Device Profile Fluid Power Technology
Proportional Valves and Hydrostatic Transmissions

This draft standard proposal may be changed without notification.
### History

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1 Scope

This profile describes the functionality of interconnectable proportional valves, hydrostatic pumps and hydrostatic transmissions. The document is based on the profile “Fluid Power Technology”, version 1.5 released by VDMA Verband Deutscher Maschinen- und Anlagenbau e.V. Frankfurt/Main, Germany /VDMAPROP/. The device profile has been defined for hydraulic proportional valves, hydrostatic pumps and hydrostatic transmissions. It can as well be applied on pneumatic devices.

1.1 System environment hydrostatic transmissions

![Diagram 1: System environment hydrostatic transmissions](image1)

Fig. 1: System environment hydrostatic transmissions

1.2 System environment valves

![Diagram 2: System environment valves](image2)

Fig. 2: System environment valves
1.3 System environment hydrostatic pumps

All the above devices use communication techniques which conform to those described in the /CiA301/. This document should be consulted in parallel to this profile.
2 References


/CiA301/ CiA DS 301 V 4.02, CANopen application layer and communication profile, February 2002

/CiA303-2/ CiA DR 303-2 V1.0, Representation of SI Units Draft Recommendation, July 1999
# 3 Definitions, acronyms and abbreviations

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<td>CAN</td>
<td>Controller Area Network. Data link layer protocol for serial communication as specified in ISO 11898.</td>
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<td>COB</td>
<td>Communication Object (CAN Message). A unit of transportation in a CAN network. Data must be sent across a network inside a COB.</td>
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<td>COB-ID</td>
<td>COB-Identifier. Identifies a COB uniquely in a network. The identifier determines the priority of that COB in the MAC sub-layer too.</td>
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<tr>
<td>NMT</td>
<td>Network Management. It performs initialisation, configuration and error handling in a CAN network.</td>
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<tr>
<td>PDO</td>
<td>Process Data Object. Object for data exchange between several devices.</td>
</tr>
<tr>
<td>SDO</td>
<td>Service Data Object. Peer to peer communication with access to the Object Dictionary of a device.</td>
</tr>
<tr>
<td>M</td>
<td>Mandatory</td>
</tr>
<tr>
<td>C</td>
<td>Conditional (mandatory, if an optional function is implemented)</td>
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<tr>
<td>O</td>
<td>Optional</td>
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<tr>
<td>dpc</td>
<td>Drive position control</td>
</tr>
</tbody>
</table>
4 Operating principles

4.1 General definitions

For detailed information, please refer to /VDMAPROP/.

4.1.1 Internal resolution (ir)

The internal resolution is 16384 (4000h) for 100% and -16384 (C000h) for -100% of the range.

4.1.2 Direction of data

- Input data are transmitted from the transmission or the valve to the bus.
- Output data are transmitted from the bus to the transmission or the valve.

4.1.3 Direction of flow

A positive set point causes a flow from P to A.

4.2 Description of parameters

The description of parameters consists of the describing elements value, unit, and prefix. These describing elements are defined in /VDMAPROP/ by the attributes name, data type, substitute value, default value, value range, access rights, and object class. For each parameter attributes have been established, device mode specific or vendor specific.

NOTE: The profile does not describe when a change of a parameter is possible and/or becomes valid. This is defined vendor specifically.

4.2.1 Definition of SI unit and prefix

All objects with SI units and prefixes have to use the coding specified in /CiA303-2/. If SI unit and prefix are configurable, the associated sub-components have rw access, otherwise ro. For entry category and default values for SI unit and prefix see /VDMAPROP/.

SI units and prefixes have been specified together with the parameter definition following the format below:

VALUE DESCRIPTION

For definitions of SI units see /CiA303-2/. In addition, profile specific units have been defined (see 4.2.2).

For definitions of prefixes see /CiA303-2/.

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>INDEX</th>
<th>Profile index number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name of parameter</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Date type</td>
<td>(parameter data type record)</td>
</tr>
<tr>
<td>Category</td>
<td>(parameter category)</td>
</tr>
</tbody>
</table>
## ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of elements</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>(Parameter access rights)</td>
<td>(Parameter PDO mapping)</td>
<td>(Parameter value range)</td>
<td>(Parameter default value)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>Parameter depending</td>
<td>no</td>
<td>UNSIGNED8</td>
<td>Parameter depending</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>Parameter depending</td>
<td>no</td>
<td>INTEGER8</td>
<td>Parameter depending</td>
</tr>
</tbody>
</table>
4.2.2 Profile-specific units

The following profile-specific units have been defined:

<table>
<thead>
<tr>
<th>Code</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>A0_h</td>
<td>m/s</td>
</tr>
<tr>
<td>A1_h</td>
<td>m/min</td>
</tr>
<tr>
<td>A2_h</td>
<td>V/bar</td>
</tr>
<tr>
<td>A3_h</td>
<td>V/m</td>
</tr>
<tr>
<td>A4_h</td>
<td>m/(min * mm)</td>
</tr>
<tr>
<td>A5_h</td>
<td>V/(m/s)</td>
</tr>
<tr>
<td>A6_h</td>
<td>V/(m/s²)</td>
</tr>
<tr>
<td>A7_h</td>
<td>m²</td>
</tr>
<tr>
<td>A8_h</td>
<td>m/(s²)</td>
</tr>
<tr>
<td>A9_h</td>
<td>l/min</td>
</tr>
</tbody>
</table>

4.3 Device architecture

This following device architecture has been chosen in order to describe simple valves as well as complex hydrostatic transmissions (drives).

Remark:

When several valves are driven by one electronic circuit (modular device), multiple architectures are used except for the interface.
4.3.1 Mapping of the device architecture to CANopen profile objects

The blocks of the device architecture can be distinguished between controller-mode independent (device-global) blocks and controller-mode depending blocks. While device-global blocks have exactly one instance in a device, controller-mode dependent blocks may have multiple instances (one instance per controller mode).

The controller-mode specific blocks have similar internal structure with functionally equivalent sub-blocks. For example, in control mode “valve position control” a controller block, a demand value generator (with optional sub-blocks like ramp, offset, or dead band compensation), a control monitoring block, an auxiliary function (dither) and a target monitoring block may be installed. The same block classes, but other instances are used for example in control mode “drive speed control” (for a detailed description of the blocks refer to /VDMAPROP/).

In order to have a unique description model, the parameters of the block instances are accessible by CANopen objects following a general device model. This device model is shown in Fig. 5.

![Device Model Diagram](image)

**Fig. 5:** Device model for CANopen mapping

The controller-mode specific block is organised as shown in Fig. 6. The offsets of the sub-blocks and objects are the same for all controller-mode specific blocks.
If a device is modular (multiple drives or valves driven by one electronic circuit), up to 8 instances (modules) can be implemented with an offset of 0800h.

Fig. 6: Structure of a controller-mode specific block

<table>
<thead>
<tr>
<th>Function</th>
<th>Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>controller-specific parameter</td>
<td>6x00H / 6x80H</td>
</tr>
<tr>
<td>demand value generator</td>
<td>6x10H / 6x90H</td>
</tr>
<tr>
<td>demand value generator globals</td>
<td>6x20H / 6xA0H</td>
</tr>
<tr>
<td>limit, scaling, zero correction</td>
<td>6x30H / 6x80H</td>
</tr>
<tr>
<td>ramp parameters</td>
<td>6x40H / 6xC0H</td>
</tr>
<tr>
<td>dead band compensation</td>
<td>6x50H / 6xD0H</td>
</tr>
<tr>
<td>control monitoring</td>
<td>6x60H / 6xE0H</td>
</tr>
<tr>
<td>auxillary functions</td>
<td>6x70H / 6xF0H</td>
</tr>
<tr>
<td>target window monitoring</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 7: Structure of a modular device

Module 1: 6000..67FF
Module 2: 6800..6FFF
Module 3: 7000..77FF
Module 8: 9800..9FFF
4.3.2 Relation between statemachines

The device state machine defined in /VDMAPROP/, chapter 5.2 has relations to the CANopen communication state machine defined in /CiA301/, chapter 9.4. These relations are shown in Fig. 8.

If the device state machine is in mode DEVICE_MODE_ACTIVE, transitions in the communication state machine force the following reactions:

- The transitions C5 and C8 in the communication state machine (Pre-operational -> Stopped, Operational -> Stopped) force the transition D8 in the device state machine (DEVICE_MODE_ACTIVE -> FAULT_REACTION).
- The transitions C12, C13 and C14 in the communication state machine (Operational -> Reset Communication, Stopped -> Reset Communication and Pre-operational -> Reset Communication) force the transition D8 in the device state machine (DEVICE_MODE_ACTIVE -> FAULT_REACTION).
- The transitions C9, C10 and C11 in the communication state machine (Operational -> Reset Application, Stopped -> Reset Application and Pre-operational -> Reset Application) force a transition in the device state machine from DEVICE_MODE_ACTIVE to INIT (reset of the application).
5 Emergency messages

5.1 Principle

Emergency messages are triggered by the occurrence of a device internal malfunction and are transmitted from the concerned application device to other devices. This makes them suitable for interrupt type error alerts.

5.2 Error code meaning

In addition to the error codes specified in /CiA301/ the following error codes may be used for fluid power systems:

<table>
<thead>
<tr>
<th>Error code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2110_h</td>
<td>Input Current too high</td>
</tr>
<tr>
<td>2211_h</td>
<td>Internal current #1</td>
</tr>
<tr>
<td>2212_h</td>
<td>Internal current #2</td>
</tr>
<tr>
<td>3110_h</td>
<td>Input voltage out of range</td>
</tr>
<tr>
<td>3210_h</td>
<td>Internal voltage too high</td>
</tr>
<tr>
<td>3220_h</td>
<td>Internal voltage too low</td>
</tr>
<tr>
<td>3400_h</td>
<td>Input voltage</td>
</tr>
<tr>
<td>3410_h</td>
<td>Power supply voltage</td>
</tr>
<tr>
<td>3411_h</td>
<td>Power supply voltage too high</td>
</tr>
<tr>
<td>3412_h</td>
<td>Power supply voltage too low</td>
</tr>
<tr>
<td>3420_h</td>
<td>Control voltage</td>
</tr>
<tr>
<td>3421_h</td>
<td>Control voltage too high</td>
</tr>
<tr>
<td>3422_h</td>
<td>Control voltage too low</td>
</tr>
<tr>
<td>4110_h</td>
<td>Ambient temperature too high</td>
</tr>
<tr>
<td>4120_h</td>
<td>Ambient temperature too low</td>
</tr>
<tr>
<td>4210_h</td>
<td>Temperature of electronic components</td>
</tr>
<tr>
<td>4211_h</td>
<td>Temperature of electronic components too high</td>
</tr>
<tr>
<td>4212_h</td>
<td>Temperature of electronic components too low</td>
</tr>
<tr>
<td>4220_h</td>
<td>Temperature of hydraulic components</td>
</tr>
<tr>
<td>4221_h</td>
<td>Temperature of hydraulic components too high</td>
</tr>
<tr>
<td>4222_h</td>
<td>Temperature of hydraulic components too low</td>
</tr>
<tr>
<td>5100_h</td>
<td>Hardware power supply</td>
</tr>
<tr>
<td>5110_h</td>
<td>Internal power supply error</td>
</tr>
<tr>
<td>5200_h</td>
<td>Device control</td>
</tr>
<tr>
<td>5210_h</td>
<td>Measurement circuits</td>
</tr>
<tr>
<td>5220_h</td>
<td>Microprocessor core</td>
</tr>
<tr>
<td>5230_h</td>
<td>Sensors</td>
</tr>
<tr>
<td>5231_h</td>
<td>Sensor #1</td>
</tr>
<tr>
<td>5232_h</td>
<td>Sensor #2</td>
</tr>
<tr>
<td>Error code</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>5233h</td>
<td>Sensor #3</td>
</tr>
<tr>
<td>5234h</td>
<td>Sensor #4</td>
</tr>
<tr>
<td>5235h</td>
<td>Sensor #5</td>
</tr>
<tr>
<td>5236h</td>
<td>Sensor #6</td>
</tr>
<tr>
<td>5237h</td>
<td>Sensor #7</td>
</tr>
<tr>
<td>5238h</td>
<td>Sensor #8</td>
</tr>
<tr>
<td>5300h</td>
<td>Local input device</td>
</tr>
<tr>
<td>5400h</td>
<td>Power electronics</td>
</tr>
<tr>
<td>5410h</td>
<td>driver</td>
</tr>
<tr>
<td>5500h</td>
<td>Data memory</td>
</tr>
<tr>
<td>5510h</td>
<td>RAM</td>
</tr>
<tr>
<td>5520h</td>
<td>EPROM</td>
</tr>
<tr>
<td>5530h</td>
<td>EEPROM</td>
</tr>
<tr>
<td>6010h</td>
<td>Software reset (Watchdog)</td>
</tr>
<tr>
<td>6310h</td>
<td>Parameter loss</td>
</tr>
<tr>
<td>6320h</td>
<td>Parameter error</td>
</tr>
<tr>
<td>7300h</td>
<td>Sensor</td>
</tr>
<tr>
<td>7310h</td>
<td>Pressure sensor</td>
</tr>
<tr>
<td>8300h</td>
<td>Closed loop control monitoring</td>
</tr>
<tr>
<td>8301h</td>
<td>Position control monitoring</td>
</tr>
<tr>
<td>8302h</td>
<td>Pressure control monitoring</td>
</tr>
</tbody>
</table>
6 Communication objects

6.1 Object descriptions

6.1.1 Object 1000\(_h\): Device type

Contains information about the device type. The object at index 1000\(_h\) describes the type of device and its functionality. It is composed of a 16 bit field which describes the device profile that is used (device profile number \(408_d = 198_h\)). The other 16 bit field contains additional information.

<table>
<thead>
<tr>
<th>Byte: MSB</th>
<th>LSB</th>
<th>Device Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>additional information</td>
</tr>
<tr>
<td>31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bit 16 to 30: reserved
Bit 31 = 1: modular device; capabilities of the single instances (modules) can be read in object device capability (offset 5F\(_h\)) of each instance

6.2 Default PDO mapping

The PDO mapping depends on the device control mode (6043\(_h\), see 7.2.2.1.4) and is different for drives and valves.

If the device is a modular device, the PDO mapping has to be defined manufacturer specific.

6.2.1 Transmit PDO mapping

The assignment of the mappings to corresponding TPDO objects can be defined manufacturer specific. If the mappings are supported, the mapping parameters defined below have to be used.

- Mapping 1 is valid for drives and valves.
- Mapping 2 is valid only for valves supporting control mode valve position control closed loop (device control mode = 2 – see IVDMAPROPI/, chapter 6.2).
- Mapping 3 is valid only for valves supporting control mode valve pressure control closed loop (device control mode = 4 – see IVDMAPROPI/, chapter 6.2).
- Mapping 4 is valid only for valves supporting control mode valve p/Q control (device control mode = 5 – see IVDMAPROPI/, chapter 6.2).
- Mapping 5 is valid only for drives supporting control mode drive speed control (device control mode = 7 – see IVDMAPROPI/, chapter 6.2).
- Mapping 6 is valid only for drives supporting control mode drive force/pressure control (device control mode = 8 – see IVDMAPROPI/, chapter 6.2).
- Mapping 7 is valid only for drives supporting control modes drive position control closed loop and positional dependent deceleration (device control mode = 9 or device control mode = 10 – see IVDMAPROPI/, chapter 6.2).
Device profile fluid power technology proportional valves and Communication objects hydrostatic transmission CiA DSP 408 V 1.5.1

<table>
<thead>
<tr>
<th>Mapping 1</th>
<th>Mapping 2</th>
<th>Mapping 3</th>
<th>Mapping 4</th>
<th>Mapping 5</th>
<th>Mapping 6</th>
<th>Mapping 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>6041_{h} / 00_{h}</td>
<td>-</td>
<td>-</td>
<td>6041_{h} / 00_{h}</td>
<td>6301_{h} / 01_{h}</td>
<td>-</td>
<td>6041_{h} / 00_{h}</td>
</tr>
<tr>
<td>6041_{h} / 00_{h}</td>
<td>6301_{h} / 01_{h}</td>
<td>-</td>
<td>6041_{h} / 00_{h}</td>
<td>6301_{h} / 01_{h}</td>
<td>6381_{h} / 01_{h}</td>
<td></td>
</tr>
<tr>
<td>6041_{h} / 00_{h}</td>
<td>6301_{h} / 01_{h}</td>
<td>6381_{h} / 01_{h}</td>
<td>6041_{h} / 00_{h}</td>
<td>6301_{h} / 01_{h}</td>
<td>6501_{h} / 01_{h}</td>
<td></td>
</tr>
<tr>
<td>6041_{h} / 00_{h}</td>
<td>6301_{h} / 01_{h}</td>
<td>6381_{h} / 01_{h}</td>
<td>6041_{h} / 00_{h}</td>
<td>6301_{h} / 01_{h}</td>
<td>6501_{h} / 01_{h}</td>
<td></td>
</tr>
<tr>
<td>6041_{h} / 00_{h}</td>
<td>6301_{h} / 01_{h}</td>
<td>6381_{h} / 01_{h}</td>
<td>6041_{h} / 00_{h}</td>
<td>6301_{h} / 01_{h}</td>
<td>6501_{h} / 01_{h}</td>
<td></td>
</tr>
</tbody>
</table>

A TPDO with transmission type 255 shall be transmitted immediately after receiving the corresponding RPDO. This ensures, that an application will receive actual values and status information every time after a set point and a control word has been sent to the device.

### 6.2.1.1 Mapping parameter of mapping 1

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>1A0x_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>TPDO(x+1)</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>PDO mapping parameter</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of mapped application objects</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value range</td>
<td>0 to 64, 255</td>
</tr>
<tr>
<td>Default value</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>1st application object</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
<td>6041 00 10_{h}</td>
</tr>
</tbody>
</table>

### 6.2.1.2 Mapping parameter of mapping 2

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>1A0x_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>TPDO(x+1)</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>PDO mapping parameter</td>
</tr>
</tbody>
</table>

26
### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00ₜ</td>
<td>Number of mapped application objects</td>
<td>Mandatory</td>
<td>rw</td>
<td>No</td>
<td>0 to 64, 255</td>
<td>2</td>
</tr>
<tr>
<td>01ₜ</td>
<td>1st application object</td>
<td>Mandatory</td>
<td>rw</td>
<td>No</td>
<td>UNSIGNED32</td>
<td>6041 00 10ₜ</td>
</tr>
<tr>
<td>02ₜ</td>
<td>2nd application object</td>
<td>Mandatory</td>
<td>rw</td>
<td>No</td>
<td>UNSIGNED32</td>
<td>6301 01 10ₜ</td>
</tr>
</tbody>
</table>

### Mapping parameter of mapping 3

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
<th>Object code</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A0ₓₜ</td>
<td>TPDO(x+1)</td>
<td>RECORD</td>
<td>PDO mapping parameter</td>
</tr>
</tbody>
</table>

### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00ₜ</td>
<td>Number of mapped application objects</td>
<td>Mandatory</td>
<td>rw</td>
<td>No</td>
<td>0 to 64, 255</td>
<td>2</td>
</tr>
<tr>
<td>Sub-index</td>
<td>Description</td>
<td>Entry category</td>
<td>Access</td>
<td>PDO mapping</td>
<td>Value range</td>
<td>Default value</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>----------------</td>
<td>--------</td>
<td>-------------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>01h</td>
<td>1st application object</td>
<td>Mandatory</td>
<td>rw</td>
<td>No</td>
<td>UNSIGNED32</td>
<td>6041 00 10h</td>
</tr>
<tr>
<td>02h</td>
<td>2nd application object</td>
<td>Mandatory</td>
<td>rw</td>
<td>No</td>
<td>UNSIGNED32</td>
<td>6381 01 10h</td>
</tr>
</tbody>
</table>

### 6.2.1.4 Mapping parameter of mapping 4

#### OBJECT DESCRIPTION

<table>
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<tr>
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6.2.1.6 Mapping parameter of mapping 6

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6.2.1.7 Mapping parameter of mapping 7

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<td>Value range</td>
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<td>Default value</td>
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| Sub-index          | 01h                 |
| Description        | 1st application object |
| Entry category     | Mandatory            |
| Access             | rw                  |
| PDO mapping        | No                  |
| Value range        | UNSIGNED32           |
| Default value      | 6041 00 10h          |

| Sub-index          | 02h                 |
| Description        | 2nd application object |
| Entry category     | Mandatory            |
| Access             | rw                  |
| PDO mapping        | No                  |
| Value range        | UNSIGNED32           |
| Default value      | 6601 01 20h          |

6.2.2 Receive PDO mapping

The assignment of the mappings to corresponding RPDO objects can be defined manufacturer specific. If the mappings are supported, the mapping parameters defined below should be used.

- Mapping 1 is valid for drives and valves.
- Mapping 2 is valid only for valves supporting control mode valve position control open loop and valve position control closed loop (device control mode = 1 or device control mode = 2 – see /VDMAPROPI/, chapter 6.2).
- Mapping 3 is valid only for valves supporting control mode valve pressure control open loop and valve pressure control closed loop (device control mode = 3 or device control mode = 4 – see /VDMAPROPI/, chapter 6.2).
- Mapping 4 is valid only for valves supporting control mode valve p/Q control (device control mode = 5 – see /VDMAPROP/, chapter 6.2).
- Mapping 5 is valid only for drives supporting control mode drive open loop movement (device control mode = 6 – see /VDMAPROP/, chapter 6.2).
- Mapping 6 is valid only for drives supporting control mode drive speed control (device control mode = 7 – see /VDMAPROP/, chapter 6.2).
- Mapping 7 is valid only for drives supporting control mode drive force/pressure control (device control mode = 8 – see /VDMAPROP/, chapter 6.2).
- Mapping 8 is valid only for drives supporting control mode drive position control closed loop and positional dependent deceleration (device control mode = 9 or device control mode = 10 – see /VDMAPROP/, chapter 6.2).

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### 6.2.2.1 Mapping parameter of mapping 1

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6.2.2.2 Mapping parameter of mapping 2

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### 6.2.2.3 Mapping parameter of mapping 3

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### 6.2.2.5 Mapping parameter of mapping 5

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### 6.2.2.6 Mapping parameter of mapping 6

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<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
<td>6500 01 20&lt;sub&gt;h&lt;/sub&gt;</td>
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### 6.2.2.7 Mapping parameter of mapping 7

#### OBJECT DESCRIPTION

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</thead>
<tbody>
<tr>
<td>Name</td>
<td>RPDO(x+1)</td>
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<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>PDO mapping parameter</td>
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#### ENTRY DESCRIPTION

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</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value range</td>
<td>0 to 64, 255</td>
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<td>Default value</td>
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<td>Access</td>
<td>rw</td>
</tr>
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<td>PDO mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
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<td>Sub-index</td>
<td>02&lt;sub&gt;h&lt;/sub&gt;</td>
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### 6.2.2.8 Mapping parameter of mapping 8

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<td>Data type</td>
<td>PDO mapping parameter</td>
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#### ENTRY DESCRIPTION

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<tr>
<td>Access</td>
<td>rw</td>
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## 7 Object dictionary

### 7.1 Data types and encoding rules

#### 7.1.1 Complex data type definitions

##### 7.1.1.1 Value parameter record Unsigned8 (0080h)

Table 1: Value parameter record Unsigned8

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##### 7.1.1.2 Value parameter record Unsigned16 (0081h)

Table 2: Value parameter record Unsigned16

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<td>01h</td>
<td>Value</td>
<td>Unsigned16</td>
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<tr>
<td></td>
<td>02h</td>
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##### 7.1.1.3 Value parameter record Unsigned32 (0082h)

Table 3: Value parameter record Unsigned32

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##### 7.1.1.4 Value parameter record Integer8 (0083h)

Table 4: Value parameter record Integer8

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<td>02h</td>
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Device profile fluid power technology proportional valves and hydrostatic transmission

CiA DSP 408 V 1.5.1

7.1.1.5 Value parameter record Integer16 (0084_h)

<table>
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Table 5: Value parameter record Integer16

7.1.1.6 Value parameter record Integer32 (0085_h)

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<td>02_h</td>
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<td>Unsigned8</td>
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Table 6: Value parameter record Integer32

7.1.1.7 Value parameter record Float32 (0086_h)

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Table 7: Value parameter record Unsigned8

7.1.1.8 Value parameter record Float64 (0087_h)

<table>
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Table 8: Value parameter record Unsigned8

7.2 Application object definitions

7.2.1 Overview

<table>
<thead>
<tr>
<th>Index</th>
<th>Object</th>
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<th>Data type</th>
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<th>M/O/C</th>
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<td>Unsigned16</td>
<td>ro</td>
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<td>rw</td>
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<td>Device control mode</td>
<td>Integer8</td>
<td>rw</td>
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<td>Index</td>
<td>Object</td>
<td>Name</td>
<td>Data type</td>
<td>Acc.</td>
<td>M/O/C</td>
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### Device profile fluid power technology proportional valves and hydrostatic transmission

#### CiA DSP 408 V 1.5.1

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### 7.2.2 Device block

#### 7.2.2.1 Device control

These objects represent the parameters used for device control (see /VDMAPROP/, chapter 5).

##### 7.2.2.1.1 Object 6040<sub>b</sub>: Device control word

The control word is transmitted via the I/O-interfaces or will be generated locally. It controls the device status (see /VDMAPROP/, chapter 5.3).

**VALUE DESCRIPTION**

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<td>(see below)</td>
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**Legend:**

- **D** - Disabled
- **DM** - Device mode (active enable)
- **H** - Hold enable
- **R** - Reset fault

---

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### Description

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### Device mode = 2

- **Install mode**
  - reserved
  - install mode negative (conditional)
  - install mode positive (conditional)
  - reserved

### Device mode = 6

- **Automatic single step**
  - reserved
  - reserved
  - single step (conditional)
  - reserved

### OBJECT DESCRIPTION

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**MSB**

**LSB**

- **D** - Disabled
- **DM** - Device mode (active enable)
- **H** - Hold enable
- **R** - Ready
- **W** - Warning
- **L** - Local control
- **RT** - Actual value reached target window
### Description

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<tr>
<th>Access</th>
<th>ro</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Default</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

### 7.2.2.1.3 Object 6042h: Device mode

With this parameter the device mode is indicated and can be chosen (see /VDMAPROP/, chapter 6.1). The access is rw, if switching between different device modes is supported, otherwise ro.

### VALUE DESCRIPTION

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No device mode</td>
</tr>
<tr>
<td>1</td>
<td>Set point input via bus</td>
</tr>
<tr>
<td>2</td>
<td>Set point input locally</td>
</tr>
<tr>
<td>3</td>
<td>Install mode (single step)</td>
</tr>
<tr>
<td>4</td>
<td>Reference mode</td>
</tr>
<tr>
<td>5</td>
<td>Automatic</td>
</tr>
<tr>
<td>6</td>
<td>Automatic (single step)</td>
</tr>
<tr>
<td>7 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to –128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and
hydrostatic transmission
CiA DSP 408 V 1.5.1

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6042h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device mode</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

| Access | rw; ro, if only one device mode supported |
| PDO mapping | Optional |
| Value range | INTEGER8 |
| Default value | 1 |

7.2.2.1.4 Object 6043h: Device control mode

With this parameter the control mode of the device is indicated or switched (see /VDMAPROP/, chapter 6.2). The object is rw, if switching between different control modes is supported, otherwise ro. Supported control modes are indicated in object 1000h (device type) by associated bits enabled (1).

VALUE DESCRIPTION

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Control mode not defined (substitute value for valves)</td>
</tr>
<tr>
<td>1</td>
<td>Spool position control open loop</td>
</tr>
<tr>
<td>2</td>
<td>Spool position control closed loop</td>
</tr>
<tr>
<td>3</td>
<td>Pressure control valve open loop</td>
</tr>
<tr>
<td>4</td>
<td>Pressure control valve closed loop</td>
</tr>
<tr>
<td>5</td>
<td>p/Q-control valve</td>
</tr>
<tr>
<td>6</td>
<td>Open loop movement (substitute value for hydrostatic axis)</td>
</tr>
<tr>
<td>7</td>
<td>Velocity control axis</td>
</tr>
<tr>
<td>8</td>
<td>Force / pressure control axis</td>
</tr>
<tr>
<td>9</td>
<td>Position control axis</td>
</tr>
<tr>
<td>10</td>
<td>Positional dependent deceleration</td>
</tr>
<tr>
<td>11 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to –128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6043h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device control mode</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>O</td>
</tr>
</tbody>
</table>
**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>rw; ro, if only one control mode supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>See table</td>
</tr>
</tbody>
</table>

7.2.2.1.5 **Object 604Eₙ: Device error code**

In case the device goes into warning state or the fault state, the fault occurred will be indicated in the error code parameter (see /VDMAPROP/, chapter 9.12). The value of this object is defined in chapter 5.2 (error code meaning).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>604Eₙ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device error code</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>ro</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

7.2.2.1.6 **Object 604Fₙ: Device local**

This object specifies the source for the object control word by switching between control word via CAN and local control (see /VDMAPROP/, chapter 5.1).

If local control is activated by a hardware switch, this supercedes any value transmitted from a different I/O port (CAN, RS 232). In such a case, a write operation to the object has to be rejected.

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Control word via CAN</td>
</tr>
<tr>
<td>1</td>
<td>Control word local</td>
</tr>
<tr>
<td>2 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to –128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>604Fₙ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device local</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>
ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>Device version</th>
</tr>
</thead>
<tbody>
<tr>
<td>ro; if switching over the bus is not implemented</td>
<td></td>
</tr>
</tbody>
</table>

PDO mapping | Optional |

Value range | INTEGER8 |

Default value | see table |

7.2.2.2 Device identification

The objects defined in this chapter refer to general information on the device (see /VDMAPROP/, chapter 9.10). Most of the parameters described there have to be implemented using objects of the standard communication area (index 1000h and above).

7.2.2.2.1 Object 6050h: Device version

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6050h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device version</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>VISIBLE STRING</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>ro</th>
</tr>
</thead>
</table>

PDO mapping | No |

Value range | No |

Default value | No |

7.2.2.2.2 Object 6051h: Device code number

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6051h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device code number</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
</table>

PDO mapping | Optional |

Value range | UNSIGNED16 |

Default value | No |
7.2.2.3  **Object 6052_h: Device serial number**

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6052_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device serial number</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>VISIBLE STRING</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>ro</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>No</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.2.4  **Object 6053_h: Device description**

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6053_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device description</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>VISIBLE STRING</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value range</td>
<td>No</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.2.5  **Object 6054_h: Device model description**

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6054_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device model description</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>VISIBLE STRING</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>ro</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value range</td>
<td>No</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
### 7.2.2.2.6 Object 6055₉: Device model URL

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6055₉</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device model URL</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>VISIBLE STRING</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>ro</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value range</td>
<td>No</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

### 7.2.2.2.7 Object 6056₉: Device parameter set code

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6056₉</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device parameter set code</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

### 7.2.2.2.8 Object 6057₉: Device vendor name

This object holds the name of the device vendor (see /VDMAPROP/ chapter 9.10).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6057₉</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device vendor name</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>VISIBLE STRING</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>ro</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value range</td>
<td>No</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.2.2.9 Object 605F₇: Device capability

This object contains information on the capabilities of a device. In a modular device this object exists for each module and describes capabilities of the module.

VALUE DESCRIPTION

<table>
<thead>
<tr>
<th>Module information</th>
<th>Specific information</th>
</tr>
</thead>
<tbody>
<tr>
<td>modular device</td>
<td>proportional valve</td>
</tr>
<tr>
<td>drive</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MSB</th>
<th>LSB</th>
</tr>
</thead>
<tbody>
<tr>
<td>module information - drive</td>
<td></td>
</tr>
<tr>
<td>reserved</td>
<td>control mode supported</td>
</tr>
<tr>
<td>position control</td>
<td>force / pressure control</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MSB</th>
<th>LSB</th>
</tr>
</thead>
<tbody>
<tr>
<td>module information – proportional valve</td>
<td></td>
</tr>
<tr>
<td>reserved</td>
<td>control mode supported</td>
</tr>
<tr>
<td>pressure flow control closed loop</td>
<td>pressure control closed loop</td>
</tr>
</tbody>
</table>

0 - disabled / not supported  1 - enabled / supported

Specific information:

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000₇</td>
<td>n. a.</td>
</tr>
<tr>
<td>0001₇ to 7FFF₇</td>
<td>reserved</td>
</tr>
<tr>
<td>8000₇ to FFFF₇</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>605F₇</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Device capability</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Category</td>
<td>Mandatory</td>
</tr>
</tbody>
</table>
7.2.3 Actual value conditioning

These objects describe the parameters used to manage the actual value conditioning (see /VDMAPROP/, chapter 9.1).

The objects for drives and valves have the same meaning, but differ in data types. Depending on the device type (valve or drive), the corresponding objects have to be considered.

7.2.3.1 Actual value conditioning for valves

7.2.3.1.1 Object 6100h: vlv actual value conditioning max interface number

This object defines a parameter additional to /VDMAPROP/. It indicates the number of physical sensor interfaces implemented in the device.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6100h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vlv actual value conditioning max interface number</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value processing implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

| Access | ro |
| PDO mapping | Optional |
| Value range | (see value description) |
| Default value | No |

7.2.3.1.2 Object 6101h: vlv actual value conditioning interface number

This object selects a single interface out of up to 8 sensor interfaces for processing actual values (see /VDMAPROP/, chapter 9.1). It acts as a pointer to the interface. Operations performed on the objects of actual value conditioning block always refer to the interface selected by interface number.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6101h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vlv actual value conditioning interface number</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value processing implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

| Access | ro |
| PDO mapping | Optional |
| Value range | UNSIGNED8 |
| Default value | 1 |
7.2.3.1.3 **Object 6102_h: vlv actual value conditioning type**

This parameter defines the type of actual value interface currently selected by *interface number*.

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No transducer function</td>
</tr>
<tr>
<td>1</td>
<td>Transducer spool position</td>
</tr>
<tr>
<td>2</td>
<td>Pressure transducer</td>
</tr>
<tr>
<td>3 to 63</td>
<td>reserved</td>
</tr>
<tr>
<td>64</td>
<td>Position transducer incremental  for drives only</td>
</tr>
<tr>
<td>65</td>
<td>Position transducer SSI binary   for drives only</td>
</tr>
<tr>
<td>66</td>
<td>Position transducer SSI gray code for drives only</td>
</tr>
<tr>
<td>67</td>
<td>Position transducer analog       for drives only</td>
</tr>
<tr>
<td>68</td>
<td>Position transducer start-stop interface for drives only</td>
</tr>
<tr>
<td>69</td>
<td>Position transducer ENDAT interface for drives only</td>
</tr>
<tr>
<td>70 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6102_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vlv actual value conditioning type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value processing implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
7.2.3.1.4 **Object 6103_h: vlv actual value conditioning sign**

With the sign parameter the sign of the actual value interface currently selected by *interface number* can be changed.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>6103_h</td>
<td>vlv actual value conditioning sign</td>
</tr>
</tbody>
</table>

**DATA DESCRIPTION**

<table>
<thead>
<tr>
<th>Object Code</th>
<th>Data Type</th>
<th>Category</th>
</tr>
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<td>VAR</td>
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<th>Default value</th>
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<td>-1 to 1</td>
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7.2.3.1.5 **Object 6104_h: vlv actual value conditioning actual value**

This object holds the actual value of the interface currently selected by *interface number*. SI unit and prefix also refer to the currently selected interface.

**OBJECT DESCRIPTION**

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**ENTRY DESCRIPTION**

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<th>Default Value</th>
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<td>Optional</td>
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<td>ro; rw, if prefix changeable</td>
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### 7.2.3.1.6 Object 6110\(^h\): vlv actual value conditioning actual value 1

This object holds the actual value of interface 1.

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**ENTRY DESCRIPTION**

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<tr>
<td>Access</td>
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<td>PDO Mapping</td>
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<tr>
<td>Value Range</td>
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### 7.2.3.1.7 Object 6111h: vlv actual value conditioning actual value 2

This object holds the actual value of interface 2.

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7.2.3.1.8 **Object 6112\(h\): vlv actual value conditioning actual value 3**

This object holds the actual value of interface 3.

### OBJECT DESCRIPTION

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### ENTRY DESCRIPTION

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<td>Access</td>
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<tr>
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#### 7.2.3.1.9 Object 6113h: vlv actual value conditioning actual value 4

This object holds the actual value of interface 4.

##### OBJECT DESCRIPTION

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##### ENTRY DESCRIPTION

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<td>Access</td>
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<td>PDO Mapping</td>
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<td>Value range</td>
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### Sub-index 02h
- **Description**: SI unit
- **Entry category**: Optional
- **Access**: ro; rw, if SI unit changeable
- **PDO mapping**: Optional
- **Value range**: UNSIGNED8
- **Default value**: No

### Sub-index 03h
- **Description**: Prefix
- **Entry category**: Optional
- **Access**: ro; rw, if prefix changeable
- **PDO mapping**: Optional
- **Value range**: INTEGER8
- **Default value**: No

### 7.2.3.1.10 Object 6114h: vlv actual value conditioning actual value 5

This object holds the actual value of interface 5.

#### OBJECT DESCRIPTION
- **Index**: 6114h
- **Name**: vlv actual value conditioning actual value 5
- **Object code**: RECORD
- **Data type**: value parameter record INTEGER16 (0084h)
- **Category**: Optional

#### ENTRY DESCRIPTION
- **Sub-index**: 00h
- **Description**: Number of entries
- **Entry Category**: Mandatory
- **Access**: ro
- **PDO Mapping**: No
- **Value Range**: 1 to 3
- **Default Value**: No
### Sub-index: 01h

**Description:** Value  
**Entry category:** Mandatory  
**Access:** ro  
**PDO mapping:** Optional  
**Value range:** INTEGER16  
**Default value:** 0

### Sub-index: 02h

**Description:** SI unit  
**Entry category:** Optional  
**Access:** ro;  
\[\text{rw, if SI unit changeable}\]  
**PDO mapping:** Optional  
**Value range:** UNSIGNED8  
**Default value:** No

### Sub-index: 03h

**Description:** Prefix  
**Entry category:** Optional  
**Access:** ro;  
\[\text{rw, if prefix changeable}\]  
**PDO mapping:** Optional  
**Value range:** INTEGER8  
**Default value:** No

#### 7.2.3.1.11 Object 6115h: vlv actual value conditioning actual value 6

This object holds the actual value of interface 6.

**OBJECT DESCRIPTION**

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### 7.2.3.1.12 Object 6116h: vlv actual value conditioning actual value 7

This object holds the actual value of interface 7.

**OBJECT DESCRIPTION**

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### 7.2.3.1.13 Object 6117h: vlv actual value conditioning actual value 8

This object holds the actual value of interface 8.

#### OBJECT DESCRIPTION

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Object dictionary

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<tr>
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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
<td>Value range</td>
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<tr>
<td>Default value</td>
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7.2.3.1.14 Object 6120h: vlv actual value conditioning min pressure

This object defines the lower measurement range limit of a pressure transducer with \textit{type} = 2 (see /VDMAPROP/, chapter 9.1.2). For other transducer types the parameter is ignored.

OBJECT DESCRIPTION

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ENTRY DESCRIPTION

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### 7.2.3.1.15 Object 6121<sub>h</sub>: vlv actual value conditioning max pressure

This object defines the upper measurement range limit (nominal pressure) of a pressure transducer with type = 2 (see /VDMAPROP/, chapter 9.1.2). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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### Device profile fluid power technology proportional valves and hydrostatic transmission

**Object dictionary**

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#### ENTRY DESCRIPTION

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<td>Access</td>
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</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
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<tr>
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<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
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<td>Default value</td>
<td>-1 (deci)</td>
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</table>
7.2.3.1.16 Object 6122_h: vlv actual value conditioning area

This object defines the cylinder area corresponding to the pressure transducer with type = 2 (see /VDMAPROP/, chapter 9.1.2). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<td>Access</td>
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<td>PDO Mapping</td>
<td>No</td>
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<tr>
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<tr>
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<td>ro; rw, if SI unit changeable</td>
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<td>A7_h (m^2)</td>
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Object 6123h: vlv actual value conditioning pressure offset

This object defines the offset parameter for pressure transducer with type = 2, that can be used in force / pressure control with only one pressure transducer (pressure 2 = constant). It is added to the actual value (see /VDMAPROP/, chapter 9.1.2). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
<td>Value range</td>
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<tr>
<td>Default value</td>
<td>-6 (micro)</td>
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**ENTRY DESCRIPTION**

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### 7.2.3.1.18 Object 6124h: vlv actual value conditioning min transducer signal

This object defines the transducer output at minimum pressure for transducer with `type = 2` (see `/VDMAPROP/`, chapter 9.1.2). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<td>Value range</td>
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</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
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<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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</tr>
<tr>
<td>Default value</td>
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This object defines the transducer output at minimum pressure for transducer with `type = 2` (see `/VDMAPROP/`, chapter 9.1.2). For other transducer types the parameter is ignored.

**ENTRY DESCRIPTION**

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</table>
### Object 6125₉

#### vlv actual value conditioning max transducer signal

This object defines the transducer output at maximum pressure for transducer with type = 2 (see `/VDMAPROP/`, chapter 9.1.2). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
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7.2.3.1.20 Object 6130h: vlv actual value conditioning min reference

This object defines the minimum reference for an analog position transducer type = 67 (see /VDMAPROP/, chapter 9.1.2.4). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<tr>
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### Object 6131h: vlv actual value conditioning max reference

This object defines the maximum reference for an analog position transducer $type = 67$ (see `/VDMAPROP/`, chapter 9.1.2.4). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
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<tr>
<td>PDO mapping</td>
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<td>Value range</td>
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<tr>
<td>Default value</td>
<td>-6 (micro)</td>
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<tr>
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<td>1 to 3</td>
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Sub-index 02ₕ
Description SI unit
Entry category Optional
Access ro;
            rw, if SI unit changeable
PDO mapping Optional
Value range UNSIGNED8
Default value 01ₕ (m)

Sub-index 03ₕ
Description Prefix
Entry category Optional
Access ro;
            rw, if prefix changeable
PDO mapping Optional
Value range INTEGER8
Default value -6 (micro)

7.2.3.1.22 Object 6132ₕ: vlv actual value conditioning T1

This object defines the time constant of the low pass filter for an analog position transducer type = 67 (see /VDMAPROP/, chapter 9.1.2.4). For other transducer types the parameter is ignored.

OBJECT DESCRIPTION

Index 6132ₕ
Name vlv actual value conditioning T1
Object code RECORD
Data type value parameter record UNSIGNED32 (0082ₕ)
Category Conditional;
            Mandatory, if actual value conditioning implemented
            and sensor type = 67

ENTRY DESCRIPTION

Sub-index 00ₕ
Description Number of entries
Entry Category Mandatory
Access ro
PDO Mapping No
Value Range 1 to 3
Default Value No
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03h (s)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

7.2.3.1.23 **Object 6133h: vlv actual value conditioning min interface**

This object defines the transducer output at minimum position for an analog position transducer type = 67 (see /VDMAPROP/, chapter 9.1.2.4). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6133h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vlv actual value conditioning min interface</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value conditioning implemented and sensor type = 67</td>
</tr>
</tbody>
</table>
## Device profile fluid power technology proportional valves and hydrostatic transmission

Object dictionary

CiA DSP 408 V 1.5.1

### ENTRY DESCRIPTION

<table>
<thead>
<tr>
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<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
</tbody>
</table>

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<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
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<tr>
<td>01h</td>
<td>Value</td>
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<td>rw</td>
<td>Optional</td>
<td>INTEGER16</td>
<td>-10</td>
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<th>Default value</th>
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<tbody>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
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<thead>
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<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>No</td>
</tr>
</tbody>
</table>
### Object 6134₇: \textit{vlv actual value conditioning max interface}

This object defines the transducer output at maximum position for an analog position transducer type = 67 (see \textit{VDMAPROP/}, chapter 9.1.2.4). For other transducer types the parameter is ignored.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th><strong>Index</strong></th>
<th>6134₇</th>
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</thead>
<tbody>
<tr>
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<td>\textit{vlv actual value conditioning max interface}</td>
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<td>RECORD</td>
</tr>
<tr>
<td><strong>Data type</strong></td>
<td>value parameter record INTEGER16 (0084₇h)</td>
</tr>
<tr>
<td><strong>Category</strong></td>
<td>Conditional; Mandatory, if \textit{actual value conditioning} implemented and \textit{sensor type} = 67</td>
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#### ENTRY DESCRIPTION

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</tr>
<tr>
<td><strong>Access</strong></td>
<td>ro</td>
</tr>
<tr>
<td><strong>PDO Mapping</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Value Range</strong></td>
<td>1 to 3</td>
</tr>
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<td><strong>Default Value</strong></td>
<td>No</td>
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<th>01₇h</th>
</tr>
</thead>
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<td><strong>Entry category</strong></td>
<td>Mandatory</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>rw</td>
</tr>
<tr>
<td><strong>PDO mapping</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Value range</strong></td>
<td>INTEGER16</td>
</tr>
<tr>
<td><strong>Default value</strong></td>
<td>10</td>
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<thead>
<tr>
<th><strong>Sub-index</strong></th>
<th>02₇h</th>
</tr>
</thead>
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<td><strong>Description</strong></td>
<td>SI unit</td>
</tr>
<tr>
<td><strong>Entry category</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td><strong>PDO mapping</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Value range</strong></td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td><strong>Default value</strong></td>
<td>No</td>
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### Device profile fluid power technology proportional valves and hydrostatic transmission

<table>
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<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

#### 7.2.3.1.25 Object 6140h: vlv actual value conditioning resolution

This object defines the resolution for position transducers of \( type = [64, 65, 66, 69] \) (see /VDMAPROP/, chapter 9.1.2.1, 9.1.2.2, 9.1.2.3, and 9.1.2.9). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

<table>
<thead>
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<th>6140h</th>
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<tbody>
<tr>
<td>Name</td>
<td>vlv actual value conditioning resolution</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value conditioning implemented and sensor type = [64, 65, 66, 69]</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
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<tr>
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<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Entry Category</td>
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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
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<tr>
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<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
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<td>Entry category</td>
<td>Mandatory</td>
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<tr>
<td>Access</td>
<td>rw</td>
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<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
### 7.2.3.1.26 Object 6141$\text{h}$: valve actual value conditioning position offset

This object defines an offset for position transducers of type $=[65, 66, 69]$ (see /VDMAPROPI/, chapter 9.1.2.2, 9.1.2.3, and 9.1.2.9). For other transducer types the parameter is ignored.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6141$\text{h}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vl v actual value conditioning position offset</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084$\text{h}$)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value conditioning implemented and sensor type $=[65, 66, 69]$</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00$\text{h}$</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.3.1.27 **Object 6142_h: vlv actual value conditioning zero shift**

This object defines a zero shift for position transducers of \textit{type} = 64 (see /VDMAPROP/, chapter 9.1.2.1). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6142_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vlv actual value conditioning zero shift</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084_h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if \textit{actual value conditioning} implemented and \textit{sensor type} = 64</td>
</tr>
<tr>
<td>Sub-index</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>00h</td>
<td>Number of entries</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
</tr>
</tbody>
</table>
7.2.3.1.28 **Object 6143_h: vlv actual value conditioning bit size**

This object defines the resolution for position transducers of type \(= [65, 66] \) (see \( /VDMAPROP/\), chapter 9.1.2.2, and 9.1.2.3). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

<table>
<thead>
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<th>6143_h</th>
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<tbody>
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<td>Name</td>
<td>vlv actual value conditioning bit size</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
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<tr>
<td>Data type</td>
<td>UNSIGNED8</td>
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<tr>
<td>Category</td>
<td>Optional</td>
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**ENTRY DESCRIPTION**

<table>
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<th>rw</th>
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</thead>
<tbody>
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<td>PDO mapping</td>
<td>Optional</td>
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<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>24</td>
</tr>
</tbody>
</table>

7.2.3.1.29 **Object 6144_h: vlv actual value conditioning C**

This object defines the speed of sound for position transducers of type \(= 68 \) (see \( /VDMAPROP/\), chapter 9.1.2.5). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6144_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vlv actual value conditioning C</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084_h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value conditioning implemented and sensor type = 68</td>
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**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
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<th>00_h</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Number of entries</td>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
Sub-index: 01h
Description: Value
Entry category: Mandatory
Access: rw
PDO mapping: Optional
Value range: INTEGER16
Default value: 0

Sub-index: 02h
Description: SI unit
Entry category: Optional
Access: ro; rw, if SI unit changeable
PDO mapping: Optional
Value range: UNSIGNED8
Default value: 03h (s)

Sub-index: 03h
Description: Prefix
Entry category: Optional
Access: ro; rw, if prefix changeable
PDO mapping: Optional
Value range: INTEGER8
Default value: -3 (milli)

7.2.3.1.30 Object 6145h: vlv actual value conditioning start stop type

This object defines the type of a start-stop position transducers type = 68 (see /VDMAPROP/, chapter 9.1.2.5). For other transducer types the parameter is ignored.

OBJECT DESCRIPTION

Index: 6145h
Name: vlv actual value conditioning start stop type
Object code: VAR
Data type: INTEGER8
Category: Conditional;
Mandatory, if actual value conditioning implemented and sensor type = 68
7.2.3.2 Actual value conditioning for drives

7.2.3.2.1 Object 6200ₜ: drv actual value conditioning max interface number

This object defines a parameter additional to /VDMAPROP/. It indicates the number of physical sensor interfaces implemented in the device.

ENTRY DESCRIPTION

<table>
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<th>6200ₜ</th>
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<tbody>
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<td>drv actual value conditioning max interface number</td>
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<tr>
<td>Object code</td>
<td>VAR</td>
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<tr>
<td>Data type</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value processing implemented</td>
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</table>

ENTRY DESCRIPTION

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<tbody>
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<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.3.2.2 Object 6201ₜ: drv actual value conditioning interface number

This object selects a single interface out of up to 8 sensor interfaces for processing actual values (see /VDMAPROP/, chapter 9.1). It acts as a pointer to the interface. Operations performed on the objects of actual value conditioning block always refer to the interface selected by interface number.

ENTRY DESCRIPTION

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<tr>
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<th>ro</th>
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<tbody>
<tr>
<td>PDO mapping</td>
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</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
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</table>

ENTRY DESCRIPTION

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</thead>
<tbody>
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<td>PDO mapping</td>
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<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
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</tr>
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</table>
7.2.3.2.3  **Object 6202h: drv actual value conditioning type**

This parameter defines the type of actual value interface currently selected by *interface number*.

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No transducer function</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Transducer spool position</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Pressure transducer</td>
<td></td>
</tr>
<tr>
<td>3 to 63</td>
<td>reserved</td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>Position transducer incremental for drives only</td>
<td></td>
</tr>
<tr>
<td>65</td>
<td>Position transducer SSI binary for drives only</td>
<td></td>
</tr>
<tr>
<td>66</td>
<td>Position transducer SSI gray code for drives only</td>
<td></td>
</tr>
<tr>
<td>67</td>
<td>Position transducer analog for drives only</td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>Position transducer start-stop interface for drives only</td>
<td></td>
</tr>
<tr>
<td>69</td>
<td>Position transducer ENDAT interface for drives only</td>
<td></td>
</tr>
<tr>
<td>70 to 127</td>
<td>reserved</td>
<td></td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
<td></td>
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</table>

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6202h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv actual value conditioning type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value processing implemented</td>
</tr>
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</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

7.2.3.2.4  **Object 6203h: drv actual value conditioning sign**

With the sign parameter the sign of the actual value interface currently selected by *interface number* can be changed.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6203h</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Data type</td>
<td>INTEGER8</td>
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<tr>
<td>Category</td>
<td>Optional</td>
</tr>
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### ENTRY DESCRIPTION

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</tr>
</thead>
<tbody>
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<td>Default value</td>
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</tbody>
</table>

#### 7.2.3.2.5 Object 6204h: drv actual value conditioning actual value

This object holds the actual value of the interface currently selected by `interface number`. SI unit and prefix also refer to the currently selected interface.

### OBJECT DESCRIPTION

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<th>6204h</th>
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### ENTRY DESCRIPTION

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7.2.3.2.6 Object 6210ₜ: drv actual value conditioning actual value 1

This object holds the actual value of interface 1.

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Device profile fluid power technology proportional valves and hydrostatic transmission

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### 7.2.3.2.7 Object 6211h: drv actual value conditioning actual value 2

This object holds the actual value of interface 2.

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<td>Access</td>
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<td>PDO Mapping</td>
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<td>Value Range</td>
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### 7.2.3.2.8 Object 6212h: drv actual value conditioning actual value 3

This object holds the actual value of interface 3.

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7.2.3.2.9 Object 6213h: drv actual value conditioning actual value 4

This object holds the actual value of interface 4.

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7.2.3.2.10 Object 6214h: drv actual value conditioning actual value 5

This object holds the actual value of interface 5.

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ENTRY DESCRIPTION

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<td>Access</td>
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Device profile fluid power technology proportional valves and hydrostatic transmission

Object dictionary

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7.2.3.2.11 Object 6215h: drv actual value conditioning actual value 6

This object holds the actual value of interface 6.

OBJECT DESCRIPTION

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ENTRY DESCRIPTION

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Sub-index 01h
Description Value
Entry category Mandatory
Access ro
PDO mapping Optional
Value range INTEGER32
Default value 0

Sub-index 02h
Description SI unit
Entry category Optional
Access ro;
  rw, if SI unit changeable
PDO mapping Optional
Value range UNSIGNED8
Default value No

Sub-index 03h
Description Prefix
Entry category Optional
Access ro;
  rw, if prefix changeable
PDO mapping Optional
Value range INTEGER8
Default value No

7.2.3.2.12 Object 6216h: drv actual value conditioning actual value 7

This object holds the actual value of interface 7.

OBJECT DESCRIPTION

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7.2.3.2.13  Object 6217$_h$: drv actual value conditioning actual value 8

This object holds the actual value of interface 8.

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7.2.3.2.14 **Object 6220₉: drv actual value conditioning min pressure**

This object defines the lower measurement range limit of a pressure transducer with type = 2 (see /VDMAPROP/, chapter 9.1.2). For other transducer types the parameter is ignored.

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</tr>
<tr>
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</tr>
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</tr>
<tr>
<td>Default value</td>
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Device profile fluid power technology proportional valves and hydrostatic transmission
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<table>
<thead>
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<th>Sub-index</th>
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</tr>
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<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
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<td>Optional</td>
</tr>
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<tr>
<td>Default value</td>
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</table>

<table>
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</thead>
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<tr>
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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
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<tr>
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<td>Default value</td>
<td>-3 (milli)</td>
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</tbody>
</table>

7.2.3.2.15 **Object 6221h: drv actual value conditioning max pressure**

This object defines the upper measurement range limit (nominal pressure) of a pressure transducer with type = 2 (see /VDMAPROP/, chapter 9.1.2). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

<table>
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</tr>
<tr>
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**ENTRY DESCRIPTION**

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</tr>
<tr>
<td>Access</td>
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</tr>
<tr>
<td>PDO Mapping</td>
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</tr>
<tr>
<td>Value Range</td>
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<table>
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<tr>
<td>Access</td>
<td>rw</td>
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<td>PDO mapping</td>
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</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
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<td>Default value</td>
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<table>
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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
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<tr>
<td>Value range</td>
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<tr>
<td>Default value</td>
<td>-3 (milli)</td>
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</table>

7.2.3.2.16 Object 6222h: drv actual value conditioning area

This object defines the cylinder area corresponding to the pressure transducer with type = 2 (see /VDMAPROP/, chapter 9.1.2). For other transducer types the parameter is ignored.

OBJECT DESCRIPTION

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## Entry Description

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<td>No</td>
</tr>
<tr>
<td>01\text{h}</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
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<td>02\text{h}</td>
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<tr>
<td>03\text{h}</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-6 (micro)</td>
</tr>
</tbody>
</table>
7.2.3.2.17  **Object 6223_h: drv actual value conditioning pressure offset**

This object defines the offset parameter for pressure transducer with type = 2, that can be used in force / pressure control with only one pressure transducer (pressure 2 = constant). It is added to the actual value (see /VDMAPROP/, chapter 9.1.2). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

<table>
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**ENTRY DESCRIPTION**

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<tr>
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<tr>
<td>Access</td>
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<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
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<td>PDO mapping</td>
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<td>Value range</td>
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<tr>
<td>Default value</td>
<td>4E_h (bar)</td>
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</table>
### 7.2.3.2.18 Object 6224h: drv actual value conditioning min transducer signal

This object defines the transducer output at minimum pressure for transducer with \textit{type} = 2 (see \textit{/VDMAPROP/}, chapter 9.1.2). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<tr>
<th>Sub-index</th>
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<tbody>
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<td>Entry category</td>
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</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
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<tr>
<td>PDO mapping</td>
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<td>Value range</td>
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**ENTRY DESCRIPTION**

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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
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<tr>
<td>Default Value</td>
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<tr>
<td>Access</td>
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<td>INTEGER32</td>
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</table>
7.2.3.2.19 Object 6225h: drv actual value conditioning max transducer signal

This object defines the transducer output at maximum pressure for transducer with type = 2 (see \VDMAPROP/, chapter 9.1.2). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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</tr>
<tr>
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<td>Data type</td>
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<td>Conditional; Mandatory, if actual value conditioning implemented and sensor type = 2</td>
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**ENTRY DESCRIPTION**

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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
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<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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### Sub-index 01h

**Description:** Value  
**Entry category:** Mandatory  
**Access:** rw  
**PDO mapping:** Optional  
**Value range:** INTEGER32  
**Default value:** 10

### Sub-index 02h

**Description:** SI unit  
**Entry category:** Optional  
**Access:** ro;  
rw, if SI unit changeable  
**PDO mapping:** Optional  
**Value range:** UNSIGNED8  
**Default value:** No

### Sub-index 03h

**Description:** Prefix  
**Entry category:** Optional  
**Access:** ro;  
rw, if prefix changeable  
**PDO mapping:** Optional  
**Value range:** INTEGER8  
**Default value:** No

---

#### 7.2.3.2.20 Object 6230h: drv actual value conditioning min reference

This object defines the minimum reference for an analog position transducer type = 67 (see /VDMAPROP/, chapter 9.1.2.4). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<tbody>
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| Category | Conditional;  
Mandatory, if actual value conditioning implemented and sensor type = 67 |
## ENTRY DESCRIPTION

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<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
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<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
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<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>01&lt;sub&gt;h&lt;/sub&gt; (m)</td>
</tr>
<tr>
<td>03&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-6 (micro)</td>
</tr>
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</table>
### Object 6231\(_h\): drv actual value conditioning max reference

This object defines the maximum reference for an analog position transducer \(type = 67\) (see `/VDMAPROP/`, chapter 9.1.2.4). For other transducer types the parameter is ignored.

#### OBJECT DESCRIPTION

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<td>RECORD</td>
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<tr>
<td>Data type</td>
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<tr>
<td>Category</td>
<td>Conditional; \nMandatory, if (actual value conditioning) implemented \nand (sensor type = 67)</td>
</tr>
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#### ENTRY DESCRIPTION

**Sub-index** 00\(_h\)
- **Description**: Number of entries
- **Entry Category**: Mandatory
- **Access**: ro
- **PDO Mapping**: No
- **Value Range**: 1 to 3
- **Default Value**: No

**Sub-index** 01\(_h\)
- **Description**: Value
- **Entry category**: Mandatory
- **Access**: rw
- **PDO mapping**: Optional
- **Value range**: INTEGER32
- **Default value**: 0

**Sub-index** 02\(_h\)
- **Description**: SI unit
- **Entry category**: Optional
- **Access**: ro; rw, if SI unit changeable
- **PDO mapping**: Optional
- **Value range**: UNSIGNED8
- **Default value**: 01\(_h\) (m)
### Object 6232h: drv actual value conditioning T1

This object defines the time constant of the low pass filter for an analog position transducer type = 67 (see /VDMAPROP/, chapter 9.1.2.4). For other transducer types the parameter is ignored.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
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</thead>
<tbody>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
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<tr>
<td>PDO mapping</td>
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<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-6 (micro)</td>
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</table>

#### ENTRY DESCRIPTION

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<tr>
<td>Value Range</td>
<td>1 to 3</td>
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<tr>
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### Object dictionary

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<table>
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<tr>
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<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
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<td>Optional</td>
<td>UNSIGNED8</td>
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</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
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</table>

### 7.2.3.2.23 Object 6233h: drv actual value conditioning min interface

This object defines the transducer output at minimum position for an analog position transducer type = 67 (see VDMAPROP/, chapter 9.1.2.4). For other transducer types the parameter is ignored.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
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<th>Data type</th>
<th>Category</th>
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<td>value parameter record INTEGER32 (0085h)</td>
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<th>Access</th>
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**Description**: Value  
**Entry category**: Mandatory  
**Access**: rw  
**PDO mapping**: Optional  
**Value range**: INTEGER32  
**Default value**: -10

### Sub-index: 02h

**Description**: SI unit  
**Entry category**: Optional  
**Access**: ro; rw, if SI unit changeable  
**PDO mapping**: Optional  
**Value range**: UNSIGNED8  
**Default value**: No

### Sub-index: 03h

**Description**: Prefix  
**Entry category**: Optional  
**Access**: ro; rw, if prefix changeable  
**PDO mapping**: Optional  
**Value range**: INTEGER8  
**Default value**: No

7.2.3.2.24 **Object 6234h: drv actual value conditioning max interface**

This object defines the transducer output at maximum position for an analog position transducer type = 67 (see /VDMAPROP/, chapter 9.1.2.4). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<thead>
<tr>
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<tbody>
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<td>drv actual value conditioning max interface</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
</tbody>
</table>
| Category | Conditional;  
Mandatory, if actual value conditioning implemented and sensor type = 67 |
## ENTRY DESCRIPTION

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<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>10</td>
</tr>
<tr>
<td>02&lt;sub&gt;h&lt;/sub&gt;</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>No</td>
</tr>
<tr>
<td>03&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>No</td>
</tr>
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</table>
7.2.3.2.25 **Object 6240ₜₜ: drv actual value conditioning resolution**

This object defines the resolution for position transducers of \(\text{type} = [64, 65, 66, 69]\) (see \(\text{/VDMAPROP/},\) chapter 9.1.2.1, 9.1.2.2, 9.1.2.3, and 9.1.2.9). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085ₜₜ)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if (\text{actual value conditioning}) implemented and (\text{sensor type} = [64, 65, 66, 69])</td>
</tr>
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**ENTRY DESCRIPTION**

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<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
<td>No</td>
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<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<table>
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<tr>
<th>Sub-index</th>
<th>01ₜₜ</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Value</td>
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<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
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<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
<td>Value range</td>
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<td>Default value</td>
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<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>01ₜₜ (m)</td>
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</table>
### Object 6241h: drv actual value conditioning position offset

This object defines an offset for position transducers of type = [65, 66, 69] (see /VDMAPROP/, chapter 9.1.2.2, 9.1.2.3, and 9.1.2.9). For other transducer types the parameter is ignored.

#### OBJECT DESCRIPTION

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<tr>
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<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value conditioning implemented and sensor type = [65, 66, 69]</td>
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#### ENTRY DESCRIPTION

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<tr>
<td>Value Range</td>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
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<tr>
<td>Value range</td>
<td>INTEGER32</td>
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<td>Default value</td>
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</table>
Device profile fluid power technology proportional valves and
hydrostatic transmission

Sub-index | 02ₘ
---|---
Description | SI unit
Entry category | Optional
Access | ro; rw, if SI unit changeable
PDO mapping | Optional
Value range | UNSIGNED8
Default value | 01ₘ (m)

Sub-index | 03ₘ
---|---
Description | Prefix
Entry category | Optional
Access | ro; rw, if prefix changeable
PDO mapping | Optional
Value range | INTEGER8
Default value | -6 (micro)

7.2.3.2.27 **Object 6242ₘ: drv actual value conditioning zero shift**

This object defines a zero shift for position transducers of type = 64 (see /VDMAPROP/, chapter 9.1.2.1). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<td>Name</td>
<td>drv actual value conditioning zero shift</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085ₘ)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value conditioning implemented and sensor type = 64</td>
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**ENTRY DESCRIPTION**

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<tr>
<td>Entry Category</td>
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</tr>
<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
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<tr>
<td>Default Value</td>
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</tbody>
</table>
Object 6243₃: drv actual value conditioning bit size

This object defines the resolution for position transducers of type = [65, 66] (see VDMAPROP/, chapter 9.1.2.2, and 9.1.2.3). For other transducer types the parameter is ignored.

OBJECT DESCRIPTION

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<td>Name</td>
<td>drv actual value conditioning bit size</td>
</tr>
<tr>
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<td>VAR</td>
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<td>Data type</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>
7.2.3.2.29  **Object 6244h: drv actual value conditioning C**

This object defines the speed of sound for position transducers of type = 68 (see /VDMAPROP/, chapter 9.1.2.5). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

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<th>6244h</th>
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<tr>
<td>Name</td>
<td>drv actual value conditioning C</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
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**ENTRY DESCRIPTION**

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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<tr>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
<tr>
<td>Sub-index</td>
<td>02&lt;sub&gt;h&lt;/sub&gt;</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------</td>
</tr>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03&lt;sub&gt;h&lt;/sub&gt; (s)</td>
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</table>

<table>
<thead>
<tr>
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<th>03&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
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<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

7.2.3.2.30 **Object 6245<sub>h</sub>: drv actual value conditioning start stop type**

This object defines the type of a start-stop position transducers type = 68 (see /VDMAPROP/, chapter 9.1.2.5). For other transducer types the parameter is ignored.

**OBJECT DESCRIPTION**

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv actual value conditioning start stop type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if actual value conditioning implemented and sensor type = 68</td>
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**ENTRY DESCRIPTION**

<table>
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<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.4 Controller output conditioning

The objects defined in this chapter describe parameters of the controller output conditioning block (see /VDMAPROP/, chapter 7.4).

7.2.4.1 Controller output conditioning for drives

7.2.4.1.1 Object 6280h: drv controller output

This value is an internal value and the output of the controller.

OBJECT DESCRIPTION

<table>
<thead>
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<tbody>
<tr>
<td>Name</td>
<td>drv controller output</td>
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<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
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ENTRY DESCRIPTION

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</tr>
<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
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</tr>
<tr>
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<td>1 to 3</td>
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</tr>
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<tr>
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</table>
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Object dictionary

CiA DSP 408 V 1.5.1

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</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
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</tr>
<tr>
<td>Value range</td>
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</tr>
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7.2.4.1.2 **Object 6281h: drv controller output interface min**

This object defines the output signal of the interface at minimum controller output (see /VDMAPROP/, chapter 7.4.3).

OBJECT DESCRIPTION

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<th>6281h</th>
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</tr>
<tr>
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<td>Category</td>
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ENTRY DESCRIPTION

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<tr>
<td>Value Range</td>
<td>1 to 3</td>
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<td>Default Value</td>
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### Object dictionary

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<tr>
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<tr>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
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<td>Value range</td>
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**7.2.4.1.3 Object 6282h: drv controller output interface max**

This object defines the output signal of the interface at maximum controller output (see /VDMAPROPI/, chapter 7.4.3).

**OBJECT DESCRIPTION**

<table>
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<th>6282h</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output interface max</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if controller output interface implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
### Object dictionary

#### 7.2.4.1.4 Object 6290<sub>h</sub>: drv controller output filter type

This object defines the type of the low pass filter (see /VDMAPROP/, chapter 7.4.1).

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No filter</td>
</tr>
<tr>
<td>1</td>
<td>Type 1</td>
</tr>
<tr>
<td>2</td>
<td>Type 2</td>
</tr>
<tr>
<td>3 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to –128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>01&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>0</td>
</tr>
<tr>
<td>02&lt;sub&gt;h&lt;/sub&gt;</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>No</td>
</tr>
<tr>
<td>03&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>No</td>
</tr>
</tbody>
</table>
### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6290(^h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output filter type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if controller output filter implemented</td>
</tr>
</tbody>
</table>

### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

#### 7.2.4.1.5 Object 6291\(^h\): drv controller output filter T1

This object defines the time constant for filter type = 1.

### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6291(^h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output filter T1</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082(_h))</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if filter type 1 implemented</td>
</tr>
</tbody>
</table>

### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00(^h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01(^h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
This object defines the damping constant of filter type = 2.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Access</td>
<td>Optional</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td></td>
<td>03h (s)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Index</th>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Access</td>
<td>Optional</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<p>| Sub-index | 00h |
| Description | Number of entries |
| Entry Category | Mandatory |
| Access | ro |
| PDO Mapping | No |
| Value Range | 1 to 3 |
| Default Value | No |</p>
<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

7.2.4.1.7  **Object 6293h: drv controller output filter f0**

This object defines the natural frequency for *filter type = 2.*

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6293h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output filter f0</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>filter type</em> 2 implemented</td>
</tr>
</tbody>
</table>
### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00ₜ</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01ₜ</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED32</td>
<td>0</td>
</tr>
<tr>
<td>02ₜ</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>20ₜ (Hz)</td>
</tr>
<tr>
<td>03ₜ</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>
7.2.4.1.8 Object 62A0h: drv controller output directional dependent gain type

This object defines the type of the directional dependent gain function (see /VDMAPROP/, chapter 9.4).

VALUE DESCRIPTION

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No directional dependent gain</td>
</tr>
<tr>
<td>1</td>
<td>Directional dependent gain type 1</td>
</tr>
<tr>
<td>2 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>62A0h,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output directional dependent gain type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if directional dependent gain function implemented</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.4.1.9 Object 62A1h: drv controller output directional dependent gain factor

This object defines a factor for directional dependent gain type = 1.

VALUE DESCRIPTION

The object is composed as shown by (numerator SHL 16)+denominator. This avoids setting numerator and denominator separately.

<table>
<thead>
<tr>
<th>31 16 15 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerator</td>
</tr>
<tr>
<td>Denominator</td>
</tr>
<tr>
<td>MSB</td>
</tr>
<tr>
<td>LSB</td>
</tr>
</tbody>
</table>

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>62A1h,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output directional dependent gain factor</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if directional dependent gain type = 1</td>
</tr>
</tbody>
</table>
Object 62A2\textsubscript{h}: drv controller output characteristic compensation type

This object defines the type of the output characteristic compensation function (see \texttt{/VDMAPROP/}, chapter 9.5). The function is specified using vendor-specific parameters.

### VALUE DESCRIPTION

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No characteristic compensation</td>
</tr>
<tr>
<td>1 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to - 128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
<th>Object code</th>
<th>Data type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>62A2\textsubscript{h}</td>
<td>drv controller output characteristic compensation type</td>
<td>VAR</td>
<td>INTEGER8</td>
<td>Conditional; Mandatory, if compensation function implemented</td>
</tr>
</tbody>
</table>

7.2.4.11 Object 62B0\textsubscript{h}: drv controller output dead band compensation type

This object defines the type of the dead band compensation function (see \texttt{/VDMAPROP/}, chapter 9.6).

### VALUE DESCRIPTION

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No dead band compensation</td>
</tr>
<tr>
<td>1</td>
<td>Type 1</td>
</tr>
<tr>
<td>2</td>
<td>Type 2</td>
</tr>
<tr>
<td>3 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to - 128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>
### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>62B0h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output dead band compensation type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <code>dead band compensation function</code> implemented</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

#### 7.2.4.1.12 Object 62B0h: drv controller output dead band compensation A side

This object defines the step height of the A side.

### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>62B1h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output dead band compensation A side</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <code>dead band compensation type</code> = [1, 2]</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
Sub-index | 02 \text{h} \\
Description | SI unit \\
Entry category | Optional \\
Access | ro; rw, if SI unit changeable \\
PDO mapping | Optional \\
Value range | UNSIGNED8 \\
Default value | No \\

Sub-index | 03 \text{h} \\
Description | Prefix \\
Entry category | Optional \\
Access | ro; rw, if prefix changeable \\
PDO mapping | Optional \\
Value range | INTEGER8 \\
Default value | -3 (milli) \\

7.2.4.1.13 Object 62B2\text{h}: drv controller output dead band compensation B side

This parameter determines the step height of the B side.

OBJECT DESCRIPTION

Index | 62B2\text{h} \\
Name | drv controller output dead band compensation B side \\
Object code | RECORD \\
Data type | value parameter record INTEGER32 (0085\text{h}) \\
Category | Conditional; Mandatory, if \textit{dead band compensation type} = \{1, 2\}

ENTRY DESCRIPTION

Sub-index | 00 \text{h} \\
Description | Number of entries \\
Entry Category | Mandatory \\
Access | ro \\
PDO Mapping | No \\
Value Range | 1 to 3 \\
Default Value | No
### Object dictionary 62B3h: drv controller output dead band compensation threshold

This object defines the starting point of the compensation step or ramp.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>62B3h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output dead band compensation threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if dead band compensation type = [1, 2]</td>
</tr>
</tbody>
</table>
### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>0</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>No</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>
7.2.4.1.15 Object 62C0h: drv controller output zero correction offset

This object defines the offset used for zero correction function (see /VDMAPROP/, chapter 9.7).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>62C0h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output zero correction offset</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if zero correction function implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
### Object 62D0h: drv controller output dither type

This object defines the type of *dither function* (see /VDMAPROP/, chapter 9.2).

#### VALUE DESCRIPTION

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Dither function off</td>
</tr>
<tr>
<td>1</td>
<td>Dither with square wave</td>
</tr>
<tr>
<td>2</td>
<td>Dither with triangular wave</td>
</tr>
<tr>
<td>3</td>
<td>Dither with sinusoidal wave (distortion factor 0.001%)</td>
</tr>
<tr>
<td>4 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>62D0h,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output dither type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>dither function</em> implemented</td>
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#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
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<tbody>
<tr>
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<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
### Object 62D1ₘ: drv controller output dither amplitude

This object defines the **amplitude** of the *dither function*.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>62D1ₘ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output dither amplitude</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085ₜₜ)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>dither function type</em> = [1, 2, 3]</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

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<thead>
<tr>
<th>Sub-index</th>
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<tbody>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01ₙ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
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<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02ₙ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
### 7.2.4.1.18 Object 62D2h: drv controller output dither frequency

This object defines the **frequency** of the **dither signal**.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
Sub-index | 02h
---|---
Description | SI unit
Entry category | Optional
Access | ro; rw, if SI unit changeable
PDO mapping | Optional
Value range | UNSIGNED8
Default value | 20h (Hz)

Sub-index | 03h
---|---
Description | Prefix
Entry category | Optional
Access | ro; rw, if prefix changeable
PDO mapping | Optional
Value range | INTEGER8
Default value | 0

7.2.4.1.19 **Object 62E0h: drv controller output upper limit**

This object defines the upper limit of the limit function (see /VDMAPROP/, chapter 7.4.1.7).

**OBJECT DESCRIPTION**

Index | 62E0h
Name | drv controller output upper limit
Object code | RECORD
Data type | value parameter record INTEGER32 (0085h)
Category | Conditional; Mandatory, if limit function implemented

**ENTRY DESCRIPTION**

Sub-index | 00h
---|---
Description | Number of entries
Entry Category | Mandatory
Access | ro
PDO Mapping | No
Value Range | 1 to 3
Default Value | No
7.2.4.1.20 Object 62E1₁₅: drv controller output lower limit

This object defines the lower limit of the limit function (see /VDMAPROP/, chapter 7.4.1.7).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>01₁₅</td>
<td>Value</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>02₁₅</td>
<td>SI unit</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>(control mode specific)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>03₁₅</td>
<td>Prefix</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>(control mode specific)</td>
</tr>
<tr>
<td>Sub-index</td>
<td>Description</td>
<td>Entry Category</td>
<td>Access</td>
<td>PDO Mapping</td>
<td>Value Range</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------</td>
<td>----------------</td>
<td>--------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro</td>
<td>Optional</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro</td>
<td>Optional</td>
<td>INTEGER8</td>
</tr>
</tbody>
</table>
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7.2.4.1.21 **Object 62F0,**: drv controller output inverting sign

With this object the sign of the output can be changed (see /VDMAPROP/, chapter 7.4.1.8).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>62F0h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output inverting sign</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>-1 to 1</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.5 **Proportional valves and hydrostatic pumps**

7.2.5.1 **Controller mode: position control**

The objects defined in this chapter refer to the control modes valve position control open loop and valve position control closed loop (see /VDMAPROP/, chapter 8.1.1 and 8.1.2). They are also implemented for valve p/Q control.

7.2.5.1.1 **Object 6300h: vpoc set point**

This object corresponds to the valve position control set point and includes the float position option (see /VDMAPROP/, chapter 8.1.1 and 8.1.2).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6300h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc set point</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control mode = [1, 2]</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
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</tr>
</thead>
<tbody>
<tr>
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<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
<tr>
<td>Sub-index</td>
<td>01h</td>
</tr>
<tr>
<td>-----------</td>
<td>-----</td>
</tr>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
</tbody>
</table>
| Access | ro;
| rw, if SI unit changeable |
| PDO mapping | Optional |
| Value range | UNSIGNED8 |
| Default value | ir |

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
</tbody>
</table>
| Access | ro;
| rw, if prefix changeable |
| PDO mapping | Optional |
| Value range | INTEGER8 |
| Default value | No |

7.2.5.1.2 **Object 6301h: vpoc actual value**

This object holds the actual value of the sensor interface instance used for the control algorithm (see \$/VDMAPROP/\, chapter 8.1.2).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
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<th>6301h</th>
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<tr>
<td>Name</td>
<td>vpoc actual value</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
</tbody>
</table>
| Category | Conditional;
| Mandatory, if control mode = 2 |
### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>ro</td>
<td>Optional</td>
<td>INTEGER16</td>
<td>0</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>No</td>
</tr>
</tbody>
</table>
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7.2.5.1.3 **Object 6302_{h}: vpoc interface reference**

This object creates a reference between the controller and the *actual value*. The parameter specifies the number of the interface, which provides the *actual value*. A write to this object with a value greater than *max interface number* has to be rejected.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6302_{h}</th>
</tr>
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<tbody>
<tr>
<td>Name</td>
<td>vpoc interface reference</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
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<tr>
<td>Category</td>
<td>Optional</td>
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**ENTRY DESCRIPTION**

<table>
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</tr>
</thead>
<tbody>
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<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.5.1.4 **Object 6310_{h}: vpoc demand value generator demand value**

This object contains the output of the demand value generator (see /VDMAPROP/, chapter 8.2).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6310_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator demand value</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084_{h})</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
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</tr>
</tbody>
</table>
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Object dictionary

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<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>02&lt;sub&gt;h&lt;/sub&gt;</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>(control mode specific)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>03&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>(control mode specific)</td>
</tr>
</tbody>
</table>

7.2.5.1.5 Object 6311<sub>h</sub>: vpoc demand value generator reference value

This object contains the reference value, a value corresponding to 100% of the set point (see /VDMAPROP/, chapter 8.2).

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
<th>Object code</th>
<th>Data type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>6311&lt;sub&gt;h&lt;/sub&gt;</td>
<td>vpoc demand value generator reference value</td>
<td>RECORD</td>
<td>value parameter record INTEGER16 (0084&lt;sub&gt;h&lt;/sub&gt;)</td>
<td>Optional</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
</tbody>
</table>
### Sub-index 01h
**Description**: Value  
**Entry category**: Mandatory  
**Access**: rw  
**PDO mapping**: Optional  
**Value range**: INTEGER16  
**Default value**: 0

### Sub-index 02h
**Description**: SI unit  
**Entry category**: Optional  
**Access**: ro; rw, if SI unit changeable  
**PDO mapping**: Optional  
**Value range**: UNSIGNED8  
**Default value**: ir

### Sub-index 03h
**Description**: Prefix  
**Entry category**: Optional  
**Access**: ro; rw, if prefix changeable  
**PDO mapping**: Optional  
**Value range**: INTEGER8  
**Default value**: No

---

### 7.2.5.1.6 Object 6314h: vpoc demand value generator hold set point

This object contains the hold set point (see /VDMAPROP/, chapter 8.2).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6314h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator hold set point</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>
## ENTRY DESCRIPTION

<table>
<thead>
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<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER16</td>
<td>0</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>No</td>
</tr>
</tbody>
</table>

*Note: Entry Category, Access, PDO Mapping, Value Range, and Default Value for each sub-index.*
7.2.5.1.7 Object 6320h: vpoc demand value generator upper limit

This object contains the upper limit of the limit function in the demand value generator (see /VDMAPROP/, chapter 8.2.1). Upper limit < lower limit has to be rejected.

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6320h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator upper limit</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if limit function implemented</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>ir</td>
</tr>
<tr>
<td>Sub-index</td>
<td>03&lt;sub&gt;h&lt;/sub&gt;</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------</td>
</tr>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

### 7.2.5.1.8 Object 6321<sub>h</sub>: vpoc demand value generator lower limit

This object contains the lower limit of the limit function in the demand value generator (see /VDMAPROP/, chapter 8.2.1). Lower limit > upper limit has to be rejected.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6321&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator lower limit</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084&lt;sub&gt;h&lt;/sub&gt;)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if limit function implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
### Object 6322h: vpoc demand value generator scaling factor

The ‘scaling’ serves to change the resolution or the signal range of the set point derivation.

The factor is composed of the elements numerator and denominator. The value 0 is not allowed neither for numerator nor denominator.

**VALUE DESCRIPTION**

The object is composed as shown by (numerator SHL 16)+denominator. This avoids setting numerator and denominator separately.

```
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>16</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>MSB</td>
<td></td>
<td></td>
<td>LSB</td>
</tr>
</tbody>
</table>
```

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6322h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator scaling factor</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <code>scaling function</code> implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.5.1.10 Object 6323\textsubscript{h}: vpoc demand value generator scaling offset

This object defines the offset used in the *scaling function*.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6323\textsubscript{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator scaling offset</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084\textsubscript{h})</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>scaling function</em> implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00\textsubscript{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01\textsubscript{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
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</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02\textsubscript{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>ir</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

7.2.5.1.11 Object 6324h: vpoc demand value generator zero correction offset

This object defines the offset used for zero correction function (see VDMAPROP/, chapter 9.7).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
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<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
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<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
7.2.5.1.12 **Object 6330h: vpoc demand value generator ramp type**

This object defines the ramp type used in the *ramp function* of the *demand value generator* (see [VDMAPROPI](/), chapter 9.3).

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No ramp</td>
</tr>
<tr>
<td>1</td>
<td>Linear (same value for all quadrants)</td>
</tr>
<tr>
<td>2</td>
<td>Linear (2 parameters for acceleration and deceleration, pos. and neg. values equal)</td>
</tr>
<tr>
<td>3</td>
<td>Linear (4 parameters for all quadrants)</td>
</tr>
<tr>
<td>4</td>
<td>Sine square</td>
</tr>
<tr>
<td>5</td>
<td>Profile generator linear (drives positioning control only)</td>
</tr>
<tr>
<td>6</td>
<td>Profile generator sine square (drives positioning control only)</td>
</tr>
<tr>
<td>7 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to –128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6330h</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
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</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>ramp function</em> implemented</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and
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ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
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</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.5.1.13 **Object 6331h: vpoc demand value generator ramp acceleration time**

The *acceleration time* parameter defines the rising speed of the output for ramps with *type* = 1, 2, 4.

OBJECT DESCRIPTION

<table>
<thead>
<tr>
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<th>6331h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator ramp acceleration time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>ramp type</em> = [1, 2, 4]</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Entry Category</td>
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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
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<td>Access</td>
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</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
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</table>
### 7.2.5.1.14 Object 6332h: vpoc demand value generator ramp acceleration time positive

This object is used with `ramp type = 3` (see `/VDMAPROP/`, chapter 9.3.3).

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
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<th>6332h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
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<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
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<td>value parameter record UNSIGNED16 (0081h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <code>ramp type = 3</code></td>
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</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
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<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
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</tbody>
</table>
### Object 6333\(_h\): \textit{vpoc demand value generator ramp acceleration time negative}

This object is used with \textit{ramp type} = 3 (see /VDMAPROP/, chapter 9.3.3).

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6333(_h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>\textit{vpoc demand value generator ramp acceleration time negative}</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081(_h))</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if \textit{ramp type} = 3</td>
</tr>
</tbody>
</table>

#### Sub-Index 01\(_h\)

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>\textit{rw}</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
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</tbody>
</table>

#### Sub-Index 02\(_h\)

<table>
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<th>SI unit</th>
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<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>\textit{ro}; \textit{rw}, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03(_h) (s)</td>
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#### Sub-Index 03\(_h\)

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<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>\textit{ro}; \textit{rw}, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>
## ENTRY DESCRIPTION

<table>
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<tr>
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<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED16</td>
<td>0</td>
</tr>
<tr>
<td>02&lt;sub&gt;h&lt;/sub&gt;</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>03&lt;sub&gt;h&lt;/sub&gt; (s)</td>
</tr>
<tr>
<td>03&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>
7.2.6.1.1 **Object 6334\(_h\): vpoc demand value generator ramp deceleration time**

The acceleration time parameter defines the falling speed of the output for ramps with type = 2.

**OBJECT DESCRIPTION**

<table>
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<tr>
<th>Index</th>
<th>6334(_h)</th>
</tr>
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<tbody>
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<td>Name</td>
<td>vpoc demand value generator ramp deceleration time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081(_h))</td>
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<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp type = 2</td>
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**ENTRY DESCRIPTION**

**Sub-index**: 00\(_h\)

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<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
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<td>Default Value</td>
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**Sub-index**: 01\(_h\)

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<tr>
<td>Access</td>
<td>rw</td>
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<td>PDO mapping</td>
<td>Optional</td>
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<td>Value range</td>
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**Sub-index**: 02\(_h\)

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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03(_h) (s)</td>
</tr>
</tbody>
</table>
Sub-index 03h
Description Prefix
Entry category Optional
Access ro; rw, if prefix changeable
PDO mapping Optional
Value range INTEGER8
Default value -3 (milli)

7.2.6.1.2 Object 6335h: vpoc demand value generator ramp deceleration time positive

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

OBJECT DESCRIPTION

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<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081h)</td>
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<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp type = 3</td>
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ENTRY DESCRIPTION

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<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
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</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
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<table>
<thead>
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</tr>
</thead>
<tbody>
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<tr>
<td>Access</td>
<td>rw</td>
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<tr>
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<tr>
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<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
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</tbody>
</table>
7.2.6.1.3 Object 6336h: vpoc demand value generator ramp deceleration time negative

This object is used with \textit{ramp type} = 3 (see /VDMAPROP/, chapter 9.3.3).

\textbf{OBJECT DESCRIPTION}

<table>
<thead>
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<tbody>
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<td>SI unit</td>
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<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03h (s)</td>
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</tbody>
</table>

<table>
<thead>
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<th>03h</th>
</tr>
</thead>
<tbody>
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<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
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\textbf{ENTRY DESCRIPTION}

<table>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

Sub-index 01h
Description Value
Entry category Mandatory
Access rw
PDO mapping Optional
Value range UNSIGNED16
Default value 0

Sub-index 02h
Description SI unit
Entry category Optional
Access ro;
        rw, if SI unit changeable
PDO mapping Optional
Value range UNSIGNED8
Default value 03h (s)

Sub-index 03h
Description Prefix
Entry category Optional
Access ro;
        rw, if prefix changeable
PDO mapping Optional
Value range INTEGER8
Default value -3 (milli)

7.2.6.1.4 Object 6340h: vpoc demand value generator directional dependent gain type

This object defines a directional dependent influence on the input (see VDMAPROPI, chapter 9.4).

VALUE DESCRIPTION

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>No directional dependent gain</td>
</tr>
<tr>
<td>1</td>
<td>Directional dependent gain type 1</td>
</tr>
<tr>
<td>2 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>
### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6340&lt;sub&gt;h&lt;/sub&gt;</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator directional dependent gain type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>directional dependent gain</em> implemented</td>
</tr>
</tbody>
</table>

### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
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</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

#### 7.2.6.1.5 Object 6341<sub>h</sub>: vpoc demand value generator directional dependent gain factor

The factor is composed of the elements numerator and denominator.

### VALUE DESCRIPTION

The object is composed as shown by (numerator SHL 16) + denominator. This avoids setting numerator and denominator separately.

<table>
<thead>
<tr>
<th>31</th>
<th>16</th>
<th>15</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerator</td>
<td>Denominator</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MSB | LSB

### OBJECT DESCRIPTION

<table>
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<th>6341&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>UNSIGNED32</td>
</tr>
</tbody>
</table>
| Category | Conditional; Mandatory, if *directional dependent gain type = 1*

### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
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<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.6.1.6  **Object 6342_{h}: vpoc demand value generator dead band compensation type**

This object defines the type of the *dead band compensation function* (see `/VDMAPROP/`, chapter 9.6).

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No dead band compensation</td>
</tr>
<tr>
<td>1</td>
<td>Type 1</td>
</tr>
<tr>
<td>2</td>
<td>Type 2</td>
</tr>
<tr>
<td>3 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

<table>
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<tr>
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<th>6342_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator dead band compensation type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>dead band compensation</em> implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
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</thead>
<tbody>
<tr>
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<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.6.1.7  **Object 6343_{h}: vpoc demand value generator dead band compensation A side**

This object defines the step height of the A side.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6343_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator dead band compensation A side</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084_{h})</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>dead band compensation type</em> = [1, 2]</td>
</tr>
</tbody>
</table>
### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
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<th>Entry Category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value Range</th>
<th>Default value</th>
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</thead>
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<tr>
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<td>Value</td>
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<td>rw</td>
<td>Optional</td>
<td>INTEGER16</td>
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</tbody>
</table>

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<th>Entry Category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value Range</th>
<th>Default value</th>
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<tbody>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
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<th>Access</th>
<th>PDO mapping</th>
<th>Value Range</th>
<th>Default value</th>
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<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>No</td>
</tr>
</tbody>
</table>
This parameter determines the step height of the B side.

### OBJECT DESCRIPTION

<table>
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<th>6344h</th>
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<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator dead band compensation B side</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if dead band compensation type = [1, 2]</td>
</tr>
</tbody>
</table>

### ENTRY DESCRIPTION

#### Sub-index 00h
- Description: Number of entries
- Entry Category: Mandatory
- Access: ro
- PDO Mapping: No
- Value Range: 1 to 3
- Default Value: No

#### Sub-index 01h
- Description: Value
- Entry Category: Mandatory
- Access: rw
- PDO Mapping: Optional
- Value range: INTEGER16
- Default value: 0

#### Sub-index 02h
- Description: SI unit
- Entry Category: Optional
- Access: ro; rw, if SI unit changeable
- PDO Mapping: Optional
- Value range: UNSIGNED8
- Default value: ir
### Object 6345h: vpoc demand value generator dead band compensation threshold

This object defines the starting point of the compensation step or ramp.

#### OBJECT DESCRIPTION

<table>
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<th>6345h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator dead band compensation threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if dead band compensation type = [1, 2]</td>
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#### ENTRY DESCRIPTION

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<tr>
<td>Access</td>
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<td>PDO Mapping</td>
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<tr>
<td>Value Range</td>
<td>1 to 3</td>
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<tr>
<td>Value range</td>
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<td>Default value</td>
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</tr>
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Device profile fluid power technology proportional valves and hydrostatic transmission

CiA DSP 408 V 1.5.1

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<th>02h</th>
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</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
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<td>Optional</td>
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<td>Entry category</td>
<td>Optional</td>
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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<td>Value range</td>
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<tr>
<td>Default value</td>
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</table>

7.2.6.1.10 Object 6346h: vpoc demand value generator characteristic compensation type

This function compensates the non-linearities of a valve (see /VDMAPROP/, chapter 9.5).

VALUE DESCRIPTION

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<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No characteristic compensation</td>
</tr>
<tr>
<td>1 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to –128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

OBJECT DESCRIPTION

<table>
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<tr>
<th>Index</th>
<th>6346h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc demand value generator characteristic compensation type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if block implemented</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
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</thead>
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<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.6.1.11 Object 6350h: vpoc control deviation

This object holds the difference between demand value and actual value:

\[
\text{control deviation} = \text{demand value} - \text{actual value}.
\]

Remark: The SI unit of the control deviation is the same as the input (set point).

**OBJECT DESCRIPTION**

<table>
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<th>6350h</th>
</tr>
</thead>
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<tr>
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</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
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<tr>
<td>Category</td>
<td>Optional</td>
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**ENTRY DESCRIPTION**

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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<table>
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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; [ro, if SI unit changeable]</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>(control mode specific)</td>
</tr>
</tbody>
</table>
### 7.2.6.1.12 Object 6351<sub>h</sub>: vpoc control monitoring type

This object defines the type of the *control monitoring function* (see /VDMAPROP/, chapter 9.8).

#### VALUE DESCRIPTION

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<thead>
<tr>
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<th>Description</th>
</tr>
</thead>
<tbody>
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<td>No control monitoring</td>
</tr>
<tr>
<td>1</td>
<td>Standard control monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>2</td>
<td>Standard control monitoring (symmetric threshold)</td>
</tr>
<tr>
<td>3</td>
<td>Dynamic control monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>4</td>
<td>Dynamic control (symmetric threshold)</td>
</tr>
<tr>
<td>5 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

#### OBJECT DESCRIPTION

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<th>6351&lt;sub&gt;h&lt;/sub&gt;</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc control monitoring type</td>
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<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>control monitoring</em> implemented</td>
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#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
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</thead>
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<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
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</table>
7.2.6.1.13 **Object 6352h: vpoc control monitoring delay time**

After the delay time a control deviation will be shown as a control fault.

**OBJECT DESCRIPTION**

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<th>6352h</th>
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<td>vpoc control monitoring delay time</td>
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<tr>
<td>Object code</td>
<td>RECORD</td>
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<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081h)</td>
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<td>Category</td>
<td>Optional</td>
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</table>

**ENTRY DESCRIPTION**

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<tbody>
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<tr>
<td>Entry Category</td>
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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
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</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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</tr>
<tr>
<td>Access</td>
<td>rw</td>
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<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<td>Value range</td>
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<table>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
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<td>PDO mapping</td>
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<td>Value range</td>
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<td>Default value</td>
<td>03h (s)</td>
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## 7.2.6.1.14 Object 6353\(_h\): vpoc control monitoring threshold

This parameter defines the threshold for **control monitoring type** = 2.

### OBJECT DESCRIPTION

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</thead>
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<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
<td>Value range</td>
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</tr>
<tr>
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<td>-3 (milli)</td>
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### ENTRY DESCRIPTION

**Sub-index**: 00\(_h\)

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<tr>
<td>PDO Mapping</td>
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</tr>
<tr>
<td>Value Range</td>
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</tr>
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**Sub-index**: 01\(_h\)

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<tbody>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
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</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
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</tr>
</tbody>
</table>
7.2.6.1.15 Object 6354<sub>h</sub>: vpoc control monitoring upper threshold

This parameter defines the upper threshold for control monitoring type = 1.

**OBJECT DESCRIPTION**

<table>
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<tr>
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<tbody>
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<td>vpoc control monitoring upper threshold</td>
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<tr>
<td>Data type</td>
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<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 1</td>
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**ENTRY DESCRIPTION**

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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
<tr>
<td>Sub-index</td>
<td>01&lt;sub&gt;h&lt;/sub&gt;</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------</td>
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<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
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<tr>
<td>Value range</td>
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<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
<td>Value range</td>
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<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
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</tr>
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### 7.2.6.1.16 Object 6355<sub>h</sub>: vpoc control monitoring lower threshold

This parameter defines the lower threshold for control monitoring type = 1.

#### OBJECT DESCRIPTION

<table>
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<tr>
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<th>6355&lt;sub&gt;h&lt;/sub&gt;</th>
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<tbody>
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<td>vpoc control monitoring lower threshold</td>
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<td>RECORD</td>
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<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084&lt;sub&gt;h&lt;/sub&gt;)</td>
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<td>Category</td>
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<td>Sub-index</td>
<td>Description</td>
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<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>00h</td>
<td>Number of entries</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
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<td>02h</td>
<td>SI unit</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
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</tbody>
</table>
7.2.6.1.17  **Object 6360h: vpoc dither type**

This object defines the type of *dither function* (see `/VDMAPROP/`, chapter 9.2).

**VALUE DESCRIPTION**

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<tr>
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<th>Description</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>Dither function off</td>
</tr>
<tr>
<td>1</td>
<td>Dither with square wave</td>
</tr>
<tr>
<td>2</td>
<td>Dither with triangular wave</td>
</tr>
<tr>
<td>3</td>
<td>Dither with sinusoidal wave (distortion factor 0.001%)</td>
</tr>
<tr>
<td>4 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

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<tr>
<td>Object code</td>
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<tr>
<td>Data type</td>
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<td>Category</td>
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**ENTRY DESCRIPTION**

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<td>Value range</td>
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<tr>
<td>Default value</td>
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</table>

7.2.6.1.18  **Object 6361h: vpoc dither amplitude**

This object defines the amplitude of the *dither function*.

**OBJECT DESCRIPTION**

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<th>6361h</th>
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</thead>
<tbody>
<tr>
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<tr>
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<td>RECORD</td>
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<tr>
<td>Data type</td>
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</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>dither function type</em> = 1</td>
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<tr>
<td>Sub-index</td>
<td>00h</td>
</tr>
<tr>
<td>-----------</td>
<td>-----</td>
</tr>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
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<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
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<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
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</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.6.1.19 Object 6362h: vpoc dither frequency

This object defines the frequency of the dither signal.

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6362h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc dither frequency</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if dither function type = 1</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>20h (Hz)</td>
</tr>
</tbody>
</table>
7.2.6.1.20 **Object 6370\(_h\): vpoc target window monitoring type**

This object defines the type of target monitoring function (see /VDMAPROP/, chapter 9.9).

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No target window monitoring</td>
</tr>
<tr>
<td>1</td>
<td>Standard target window monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>2</td>
<td>Target window monitoring (symmetric threshold)</td>
</tr>
<tr>
<td>3 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

7.2.6.1.21 **Object 6371\(_h\): vpoc target window monitoring switch on time**

This parameter defines the time delay, if the bit of the status word is set to 1, after the control deviation reached the target window range.
## ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED16</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>03h (s)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>
7.2.6.1.22 **Object 6372h: vpoc target window monitoring switch off time**

This parameter defines the time delay, if the bit of the status word is set to 0, after the control deviation is outside the target window range.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6372h</th>
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</thead>
<tbody>
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<td>Name</td>
<td>vpoc target window monitoring switch off time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081h)</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro;</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03h (s)</td>
</tr>
</tbody>
</table>
### 7.2.6.1.23 Object 6373h: vpoc target window monitoring threshold

This parameter defines the threshold for target monitoring type = 2.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6373h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc target window monitoring threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring type = 2</td>
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</table>

#### ENTRY DESCRIPTION

<table>
<thead>
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</thead>
<tbody>
<tr>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
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</table>
### Device profile fluid power technology proportional valves and hydrostatic transmission

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<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>ir</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

#### 7.2.6.1.24 Object 6374<sub>h</sub>: vpoc target window monitoring upper threshold

This object defines the upper threshold for target window monitoring type = 1.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6374&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpoc target window monitoring upper threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084&lt;sub&gt;h&lt;/sub&gt;)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring type = 1</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
### Device profile fluid power technology proportional valves and hydrostatic transmission

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#### Object dictionary

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER16</td>
<td>0</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>No</td>
</tr>
</tbody>
</table>

#### 7.2.6.1.25 Object 6375h: vpoc target window monitoring lower threshold

This object defines the lower threshold for target window monitoring type = 1.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
<th>Object code</th>
<th>Data type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>6375h</td>
<td>vpoc target window monitoring lower threshold</td>
<td>RECORD</td>
<td>value parameter record INTEGER16 (0084h)</td>
<td>Conditional; Mandatory, if target window monitoring type = 1</td>
</tr>
</tbody>
</table>
### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER16</td>
<td>0</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>No</td>
</tr>
</tbody>
</table>
## 7.2.6.2 Control mode: pressure control

The objects defined in this chapter refer to the control modes valve pressure control open loop and valve pressure control closed loop (see /VDMAPROP/, chapter 8.1.3 and 8.1.4). They are also implemented for valve p/Q control.

### 7.2.6.2.1 Object 6380\textsubscript{h}: vprc set point

This object corresponds to the valve pressure control set point (see /VDMAPROP/, chapter 8.1.3 and 8.1.4).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6380\textsubscript{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc set point</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084\textsubscript{h})</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control mode = [3, 4]</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00\textsubscript{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01\textsubscript{h}</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Value</td>
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<tr>
<td>Entry category</td>
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</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
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<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>ir</td>
</tr>
</tbody>
</table>
### Object 6381<sub>h</sub>: vprc actual value

This object holds the *actual value* of the sensor interface instance used for the control algorithm (see `/VDMAPROP/`, chapter 8.1.4).

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6381&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc actual value</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084&lt;sub&gt;h&lt;/sub&gt;)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>control mode</em> = 4</td>
</tr>
</tbody>
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#### ENTRY DESCRIPTION

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</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
### 7.2.6.2.3 Object 6382h: vprc interface reference

This object creates a reference between the controller and the actual value. The parameter specifies the number of the interface, which provides the actual value. A write to this object with a value greater than max interface number has to be rejected.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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</tr>
<tr>
<td>Default value</td>
<td>ir</td>
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</tbody>
</table>

<table>
<thead>
<tr>
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<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
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<td>Optional</td>
</tr>
<tr>
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</tr>
<tr>
<td>Default value</td>
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</table>

#### ENTRY DESCRIPTION

| Access | rw |
| PDO mapping | Optional |
| Value range | UNSIGNED8 |
| Default value | No |
7.2.6.2.4  Object 6390h: vprc demand value generator demand value

This object contains the output of the demand value generator (see /VDMAPROP/, chapter 8.2).

**OBJECT DESCRIPTION**

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<tr>
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<th>6390h</th>
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<tbody>
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<td>Name</td>
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<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
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<tr>
<td>Category</td>
<td>Optional</td>
</tr>
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**ENTRY DESCRIPTION**

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<tr>
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</tr>
<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
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</tr>
<tr>
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<td>Default Value</td>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
<td>Value range</td>
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<tr>
<td>Default value</td>
<td>ir</td>
</tr>
</tbody>
</table>
7.2.6.2.5 Object 6391h: vprc demand value generator reference value

This object contains the reference value, a value corresponding to 100% of the set point (see /VDMAPROP/, chapter 8.2).

OBJECT DESCRIPTION

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<th>03h</th>
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</thead>
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</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
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<tr>
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ENTRY DESCRIPTION

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<tr>
<td>Value Range</td>
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<td>Default Value</td>
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<table>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
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<td>PDO mapping</td>
<td>Optional</td>
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</table>
7.2.6.2.6  **Object 6394h: vprc demand value generator hold set point**

This object contains the *hold set point* (see /VDMAPROP/, chapter 8.2).

**OBJECT DESCRIPTION**

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<td>value parameter record INTEGER16 (0084h)</td>
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**ENTRY DESCRIPTION**

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</thead>
<tbody>
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<tr>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
<tr>
<td>Sub-index</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
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<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
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<tbody>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
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<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
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</table>

### 7.2.6.2.7 Object 63A0h: vprc demand value generator upper limit

This object contains the upper limit of the limit function in the demand value generator (see /VDMAPROP/, chapter 8.2.1). Upper limit < lower limit has to be rejected.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
<th>Object code</th>
<th>Data type</th>
<th>Category</th>
</tr>
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<tbody>
<tr>
<td>63A0h</td>
<td>vprc demand value generator upper limit</td>
<td>RECORD</td>
<td>value parameter record INTEGER16 (0084h)</td>
<td>Conditional; Mandatory, if limit function implemented</td>
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### ENTRY DESCRIPTION

<table>
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<tbody>
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<tr>
<td><strong>Entry Category</strong></td>
<td>Mandatory</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>ro</td>
</tr>
<tr>
<td><strong>PDO Mapping</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Value Range</strong></td>
<td>1 to 3</td>
</tr>
<tr>
<td><strong>Default Value</strong></td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Value</td>
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<tr>
<td><strong>Entry Category</strong></td>
<td>Mandatory</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>rw</td>
</tr>
<tr>
<td><strong>PDO mapping</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Value range</strong></td>
<td>INTEGER16</td>
</tr>
<tr>
<td><strong>Default value</strong></td>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
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</tr>
<tr>
<td><strong>Entry Category</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td><strong>PDO mapping</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Value range</strong></td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td><strong>Default value</strong></td>
<td>ir</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Prefix</td>
</tr>
<tr>
<td><strong>Entry Category</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td><strong>PDO mapping</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Value range</strong></td>
<td>INTEGER8</td>
</tr>
<tr>
<td><strong>Default value</strong></td>
<td>0</td>
</tr>
</tbody>
</table>
### 7.2.6.2.8 Object 63A1ₜ: vprc demand value generator lower limit

This object contains the *lower limit* of the *limit function* in the *demand value generator* (see [V/DMAPROPI/], chapter 8.2.1). *Lower limit > upper limit* has to be rejected.

<table>
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<tr>
<th><strong>OBJECT DESCRIPTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Index</strong></td>
</tr>
<tr>
<td><strong>Name</strong></td>
</tr>
<tr>
<td><strong>Object code</strong></td>
</tr>
<tr>
<td><strong>Data type</strong></td>
</tr>
<tr>
<td><strong>Category</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ENTRY DESCRIPTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-index</strong></td>
</tr>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><strong>Entry Category</strong></td>
</tr>
<tr>
<td><strong>Access</strong></td>
</tr>
<tr>
<td><strong>PDO Mapping</strong></td>
</tr>
<tr>
<td><strong>Value Range</strong></td>
</tr>
<tr>
<td><strong>Default Value</strong></td>
</tr>
</tbody>
</table>

| **Sub-index** | 01ₜ |
| **Description** | Value |
| **Entry category** | Mandatory |
| **Access** | rw |
| **PDO mapping** | Optional |
| **Value range** | INTEGER16 |
| **Default value** | 0 |

| **Sub-index** | 02ₜ |
| **Description** | SI unit |
| **Entry category** | Optional |
| **Access** | ro; rw, if SI unit changeable |
| **PDO mapping** | Optional |
| **Value range** | UNSIGNED8 |
| **Default value** | ir |
7.2.6.2.9 **Object 63A2h: vprc demand value generator scaling factor**

The ‘scaling’ serves to change the resolution or the signal range of the set point derivation.

**VALUE DESCRIPTION**

The factor is composed of the elements numerator and denominator.

\[
\text{value} = (\text{numerator} \text{ SHL} 16) + \text{denominator}
\]

This avoids setting numerator and denominator separately. The value 0 is not allowed neither for numerator nor denominator.

31 16 15 0

<table>
<thead>
<tr>
<th>MSB</th>
<th>LSB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerator</td>
<td>Denominator</td>
</tr>
</tbody>
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**OBJECT DESCRIPTION**

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<tbody>
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<td>Name</td>
<td>vprc demand value generator scaling factor</td>
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<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
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**ENTRY DESCRIPTION**

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7.2.6.2.10 **Object 63A3h: vprc demand value generator scaling offset**

This object defines the offset used in the *scaling function*.

**OBJECT DESCRIPTION**

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<tbody>
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<td>Object code</td>
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<tr>
<td>Data type</td>
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<tr>
<td>Category</td>
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## ENTRY DESCRIPTION

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<th>Access</th>
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<th>Value Range</th>
<th>Default Value</th>
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<tr>
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<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER16</td>
<td>0</td>
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<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
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</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

Object dictionary CiA DSP 408 V 1.5.1

7.2.6.2.11 Object 63A4h: vprc demand value generator zero correction offset

This object defines the offset used for zero correction function (see /VDMAPROP/, chapter 9.7).

OBJECT DESCRIPTION

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ENTRY DESCRIPTION

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<tr>
<td>Value Range</td>
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<tr>
<td>Default Value</td>
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</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
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</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

Object dictionary

CiA DSP 408 V 1.5.1

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<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
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### 7.2.6.2.12 Object 63B0h: vprc demand value generator ramp type

This object defines the ramp type used in the ramp function of the demand value generator (see `/VDMAPROP/`, chapter 9.3).

#### VALUE DESCRIPTION

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<th>Description</th>
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<tbody>
<tr>
<td>0</td>
<td>No ramp</td>
</tr>
<tr>
<td>1</td>
<td>Linear (same value for all quadrants)</td>
</tr>
<tr>
<td>2</td>
<td>Linear (2 parameters for acceleration and deceleration, pos. and neg. values equal)</td>
</tr>
<tr>
<td>3</td>
<td>Linear (4 parameters for all quadrants)</td>
</tr>
<tr>
<td>4</td>
<td>Sine square</td>
</tr>
<tr>
<td>5</td>
<td>Profile generator linear (drives positioning control only)</td>
</tr>
<tr>
<td>6</td>
<td>Profile generator sine square (drives positioning control only)</td>
</tr>
<tr>
<td>7 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
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</tbody>
</table>

#### OBJECT DESCRIPTION

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</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc demand value generator ramp type</td>
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<tr>
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<td>Data type</td>
<td>INTEGER8</td>
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<td>Category</td>
<td>Conditional; Mandtory, if ramp function implemented</td>
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<tr>
<td>Default value</td>
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</table>
7.2.6.2.13 Object 63B1h: vprc demand value generator ramp acceleration time

The acceleration time parameter defines the rising speed of the output for ramps with type = 1,2,4.

**OBJECT DESCRIPTION**

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<th>63B1h</th>
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<tr>
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<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp type = [1, 2, 4]</td>
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**ENTRY DESCRIPTION**

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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
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<td>Default Value</td>
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<table>
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<tr>
<td>Access</td>
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<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
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<tr>
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</tr>
<tr>
<td>Default value</td>
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</table>
### 7.2.6.2.14 Object 63B2h: vprd demand value generator ramp acceleration time positive

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

**OBJECT DESCRIPTION**

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<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
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</table>

**ENTRY DESCRIPTION**

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<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
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<td>UNSIGNED16</td>
</tr>
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<td>Default value</td>
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</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

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Sub-index 02h
Description SI unit
Entry category Optional
Access ro; rw, if SI unit changeable
PDO mapping Optional
Value range UNSIGNED8
Default value 03h (s)

Sub-index 03h
Description Prefix
Entry category Optional
Access ro; rw, if prefix changeable
PDO mapping Optional
Value range INTEGER8
Default value -3 (milli)

7.2.6.2.15 Object 63B3h: vprc demand value generator ramp acceleration time negative

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

OBJECT DESCRIPTION

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<td>Category</td>
<td>Conditional; Mandatory, if ramp type = 3</td>
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ENTRY DESCRIPTION

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</thead>
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<tr>
<td>Entry Category</td>
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<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
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<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

Sub-index: 01h
Description: Value
Entry category: Mandatory
Access: rw
PDO mapping: Optional
Value range: UNSIGNED16
Default value: 0

Sub-index: 02h
Description: SI unit
Entry category: Optional
Access: ro;
rv, if SI unit changeable
PDO mapping: Optional
Value range: UNSIGNED8
Default value: 03h (s)

Sub-index: 03h
Description: Prefix
Entry category: Optional
Access: ro;
rv, if prefix changeable
PDO mapping: Optional
Value range: INTEGER8
Default value: -3 (milli)

7.2.6.2.16 Object 63B4h: vprc demand value generator ramp deceleration time

The acceleration time parameter defines the falling speed of the output for ramps with type = 2.

OBJECT DESCRIPTION

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<td>RECORD</td>
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<td>Category</td>
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<th>PDO Mapping</th>
<th>Value Range</th>
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<td>Mandatory</td>
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<td>1 to 3</td>
<td>No</td>
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<th>Entry Category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
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</thead>
<tbody>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED16</td>
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<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
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<td>ro;</td>
<td>Optional</td>
<td>UNSIGNED8</td>
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<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
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</table>
7.2.6.2.17 Object 63B5h: vprc demand value generator ramp deceleration time positive

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

**OBJECT DESCRIPTION**

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<td>Object code</td>
<td>RECORD</td>
</tr>
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<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp type = 3</td>
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**ENTRY DESCRIPTION**

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<tr>
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<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
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<tr>
<td>Value Range</td>
<td>1 to 3</td>
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<tr>
<td>Default Value</td>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
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</tr>
<tr>
<td>Value range</td>
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<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
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<tr>
<td>PDO mapping</td>
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<tr>
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</tr>
<tr>
<td>Default value</td>
<td>03h (s)</td>
</tr>
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</table>
Object 63B6h: vprc demand value generator ramp deceleration time negative

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

**OBJECT DESCRIPTION**

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<td>Entry category</td>
<td>Optional</td>
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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
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<tr>
<td>Default value</td>
<td>-3 (milli)</td>
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**ENTRY DESCRIPTION**

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<tr>
<td>Value Range</td>
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<tr>
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Device profile fluid power technology proportional valves and hydrostatic transmission

### Object dictionary

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<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
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<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>03h (s)</td>
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<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
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</thead>
<tbody>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
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</table>

### 7.2.6.2.19 Object 63C0h: vprc demand value generator directional dependent gain type

This object defines a directional dependent influence on the input (see /VDMAPROPI/, chapter 9.4).

#### VALUE DESCRIPTION

<table>
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<th>Description</th>
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<tbody>
<tr>
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<tr>
<td>1</td>
<td>Directional dependent gain type 1</td>
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<tr>
<td>2 to 127</td>
<td>reserved</td>
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<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
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</table>

#### OBJECT DESCRIPTION

<table>
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<td>vprc demand value generator directional dependent gain type</td>
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<table>
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<th>Category</th>
</tr>
</thead>
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#### ENTRY DESCRIPTION

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<tr>
<td>rw</td>
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</table>
**Device profile fluid power technology proportional valves and hydrostatic transmission**

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**7.2.6.2.20 Object 63C1h: vprc demand value generator directional dependent gain factor**

The factor is composed of the elements numerator and denominator.

**VALUE DESCRIPTION**

The object is composed as shown by (numerator SHL 16)+denominator. This avoids setting numerator and denominator separately.

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<tr>
<th>Value</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>No dead band compensation</td>
</tr>
<tr>
<td>1</td>
<td>Type 1</td>
</tr>
<tr>
<td>2</td>
<td>Type 2</td>
</tr>
<tr>
<td>3 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>63C1h</td>
<td>vprc demand value generator directional dependent gain factor</td>
</tr>
<tr>
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<td>VAR</td>
</tr>
<tr>
<td>UNSIGNED32</td>
<td>UNSIGNED32</td>
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<td>Conditional; Mandatory, if directional dependent gain type = 1 implemented</td>
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</table>

**ENTRY DESCRIPTION**

Access: rw

PDO mapping: Optional

Value range: UNSIGNED32

Default value: No

---

**7.2.6.2.21 Object 63C2h: vprc demand value generator dead band compensation type**

This object defines the type of the dead band compensation function (see VDMAPROP/, chapter 9.6).

**VALUE DESCRIPTION**

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<th>Value</th>
<th>Description</th>
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</thead>
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<tr>
<td>1</td>
<td>Type 1</td>
</tr>
<tr>
<td>2</td>
<td>Type 2</td>
</tr>
<tr>
<td>3 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
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</table>

**OBJECT DESCRIPTION**

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<th>Name</th>
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</thead>
<tbody>
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<td>VAR</td>
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<td>INTEGER8</td>
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<tr>
<td>Conditional; Mandatory, if dead band compensation implemented</td>
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</tbody>
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ENTRY DESCRIPTION

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<td>Value range</td>
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</tr>
<tr>
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</table>

### 7.2.6.2.22 Object 63C3h: vprc demand value generator dead band compensation A side

This object defines the step height of the A side.

**OBJECT DESCRIPTION**

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<th>63C3h</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
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**ENTRY DESCRIPTION**

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<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
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<table>
<thead>
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<th>01h</th>
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<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
### Object 63C4: vprc demand value generator dead band compensation B side

This parameter determines the step height of the B side.

#### OBJECT DESCRIPTION

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<tr>
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<th>63C4h</th>
</tr>
</thead>
<tbody>
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<td>Name</td>
<td>vprc demand value generator dead band compensation B side</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if dead band compensation type = [1, 2]</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
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<th>00h</th>
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<tbody>
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<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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### Device profile fluid power technology proportional valves and hydrostatic transmission

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<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
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<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER16</td>
<td>0</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>0</td>
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</table>

7.2.6.2.24 **Object 63C5h: vprc demand value generator dead band compensation threshold**

This object defines the starting point of the compensation step or ramp.

**OBJECT DESCRIPTION**

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<th>Object code</th>
<th>Data type</th>
<th>Category</th>
</tr>
</thead>
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<td>vprc demand value generator dead band compensation threshold</td>
<td>RECORD</td>
<td>value parameter record INTEGER16 (0084h)</td>
<td>Conditional; Mandatory, if dead band compensation type = [1, 2]</td>
</tr>
</tbody>
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### ENTRY DESCRIPTION

<table>
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<tr>
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<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER16</td>
<td>0</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>0</td>
</tr>
</tbody>
</table>
7.2.6.2.25  **Object 63C6ₜ: vprc demand value generator characteristic compensation type**

This function compensates the non-linearities of a valve (see /VDMAPROP/, chapter 9.5).

**VALUE DESCRIPTION**

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<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No characteristic compensation</td>
</tr>
<tr>
<td>1 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
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</table>

**OBJECT DESCRIPTION**

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<th>63C6ₜ</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc demand value generator characteristic compensation type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if block implemented</td>
</tr>
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**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
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<th>rw</th>
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</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.6.2.26  **Object 63D0ₜ: vprc control deviation**

This object holds the difference between *demand value* and *actual value*:

\[
\text{control deviation} = \text{demand value} - \text{actual value}
\]

Remark: The SI unit of the *control deviation* is the same as the input (set point).

**OBJECT DESCRIPTION**

<table>
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<th>Index</th>
<th>63D0ₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc control deviation</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084ₜ)</td>
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<tr>
<td>Category</td>
<td>Optional</td>
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**ENTRY DESCRIPTION**

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<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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</table>
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Object dictionary

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<table>
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<th>01h</th>
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<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO mapping</td>
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<td>Value range</td>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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<td>(control mode specific)</td>
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<table>
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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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</tr>
<tr>
<td>Default value</td>
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</table>

7.2.6.2.27 Object 63D1h: vprc control monitoring type

This object defines the type of the control monitoring function (see /VDMAPROP/, chapter 9.8).

VALUE DESCRIPTION

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No control monitoring</td>
</tr>
<tr>
<td>1</td>
<td>Standard control monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>2</td>
<td>Standard control monitoring (symmetric threshold)</td>
</tr>
<tr>
<td>3</td>
<td>Dynamic control monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>4</td>
<td>Dynamic control (symmetric threshold)</td>
</tr>
<tr>
<td>5 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
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### OBJECT DESCRIPTION

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<tbody>
<tr>
<td>Name</td>
<td>vprc control monitoring type</td>
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<tr>
<td>Object code</td>
<td>VAR</td>
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<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring implemented</td>
</tr>
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</table>

### ENTRY DESCRIPTION

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<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
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</table>

7.2.6.2.28 Object 63D2h: vprc control monitoring delay time

After the delay time a control deviation will be shown as a control fault.

### OBJECT DESCRIPTION

<table>
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<th>63D2h</th>
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<tbody>
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<td>Name</td>
<td>vprc control monitoring delay time</td>
</tr>
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<td>Object code</td>
<td>RECORD</td>
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<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081h)</td>
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<tr>
<td>Category</td>
<td>Optional</td>
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### ENTRY DESCRIPTION

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<tr>
<td>Entry Category</td>
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<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Sub-index</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
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</table>
### 7.2.6.2.29 Object 63D3h: vprc control monitoring threshold

This parameter defines the threshold for control monitoring type = 2.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>63D3h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc control monitoring threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 2</td>
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</table>

**ENTRY DESCRIPTION**

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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
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| Sub-index | 01h |
| Description | Value |
| Entry category | Mandatory |
| Access | rw |
| PDO mapping | Optional |
| Value range | INTEGER16 |
| Default value | 0 |

| Sub-index | 02h |
| Description | SI unit |
| Entry category | Optional |
| Access | ro; rw, if SI unit changeable |
| PDO mapping | Optional |
| Value range | UNSIGNED8 |
| Default value | ir |

| Sub-index | 03h |
| Description | Prefix |
| Entry category | Optional |
| Access | ro; rw, if prefix changeable |
| PDO mapping | Optional |
| Value range | INTEGER8 |
| Default value | 0 |

### 7.2.6.2.30 Object 63D4h: vprc control monitoring upper threshold

This parameter defines the *upper threshold* for *control monitoring type* = 1.

**OBJECT DESCRIPTION**

<p>| Index | 63D4h |
| Name | vprc control monitoring upper threshold |
| Object code | RECORD |
| Data type | value parameter record INTEGER16 (0084h) |
| Category | Conditional; Mandatory, if <em>control monitoring type</em> = 1 |</p>
<table>
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<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
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<tr>
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<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER16</td>
<td>0</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>0</td>
</tr>
</tbody>
</table>
7.2.6.2.31 **Object 63D5h: vprc control monitoring lower threshold**

This parameter defines the *lower threshold* for *control monitoring type* $= 1$.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>63D5h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc control monitoring lower threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>control monitoring type</em> $= 1$</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

**Sub-index** 00h

- **Description**: Number of entries
- **Entry Category**: Mandatory
- **Access**: ro
- **PDO Mapping**: No
- **Value Range**: 1 to 3
- **Default Value**: No

**Sub-index** 01h

- **Description**: Value
- **Entry Category**: Mandatory
- **Access**: rw
- **PDO mapping**: Optional
- **Value range**: INTEGER16
- **Default value**: 0

**Sub-index** 02h

- **Description**: SI unit
- **Entry category**: Optional
- **Access**: ro; rw, if SI unit changeable
- **PDO mapping**: Optional
- **Value range**: UNSIGNED8
- **Default value**: ir
7.2.6.2.32 **Object 63E0₃h: vprc dither type**

This object defines the type of dither function (see `/VDMAPROP/`, chapter 9.2).

### VALUE DESCRIPTION

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Dither function off</td>
</tr>
<tr>
<td>1</td>
<td>Dither with square wave</td>
</tr>
<tr>
<td>2</td>
<td>Dither with triangular wave</td>
</tr>
<tr>
<td>3</td>
<td>Dither with sinusoidal wave (distortion factor 0.001%)</td>
</tr>
<tr>
<td>4 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

### OBJECT DESCRIPTION

- **Index**: 63E0₃h
- **Name**: vprc dither type
- **Object code**: VAR
- **Data type**: INTEGER8
- **Category**: Conditional; Mandatory, if dither function implemented

### ENTRY DESCRIPTION

- **Access**: rw
- **PDO mapping**: Optional
- **Value range**: INTEGER8
- **Default value**: No
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7.2.6.2.33  **Object 63E1\textsubscript{h}: vprc dither amplitude**

This object defines the *amplitude* of the *dither function*.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>63E1\textsubscript{h}</th>
</tr>
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<tr>
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<td>vprc dither amplitude</td>
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<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081\textsubscript{h})</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>dither function type</em> = 1</td>
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**ENTRY DESCRIPTION**

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</thead>
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</tr>
<tr>
<td>Access</td>
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<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<table>
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<tbody>
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<td>Value</td>
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</tr>
<tr>
<td>Access</td>
<td>rw</td>
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<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
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</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02\textsubscript{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>ir</td>
</tr>
</tbody>
</table>
This object defines the frequency of the dither signal.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
### Sub-index 02ₜ

<table>
<thead>
<tr>
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<th>SI unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>20ₜ (Hz)</td>
</tr>
</tbody>
</table>

### Sub-index 03ₜ

<table>
<thead>
<tr>
<th>Description</th>
<th>Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

#### 7.2.6.2.35 Object 63F₀ₜ: vprc target window monitoring type

This object defines the type of target monitoring function (see /VDMAPROP/, chapter 9.9).

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No target window monitoring</td>
</tr>
<tr>
<td>1</td>
<td>Standard target window monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>2</td>
<td>Target window monitoring (symmetric threshold)</td>
</tr>
<tr>
<td>3 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>63F₀ₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc target window monitoring type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.6.2.36 Object 63F1h: vprc target window monitoring switch on time

This parameter defines the time delay, if the bit of the status word is set to 1, after the control deviation reached the target window range.

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>63F1h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc target window monitoring switch on time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record unsigned16 (0081h)</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03h (s)</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission CiA DSP 408 V 1.5.1

Sub-index | 03h
---|---
Description | Prefix
Entry category | Optional
Access | ro; rw, if prefix changeable
PDO mapping | Optional
Value range | INTEGER8
Default value | -3 (milli)

7.2.6.2.37 Object 63F2h: vprc target window monitoring switch off time

This parameter defines the time delay, if the bit of the status word is set to 0, after the control deviation is outside the target window range.

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>63F2h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc target window monitoring switch off time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081h)</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

CiA DSP 408 V 1.5.1

<table>
<thead>
<tr>
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<th>(02_{\text{h}})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>(03_{\text{h}}) (s)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>(03_{\text{h}})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

### 7.2.6.2.38 Object 63F3\(_{\text{h}}\) - vprc target window monitoring threshold

This parameter defines the threshold for target monitoring type = 2.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>63F3(_{\text{h}})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc target window monitoring threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084(_{\text{h}}))</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory if target window monitoring type = 2</td>
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#### ENTRY DESCRIPTION

<table>
<thead>
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<th>(00_{\text{h}})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
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### Sub-index 01h

<table>
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<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
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</table>

### Sub-index 02h

<table>
<thead>
<tr>
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<th>SI unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>ir</td>
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### Sub-index 03h

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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

#### 7.2.6.2.39 Object 63F4h: vprc target window monitoring upper threshold

This object defines the upper threshold for target window monitoring type = 1.

**OBJECT DESCRIPTION**

<table>
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<th>63F4h</th>
</tr>
</thead>
<tbody>
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<td>vprc target window monitoring upper threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring type = 1</td>
</tr>
</tbody>
</table>
## ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER16</td>
<td>0</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>0</td>
</tr>
</tbody>
</table>
7.2.6.2.40 **Object 63F5h: vprc target window monitoring lower threshold**

This object defines the *lower threshold* for *target window monitoring type = 1*.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>63F5h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vprc target window monitoring lower threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>target window monitoring type = 1</em></td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>ir</td>
</tr>
</tbody>
</table>
7.2.6.3 Controller mode: valve p/Q control

The objects defined in this chapter refer to the control mode valve p/Q control (see /VDMAPROP/, chapter 8.1.5).

7.2.6.3.1 Object 640Dₜ: vpqc power limit factor

The power limit factor determines the maximum hydrostatic power.

VALUE DESCRIPTION

The object holds the quotient of nominal actuation power and hydrostatic corner power. The value 0 is not allowed for both numerator and denominator. The object is composed by

\[ value = (\text{nominal actuation power SHL 16}) + \text{hydrostatic corner power}. \]

<table>
<thead>
<tr>
<th>31</th>
<th>16</th>
<th>15</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSB</td>
<td>Nominal actuation power (numerator)</td>
<td>Hydrostatic corner power (denominator)</td>
<td>LSB</td>
</tr>
</tbody>
</table>

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>640Dₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpqc power limit factor</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control mode = 5</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.6.3.2 **Object 640E₈: vpqc hydrostatic actual power**

The *hydrostatic actual power* is calculated by the controller from the input physical actual values.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>640E₈ₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpqc hydrostatic actual power</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084ₜ)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>control mode</em> = 5</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

**Sub-index: 00ₜ**

<table>
<thead>
<tr>
<th>Description</th>
<th>Number of entries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

**Sub-index: 01ₜ**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

**Sub-index: 02ₜ**

<table>
<thead>
<tr>
<th>Description</th>
<th>SI unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>ir</td>
</tr>
</tbody>
</table>
7.2.6.3.3  **Object 6460<sub>h</sub>: vpqc dither type**

This object defines the type of dither function (see /VDMAPROP/, chapter 9.2).

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Dither function off</td>
</tr>
<tr>
<td>1</td>
<td>Dither with square wave</td>
</tr>
<tr>
<td>2</td>
<td>Dither with triangular wave</td>
</tr>
<tr>
<td>3</td>
<td>Dither with sinusoidal wave (distortion factor 0.001%)</td>
</tr>
<tr>
<td>-4 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

- **Index**: 6460<sub>h</sub>
- **Name**: vpqc dither type
- **Object code**: VAR
- **Data type**: INTEGER8
- **Category**: Conditional; Mandatory, if dither function implemented

**ENTRY DESCRIPTION**

- **Access**: rw
- **PDO mapping**: Optional
- **Value range**: INTEGER8
- **Default value**: No
7.2.6.3.4 Object 6461h: vpqc dither amplitude

This object defines the \textit{amplitude} of the \textit{dither function}.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6461h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpqc dither amplitude</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if \textit{dither function type} = 1</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

**Sub-index 00h**
- Description: Number of entries
- Entry Category: Mandatory
- Access: ro
- PDO Mapping: No
- Value Range: 1 to 3
- Default Value: No

**Sub-index 01h**
- Description: Value
- Entry Category: Mandatory
- Access: rw
- PDO mapping: Optional
- Value range: UNSIGNED16
- Default value: 0

**Sub-index 02h**
- Description: SI unit
- Entry category: Optional
- Access: ro; rw, if SI unit changeable
- PDO mapping: Optional
- Value range: UNSIGNED8
- Default value: ir
**Sub-index** 03_{h}

**Description** Prefix

**Entry category** Optional

**Access** ro; rw, if prefix changeable

**PDO mapping** Optional

**Value range** INTEGER8

**Default value** 0

### 7.2.6.3.5 Object 6462_{h}: vpqc dither frequency

This object defines the frequency of the dither signal.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Number of entries</td>
</tr>
<tr>
<td><strong>Entry category</strong></td>
<td>Mandatory</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>ro</td>
</tr>
<tr>
<td><strong>PDO Mapping</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Value Range</strong></td>
<td>1 to 3</td>
</tr>
<tr>
<td><strong>Default Value</strong></td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Value</td>
</tr>
<tr>
<td><strong>Entry category</strong></td>
<td>Mandatory</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>rw</td>
</tr>
<tr>
<td><strong>PDO mapping</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Value range</strong></td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td><strong>Default value</strong></td>
<td>0</td>
</tr>
</tbody>
</table>
### Sub-index 02<sub>h</sub>

**Description**: SI unit  
**Entry category**: Optional  
**Access**: ro; rw, if SI unit changeable  
**PDO mapping**: Optional  
**Value range**: UNSIGNED8  
**Default value**: 20<sub>h</sub> (Hz)

### Sub-index 03<sub>h</sub>

**Description**: Prefix  
**Entry category**: Optional  
**Access**: ro; rw, if prefix changeable  
**PDO mapping**: Optional  
**Value range**: INTEGER8  
**Default value**: 0

### 7.2.6.3.6 Object 6470<sub>h</sub>: vpqc target window monitoring type

This object defines the type of target monitoring function (see /VDMAPROP/, chapter 9.9).

#### VALUE DESCRIPTION

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No target window monitoring</td>
</tr>
<tr>
<td>1</td>
<td>Standard target window monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>2</td>
<td>Target window monitoring (symmetric threshold)</td>
</tr>
<tr>
<td>3 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6470&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpqc target window monitoring type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring implemented</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.6.3.7 **Object 6471ₜ**: vpqc target window monitoring switch on time

This parameter defines the time delay, if the bit of the status word is set to 1, after the control deviation reached the target window range.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6471ₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpqc target window monitoring switch on time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED16 (0081ₜ)</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00ₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01ₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02ₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03ₜ (s)</td>
</tr>
</tbody>
</table>
### 7.2.6.3.8 Object 6472\(_h\): vpqc target window monitoring switch off time

This parameter defines the time delay, if the bit of the status word is set to 0, after the control deviation is outside the target window range.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03(_h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00(_h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01(_h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED16</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03h (s)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

### 7.2.6.3.9 Object 6473h: vpqc target window monitoring threshold

This parameter defines the threshold for target monitoring type = 2.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6473h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpqc target window monitoring threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring type = 2</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
### Sub-index 01h

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

### Sub-index 02h

<table>
<thead>
<tr>
<th>Description</th>
<th>SI unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>ir</td>
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</table>

### Sub-index 03h

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

#### 7.2.6.3.10 Object 6474h: vpqc target window monitoring upper threshold

This object defines the upper threshold for target window monitoring type = 1.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6474h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpqc target window monitoring upper threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring type = 1</td>
</tr>
</tbody>
</table>
### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER16</td>
<td>No</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>ir</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>0</td>
</tr>
</tbody>
</table>
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7.2.6.3.11 Object 6475h: vpqc target window monitoring lower threshold

This object defines the lower threshold for target window monitoring type = 1.

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6475h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>vpqc target window monitoring lower threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER16 (0084h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring type = 1</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER16</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>ir</td>
</tr>
</tbody>
</table>
7.2.7 Hydrostatic transmissions (drives)

7.2.7.1 Control mode: open loop movement

The objects defined in this chapter refer to the control mode drive open loop movement (see /VDMAPROP/, chapter 7.1.1).

7.2.7.1.1 Object 6480h: dcol set point

This object corresponds to the open loop set point (see /VDMAPROP/, chapter 7.1.1).

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6480h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dcol set point</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control mode = 6</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
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<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
### Device profile fluid power technology proportional valves and hydrostatic transmission

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>A1&lt;sub&gt;h&lt;/sub&gt; (m/min)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

#### 7.2.7.1.2 Object 6490<sub>h</sub>: dcol demand value generator demand value

This object contains the output of the demand value generator (see /VDMAPROP/, chapter 7.2).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6490&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dcol demand value generator demand value</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085&lt;sub&gt;h&lt;/sub&gt;)</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
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</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>ro</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>0</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>(control mode specific)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>(control mode specific)</td>
</tr>
</tbody>
</table>

7.2.7.1.3 Object 6492h: dcol demand value generator reference A value

This object contains the reference value for direction A, a value corresponding to 100% of physical capabilities (see /VDMAPROP/, chapter 7.2). If only one reference value is used, reference A value is valid for both directions.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
<th>Object code</th>
<th>Data type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>6492h</td>
<td>dcol demand value generator reference A value</td>
<td>RECORD</td>
<td>value parameter record INTEGER32 (0085h)</td>
<td>Optional</td>
</tr>
<tr>
<td>Sub-index</td>
<td>Description</td>
<td>Entry Category</td>
<td>Access</td>
<td>PDO Mapping</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>----------------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>00&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
</tr>
<tr>
<td>01&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
</tr>
<tr>
<td>02&lt;sub&gt;h&lt;/sub&gt;</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
</tr>
<tr>
<td>03&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
</tr>
</tbody>
</table>
7.2.7.1.4 Object 6493: dcol demand value generator reference B value

This object contains the reference value for direction B, a value corresponding to 100% of physical capabilities (see /VDMAPROP/, chapter 7.2).

### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6493&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dcol demand value generator reference B value</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085&lt;sub&gt;h&lt;/sub&gt;)</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

### ENTRY DESCRIPTION

#### Sub-index 00<sub>h</sub>
- **Description**: Number of entries
- **Entry Category**: Mandatory
- **Access**: ro
- **PDO Mapping**: No
- **Value Range**: 1 to 3
- **Default Value**: No

#### Sub-index 01<sub>h</sub>
- **Description**: Value
- **Entry category**: Mandatory
- **Access**: rw
- **PDO mapping**: Optional
- **Value range**: INTEGER32
- **Default value**: 0

#### Sub-index 02<sub>h</sub>
- **Description**: SI unit
- **Entry category**: Optional
- **Access**: ro;
  
  rw, if SI unit changeable
- **PDO mapping**: Optional
- **Value range**: UNSIGNED8
- **Default value**: (control mode specific)
### Object 6494: dcol demand value generator hold set point

This object contains the **hold set point** (see /VDMAPROP/, chapter 7.2).

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6494_{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dcol demand value generator hold set point</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085_{h})</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

**Sub-index 00_{h}**

<table>
<thead>
<tr>
<th>Description</th>
<th>Number of entries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

**Sub-index 01_{h}**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
### Object 64A0h: dcol demand value generator upper limit

This object contains the upper limit of the limit function in the demand value generator (see /VDMAPROP/, chapter 7.2.1). Upper limit < lower limit has to be rejected.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>64A0h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dcol demand value generator upper limit</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if limit function implemented</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
### Object 64A1\textsubscript{h}: dcol demand value generator lower limit

This object contains the *lower limit* of the *limit function* in the demand value generator (see \texttt{VDMAPROPI}, chapter 7.2.1). *Lower limit* > *upper limit* has to be rejected.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>64A1\textsubscript{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dcol demand value generator lower limit</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085\textsubscript{h})</td>
</tr>
</tbody>
</table>
| Category | Conditional;  
Mandatory, if *limit function* implemented |
### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>0</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>(control mode specific)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>(control mode specific)</td>
</tr>
</tbody>
</table>
7.2.7.1.8 **Object 64B0\textsubscript{h}: dcol demand value generator ramp type**

This object defines the ramp type used in the ramp function of the demand value generator (see /VDMAPROP/, chapter 9.3).

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No ramp</td>
</tr>
<tr>
<td>1</td>
<td>Linear (same value for all quadrants)</td>
</tr>
<tr>
<td>2</td>
<td>Linear (2 parameters for acceleration and deceleration, pos. and neg. values equal)</td>
</tr>
<tr>
<td>3</td>
<td>Linear (4 parameters for all quadrants)</td>
</tr>
<tr>
<td>4</td>
<td>Sine square</td>
</tr>
<tr>
<td>5</td>
<td>Profile generator linear (drives positioning control only)</td>
</tr>
<tr>
<td>6</td>
<td>Profile generator sine square (drives positioning control only)</td>
</tr>
<tr>
<td>7 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>64B0\textsubscript{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dcol demand value generator ramp type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.7.1.9 **Object 64B1\textsubscript{h}: dcol demand value generator ramp acceleration time**

The acceleration time parameter defines the rising speed of the output for ramps with type = 1, 2, 4.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>64B1\textsubscript{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dcol demand value generator ramp acceleration time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082\textsubscript{h})</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp type = [1, 2, 4]</td>
</tr>
<tr>
<td>Sub-index</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>00h</td>
<td>Number of entries</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
</tr>
</tbody>
</table>
7.2.7.1.10  **Object 64B2_h: dcol demand value generator ramp acceleration time positive**

This object is used with `ramp type = 3` (see `/VDMAPROP/`, chapter 9.3.3).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>64B2_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dcol demand value generator ramp acceleration time positive</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082_h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <code>ramp type = 3</code></td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03_h (s)</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and
Object dictionary hydrostatic transmission CiA DSP 408 V 1.5.1

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

### 7.2.7.1.11 Object 64B3h: dcol demand value generator ramp acceleration time negative

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>64B3h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dcol demand value generator ramp acceleration time negative</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp type = 3</td>
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#### ENTRY DESCRIPTION

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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<tr>
<td>Access</td>
<td>rw</td>
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</table>
The acceleration time parameter defines the falling speed of the output for ramps with type = 2.

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<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
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<tr>
<td>Default Value</td>
<td>No</td>
</tr>
<tr>
<td>Sub-index</td>
<td>01&lt;sub&gt;h&lt;/sub&gt;</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------</td>
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<tr>
<td>Description</td>
<td>Value</td>
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<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<td>Value range</td>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
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<tr>
<td>PDO mapping</td>
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<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
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<tr>
<td>Value range</td>
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<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

### 7.2.7.1.13 Object 64B5<sub>h</sub>: dcol demand value generator ramp deceleration time positive

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

#### OBJECT DESCRIPTION

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<td>Category</td>
<td>Conditional; Mandatory, if ramp type = 3</td>
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<td>Sub-index</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>---------------</td>
</tr>
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<td>01h</td>
<td>Value</td>
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<tr>
<td>02h</td>
<td>SI unit</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
</tr>
</tbody>
</table>
### 7.2.7.1.14 Object 64B6h: dcol demand value generator ramp deceleration time negative

This object is used with \textit{ramp type} = 3 (see /VDMAPROP/, chapter 9.3.3).

#### OBJECT DESCRIPTION

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#### ENTRY DESCRIPTION

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<tr>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<td>Value</td>
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<tr>
<td>Entry category</td>
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</tr>
<tr>
<td>Access</td>
<td>rw</td>
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<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
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<td>Value range</td>
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<td>Optional</td>
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<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
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<tr>
<td>Value range</td>
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<tr>
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<td>03h (s)</td>
</tr>
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</table>
7.2.7.2 Control mode: speed control

The objects defined in this chapter refer to the control mode drive speed control (see /VDMAPROP/, chapter 7.1.3).

7.2.7.2.1 Object 6500h: dsc set point

This object corresponds to the drive speed control set point (see /VDMAPROP/, chapter 7.1.3).
### Sub-index 02h

**Description**  
SI unit

**Entry category**  
Optional

**Access**  
ro;  
rw, if SI unit changeable

**PDO mapping**  
Optional

**Value range**  
UNSIGNED8

**Default value**  
A1, (m/min)

---

### Sub-index 03h

**Description**  
Prefix

**Entry category**  
Optional

**Access**  
ro;  
rw, if prefix changeable

**PDO mapping**  
Optional

**Value range**  
INTEGER8

**Default value**  
-3 (milli)

---

#### 7.2.7.2.2 Object 6501h: dsc actual value

This object holds the actual value of the sensor interface instance used for the control algorithm (see /VDMAPROP/, chapter 7.1.3).

**OBJECT DESCRIPTION**

<table>
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<th>6501h</th>
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</tr>
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</tr>
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<td>Data type</td>
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**ENTRY DESCRIPTION**

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</tr>
<tr>
<td>Value Range</td>
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</tr>
<tr>
<td>Default Value</td>
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</tr>
<tr>
<td>Sub-index</td>
<td>01&lt;sub&gt;h&lt;/sub&gt;</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------</td>
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<td>Description</td>
<td>Value</td>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
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<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
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<td>Default value</td>
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<table>
<thead>
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<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
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<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

### 7.2.7.2.3 Object 6502<sub>h</sub>: dsc interface reference

This object creates a reference between the controller and the *actual value*. The parameter specifies the number of the interface, which provides the *actual value*. A write to this object with a value greater than *max interface number* has to be rejected.

**OBJECT DESCRIPTION**

<table>
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<tr>
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<th>6502&lt;sub&gt;h&lt;/sub&gt;</th>
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7.2.7.2.4 Object 6503h: dsc Kp

This object defines the proportional factor of a PI controller.

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ENTRY DESCRIPTION

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<td>Access</td>
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Sub-index 01h

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**Device profile fluid power technology proportional valves and hydrostatic transmission**

<table>
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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
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**7.2.7.2.5 Object 6504ₜₜ: dsc Ti**

This object defines the integration time constant of a PI controller.

**OBJECT DESCRIPTION**

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### Sub-index 03h

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<tr>
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<tr>
<td>Value range</td>
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### 7.2.7.2.6  
**Object 6510h:** dsc demand value generator demand value

This object contains the output of the *demand value generator* (see /VDMAPROP/, chapter 7.2).

**OBJECT DESCRIPTION**

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## ENTRY DESCRIPTION

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<th>Access</th>
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<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01_h</td>
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<td>Optional</td>
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<tr>
<td>02_h</td>
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<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>A1_h (m/min)</td>
</tr>
<tr>
<td>03_h</td>
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<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (mili)</td>
</tr>
</tbody>
</table>
**7.2.7.2.7 Object 6512h: dsc demand value generator reference A value**

This object contains the reference value for direction A, a value corresponding to 100% of physical capabilities (see /VDMAPROPl, chapter 7.2). If only one reference value is used, reference A value is valid for both directions.

**OBJECT DESCRIPTION**

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<th>6512h</th>
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</tr>
<tr>
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<tr>
<td>Category</td>
<td>Optional</td>
</tr>
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**ENTRY DESCRIPTION**

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</tr>
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<tbody>
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<tr>
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</tr>
<tr>
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</tr>
<tr>
<td>Default Value</td>
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<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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<tr>
<td>Default value</td>
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<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
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<td>Value range</td>
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</tr>
<tr>
<td>Default value</td>
<td>$A_1$ (m/min)</td>
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</table>
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<table>
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</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
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</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

### 7.2.7.2.8 Object 6513h: dsc demand value generator reference B value

This object contains the **reference value** for direction B, a value corresponding to 100% of physical capabilities (see [VDMAPROP/], chapter 7.2).

**OBJECT DESCRIPTION**

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<th>6513h</th>
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</thead>
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</tr>
<tr>
<td>Object code</td>
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</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
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<tr>
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<td>Optional</td>
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**ENTRY DESCRIPTION**

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<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
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<table>
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<th>01h</th>
</tr>
</thead>
<tbody>
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<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
### Object 6514ₜₜ: dsc demand value generator hold set point

This object contains the *hold set point* (see /VDMAPROP/, chapter 7.2).

**OBJECT DESCRIPTION**

<table>
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<th>6514ₜₜ</th>
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<tr>
<td>Name</td>
<td>dsc demand value generator hold set point</td>
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<tr>
<td>Object code</td>
<td>RECORD</td>
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<td>Data type</td>
<td>value parameter record INTEGER32 (0085ₜₜ)</td>
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**ENTRY DESCRIPTION**

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<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
### Sub-index 01h

**Description**: Value  
**Entry category**: Mandatory  
**Access**: rw  
**PDO mapping**: Optional  
**Value range**: INTEGER32  
**Default value**: 0

### Sub-index 02h

**Description**: SI unit  
**Entry category**: Optional  
**Access**: ro;  
**PDO mapping**: Optional  
**Value range**: UNSIGNED8  
**Default value**: A1, (m/min)

### Sub-index 03h

**Description**: Prefix  
**Entry category**: Optional  
**Access**: ro;  
**PDO mapping**: Optional  
**Value range**: INTEGER8  
**Default value**: -3 (milli)

### 7.2.7.2.10 Object 6520h: dsc demand value generator upper limit

This object contains the *upper limit* of the *limit function* in the *demand value generator* (see /VDMAPROPI/, chapter 7.2.1). *Upper limit < lower limit* has to be rejected.

**OBJECT DESCRIPTION**

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<th>6520h</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>dsc demand value generator upper limit</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
</tbody>
</table>
| Category   | Conditional;  
             | Mandatory, if *limit function* implemented |
### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>0</td>
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<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>A1h (m/min)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>
7.2.7.2.11 Object 6521h: dsc demand value generator lower limit

This object contains the lower limit of the limit function in the demand value generator (see \texttt{VDMAPROPI}, chapter 7.2.1). Lower limit > upper limit has to be rejected.

**OBJECT DESCRIPTION**

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<td>RECORD</td>
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<td>value parameter record INTEGER32 (0085h)</td>
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<tr>
<td>Category</td>
<td>Conditional; Mandatory, if limit function implemented</td>
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</tbody>
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**ENTRY DESCRIPTION**

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<tbody>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
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<table>
<thead>
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<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>A1h (m/min)</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

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<table>
<thead>
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<th>Sub-index</th>
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</tr>
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<tbody>
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<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

7.2.7.2.12 Object 6530h: dsc demand value generator ramp type

This object defines the ramp type used in the ramp function of the demand value generator (see /VDMAPROP/, chapter 9.3).

**VALUE DESCRIPTION**

<table>
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<tr>
<th>Value</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>No ramp</td>
</tr>
<tr>
<td>1</td>
<td>Linear (same value for all quadrants)</td>
</tr>
<tr>
<td>2</td>
<td>Linear (2 parameters for acceleration and deceleration, pos. and neg. values equal)</td>
</tr>
<tr>
<td>3</td>
<td>Linear (4 parameters for all quadrants)</td>
</tr>
<tr>
<td>4</td>
<td>Sine square</td>
</tr>
<tr>
<td>5</td>
<td>Profile generator linear (drives positioning control only)</td>
</tr>
<tr>
<td>6</td>
<td>Profile generator sine square (drives positioning control only)</td>
</tr>
<tr>
<td>7 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
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**OBJECT DESCRIPTION**

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<tr>
<td>Category</td>
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**ENTRY DESCRIPTION**

<table>
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<tbody>
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<tr>
<td>Value range</td>
<td>INTEGER8</td>
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<tr>
<td>Default value</td>
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</table>
## 7.2.7.2.13 Object 6531h: dsc demand value generator ramp acceleration time

The **acceleration time** parameter defines the rising speed of the output for ramps with \( \text{type} = 1, 2, 4 \).

### OBJECT DESCRIPTION

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<td>Object code</td>
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</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ( \text{ramp type} = [1, 2, 4] )</td>
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</table>

### ENTRY DESCRIPTION

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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<tr>
<td>Access</td>
<td>rw</td>
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<td>PDO mapping</td>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
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<tr>
<td>PDO mapping</td>
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<tr>
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</table>
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Object dictionary

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<table>
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<tr>
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</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
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<tr>
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<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
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<td>-3 (milli)</td>
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</tbody>
</table>

7.2.7.2.14 **Object 6532h: dsc demand value generator ramp acceleration time positive**

This object is used with **ramp type** = 3 (see /VDMAPROP/, chapter 9.3.3).

**OBJECT DESCRIPTION**

<table>
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<th>6532h</th>
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<tbody>
<tr>
<td>Name</td>
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<tr>
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<td>Category</td>
<td>Conditional; Mandatory, if <strong>ramp type</strong> = 3</td>
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**ENTRY DESCRIPTION**

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<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
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<tr>
<td>Access</td>
<td>rw</td>
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<tr>
<td>PDO mapping</td>
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<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
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</table>
### 7.2.7.2.15 Object 6533h: dsc demand value generator ramp acceleration time negative

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

**OBJECT DESCRIPTION**

<table>
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<th>6533h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dsc demand value generator ramp acceleration time negative</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp type = 3</td>
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**ENTRY DESCRIPTION**

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<th>00h</th>
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<td>Access</td>
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<td>PDO Mapping</td>
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</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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</table>
### Object 6534: dsc demand value generator ramp deceleration time

The **acceleration time** parameter defines the falling speed of the output for ramps with **type = 2**.

#### OBJECT DESCRIPTION

<table>
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<th>6534&lt;sub&gt;h&lt;/sub&gt;</th>
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<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082&lt;sub&gt;h&lt;/sub&gt;)</td>
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### 7.2.7.2.17 Object 6535h: dsc demand value generator ramp deceleration time positive

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

#### OBJECT DESCRIPTION

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<tr>
<td>Access</td>
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### Object 6536\(_h\): dsc demand value generator ramp deceleration time negative

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
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<td>-3 (milli)</td>
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#### ENTRY DESCRIPTION

Sub-index 00\(_h\)
- Description: Number of entries
- Entry Category: Mandatory
- Access: ro
- PDO Mapping: No
- Value Range: 1 to 3
- Default Value: No

Sub-index 01\(_h\)
- Description: Value
- Entry category: Mandatory
- Access: rw
- PDO mapping: Optional
- Value range: UNSIGNED32
- Default value: 0
7.2.7.2.19  
**Object 6550h: dsc control deviation**

This object holds the difference between demand value and actual value:

\[ \text{control deviation} = \text{demand value} - \text{actual value} \]

Remark: The SI unit of the control deviation is the same as the input (set point).

**OBJECT DESCRIPTION**

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<td>INTEGER32</td>
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### 7.2.7.2.20 Object 6551ₜₜ: dsc control monitoring type

This object defines the type of the control monitoring function (see /VDMAPROP/, chapter 9.8).

**VALUE DESCRIPTION**

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<tbody>
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</tr>
<tr>
<td>1</td>
<td>Standard control monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>2</td>
<td>Standard control monitoring (symmetric threshold)</td>
</tr>
<tr>
<td>3</td>
<td>Dynamic control monitoring (upper and lower threshold)</td>
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<td>4</td>
<td>Dynamic control (symmetric threshold)</td>
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<tr>
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### ENTRY DESCRIPTION

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#### 7.2.7.2.21 Object 6552<sub>h</sub>: dsc control monitoring delay time

*After the delay time a control deviation will be shown as a control fault.*

### OBJECT DESCRIPTION

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<tr>
<td>Access</td>
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Object dictionary

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<td>Access</td>
<td>ro; rw, if prefix changeable</td>
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<td>Value range</td>
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7.2.7.2.22 Object 6553h: dsc control monitoring threshold

This parameter defines the threshold for control monitoring type = 2.

OBJECT DESCRIPTION

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ENTRY DESCRIPTION

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### Object 6554h: dsc control monitoring upper threshold

This parameter defines the *upper threshold* for *control monitoring type* = 1.

**OBJECT DESCRIPTION**

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7.2.7.2.24 **Object 6555h: dsc control monitoring lower threshold**

This parameter defines the lower threshold for control monitoring type = 1.

**OBJECT DESCRIPTION**

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#### 7.2.7.2.25 Object 6556h: dsc control monitoring threshold \( V_{\text{max}} \)

This parameter defines the threshold at maximum velocity for symmetric dynamic monitoring (control monitoring type = 4) (see /VDMAPROP/ chapter 9.8.4).

### OBJECT DESCRIPTION

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<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
7.2.7.2.26 Object 6557h: dsc control monitoring upper threshold \( V_{\text{max}}\) positive

This parameter defines the \textit{threshold at maximum velocity for asymmetric dynamic monitoring (control monitoring type = 3)} (see /VDMAPROPI/, chapter 9.8.3).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6557h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dsc control monitoring upper threshold ( V_{\text{max}}) positive</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 3</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
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<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
Object 6558<sub>h</sub>: dsc control monitoring lower threshold V<sub>max</sub> negative

This parameter defines the threshold at maximum velocity for asymmetric dynamic monitoring (control monitoring type = 3) (see /VDMAPROP/, chapter 9.8.3).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6558&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dsc control monitoring lower threshold V&lt;sub&gt;max&lt;/sub&gt; negative</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085&lt;sub&gt;h&lt;/sub&gt;)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 3</td>
</tr>
<tr>
<td>Sub-index</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>00h</td>
<td>Number of entries</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
</tr>
</tbody>
</table>
7.2.7.2.28  **Object 6570\(_h\): dsc target window monitoring type**

This object defines the type of target monitoring function (see /VDMAPROP/, chapter 9.9).

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No target window monitoring</td>
</tr>
<tr>
<td>1</td>
<td>Standard target window monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>2</td>
<td>Standard target window monitoring (symmetric threshold)</td>
</tr>
<tr>
<td>3 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6570(_h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dsc target window monitoring type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring implemented</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value rRange</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.7.2.29  **Object 6571\(_h\): dsc target window monitoring switch on time**

This parameter defines the time delay, if the bit of the status word is set to 1, after the control deviation reached the target window range.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6571(_h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dsc target window monitoring switch on time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082(_h))</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00(_h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
Sub-index 01h
Description Value
Entry category Mandatory
Access rw
PDO mapping Optional
Value range UNSIGNED32
Default value No

Sub-index 02h
Description SI unit
Entry category Optional
Access ro;
rw, if SI unit changeable
PDO mapping Optional
Value range UNSIGNED8
Default value 03h (s)

Sub-index 03h
Description Prefix
Entry category Optional
Access ro;
rw, if prefix changeable
PDO mapping Optional
Value range INTEGER8
Default value -3 (milli)

7.2.7.2.30 Object 6572h: dsc target window monitoring switch off time

This parameter defines the time delay, if the bit of the status word is reset to 0, after the control deviation is outside the target window range.

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6572h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dsc target window monitoring switch off time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
</table>
### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED32</td>
<td>No</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>03h (s)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>
### 7.2.7.2.31 Object 6573₃: dsc target window monitoring threshold

This parameter defines the **threshold** for *target monitoring type* = 2.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6573₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dsc target window monitoring threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085₃)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <em>target monitoring type</em> = 2</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>A1₃ (m/min)</td>
</tr>
</tbody>
</table>
7.2.7.2.32  **Object 6574h: dsc target window monitoring upper threshold**

This object defines the *upper threshold for target window monitoring type = 1.*

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
### Device profile fluid power technology proportional valves and hydrostatic transmission

#### Object dictionary

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>02&lt;sub&gt;h&lt;/sub&gt;</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>A1&lt;sub&gt;h&lt;/sub&gt; (m/min)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>03&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

### 7.2.7.2.33 Object 6575<sub>h</sub>: dsc target window monitoring lower threshold

This object defines the lower threshold for target window monitoring type = 1.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
<th>Object code</th>
<th>Data type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>6575&lt;sub&gt;h&lt;/sub&gt;</td>
<td>dsc target window monitoring lower threshold</td>
<td>RECORD</td>
<td>value parameter record INTEGER32 (0085&lt;sub&gt;h&lt;/sub&gt;)</td>
<td>Conditional; Mandatory, if target window monitoring type = 1</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.7.3 Control mode: drive force/pressure control

The objects defined in this chapter refer to the control mode drive force/pressure control (see /VDMAPROP/, chapter 7.1.4).

7.2.7.3.1 Object 6580h: dfpc set point

This object corresponds to the drive force/pressure control set point (see /VDMAPROP/, chapter 7.1.4).

OBJECT DESCRIPTION

<table>
<thead>
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<th>Index</th>
<th>6580h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dfpc set point</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control mode = 8</td>
</tr>
</tbody>
</table>
## Entry Description

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00\text{h}</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01\text{h}</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>No</td>
</tr>
<tr>
<td>02\text{h}</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>4E, (bar)</td>
</tr>
<tr>
<td>03\text{h}</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>
7.2.7.3.2 Object 6581h: dfpc actual value

This object holds the actual value of the sensor interface instance used for the control algorithm (see \([/VDMAPROP/](#), chapter 7.1.4).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6581h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dfpc actual value</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control mode = 8</td>
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**ENTRY DESCRIPTION**

<table>
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<tr>
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<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>4Eh (bar)</td>
</tr>
</tbody>
</table>
### 7.2.7.3.3 Object 6582<sub>h</sub>: dfpc interface reference

This object creates a reference between the controller and the actual value. The parameter specifies the number of the interface, which provides the actual value. A write to this object with a value greater than maximum interface number has to be rejected.

<table>
<thead>
<tr>
<th>Access</th>
<th>ro; rw, if prefix changeable</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6582&lt;sub&gt;h&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dfpc interface reference</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Category</td>
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#### ENTRY DESCRIPTION

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<td>Default value</td>
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### 7.2.7.3.4 Object 6583<sub>h</sub>: dfpc K<sub>p</sub>

This object defines the proportional factor of a PI(DT1) controller (see /VDMAPROP/, chapter 7.1.4.1).

#### OBJECT DESCRIPTION

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<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED32</td>
<td>No</td>
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<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>rw, if SI unit changeable</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
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<td></td>
<td></td>
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<td></td>
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</table>
7.2.7.3.5  **Object 6584ₜ: dfpc Tₜ**

This object defines the rate time DT1 of a PI(DT1) controller (see /VDMAPROP/, chapter 7.1.4.1).

**OBJECT DESCRIPTION**

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<tr>
<td>Access</td>
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<tr>
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<tr>
<td>Access</td>
<td>rw</td>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
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<tr>
<td>PDO mapping</td>
<td>Optional</td>
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**Device profile fluid power technology proportional valves and hydrostatic transmission**

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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<td>Value range</td>
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<tr>
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</tr>
</tbody>
</table>

**7.2.7.3.6 Object 6585h: dfpc T1**

This object defines the time delay DT1 of a PI(DT1) controller (see /VDMAPROP/, chapter 7.1.4.1)

**OBJECT DESCRIPTION**

| Index | 6585h |
| Name | dfpc T1 |
| Object code | RECORD |
| Data type | value parameter record UNSIGNED32 (0082h) |
| Category | Conditional; Mandatory, if control mode = 8 |

**ENTRY DESCRIPTION**

| Sub-index | 00h |
| Description | Number of entries |
| Entry Category | Mandatory |
| Access | ro |
| PDO Mapping | No |
| Value Range | 1 to 3 |
| Default Value | No |

| Sub-index | 01h |
| Description | Value |
| Entry category | Mandatory |
| Access | rw |
| PDO mapping | Optional |
| Value range | UNSIGNED32 |
| Default value | No |
### 7.2.7.3.7 Object 6586₇: dfpc Ti

This object defines the integration time constant of a PI(DT1) controller (see \VDMAPROP/, chapter 7.1.4.1)

**OBJECT DESCRIPTION**

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**ENTRY DESCRIPTION**

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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
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</tr>
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</table>
### 7.2.7.3.8 Object 6587₇₉: dfpc pressure sample time

The pressure sample time parameter describes the sample time of the pressure controller in ms (see `/VDMAPROP/`, chapter 7.1.4). Sample time zero means, the pressure / force controller is disabled.

**OBJECT DESCRIPTION**

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<td>Name</td>
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</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
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<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082₉)</td>
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## ENTRY DESCRIPTION

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<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
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<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED32</td>
<td>No</td>
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<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>03h (s)</td>
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<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
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<td>-6 (micro)</td>
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</table>
## 7.2.7.3.9 Object 6590h: dfpc demand value generator demand value

This object contains the output of the *demand value generator* (see `/VDMAPROP/`, chapter 7.2).

### OBJECT DESCRIPTION

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<td>RECORD</td>
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<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
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### ENTRY DESCRIPTION

#### Sub-index 00h

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<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
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</tr>
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#### Sub-index 01h

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#### Sub-index 02h

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</tr>
<tr>
<td>PDO mapping</td>
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<td>Value range</td>
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<td>Default value</td>
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</table>
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Object dictionary

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<table>
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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
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</tr>
<tr>
<td>Value range</td>
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</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
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</table>

### 7.2.7.3.10 Object 6592h: dfpc demand value generator reference A value

This object contains the reference value for direction A, a value corresponding to 100% of physical capabilities (see /VDMAPROP/, chapter 7.2). If only one reference value is used, reference A value is valid for both directions.

**OBJECT DESCRIPTION**

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<tr>
<td>Access</td>
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<td>PDO Mapping</td>
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</tr>
<tr>
<td>Value Range</td>
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<tr>
<td>Access</td>
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### Object dictionary

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<tr>
<td>Access</td>
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<td>PDO mapping</td>
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</tr>
<tr>
<td>Value range</td>
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<tr>
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### 7.2.7.3.11 Object 6593h: dfpc demand value generator reference B value

This object contains the reference value for direction B, a value corresponding to 100% of physical capabilities (see /VDMAPROP/, chapter 7.2).

**OBJECT DESCRIPTION**

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</tr>
<tr>
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<tr>
<td>Access</td>
<td>rw</td>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
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<td>ro; rw, if prefix changeable</td>
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<td>INTEGER8</td>
</tr>
<tr>
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<td>-3 (milli)</td>
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</table>

#### 7.2.7.3.12 Object 6594h: dfpc demand value generator hold set point

This object contains the hold set point (see /VDMAPROP/, chapter 7.2).

**OBJECT DESCRIPTION**

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<tr>
<td>Sub-index</td>
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<td>-----------</td>
<td>-------------</td>
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<tr>
<td>00h</td>
<td>Number of entries</td>
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<td>01h</td>
<td>Value</td>
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<td>02h</td>
<td>SI unit</td>
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<tr>
<td>03h</td>
<td>Prefix</td>
</tr>
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</table>
7.2.7.3.13  **Object 65A0₉: dfpc demand value generator upper limit**

This object contains the upper limit of the limit function in the demand value generator (see VDMAPROP/, chapter 7.2.1). Upper limit < lower limit has to be rejected.

**OBJECT DESCRIPTION**

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### Object 65A1₇: dfpc demand value generator lower limit

This object contains the lower limit of the limit function in the demand value generator (see \( \text{VDMAPROP} \), chapter 7.2.1). Lower limit > upper limit has to be rejected.

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### 7.2.7.3.15 Object 65B0$_{h}$: dfpc demand value generator ramp type

This object defines the *ramp type* used in the *ramp function* of the *demand value generator* (see \dvdmaprop/, chapter 9.3).

#### VALUE DESCRIPTION

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</tr>
<tr>
<td>1</td>
<td>Linear (same value for all quadrants)</td>
</tr>
<tr>
<td>2</td>
<td>Linear (2 parameters for acceleration and deceleration, pos. and neg. values equal)</td>
</tr>
<tr>
<td>3</td>
<td>Linear (4 parameters for all quadrants)</td>
</tr>
<tr>
<td>4</td>
<td>Sine square</td>
</tr>
<tr>
<td>5</td>
<td>Profile generator linear (drives positioning control only)</td>
</tr>
<tr>
<td>6</td>
<td>Profile generator sine square (drives positioning control only)</td>
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#### OBJECT DESCRIPTION

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### 7.2.7.3.16 Object 65B1\textsubscript{h}: dfpc demand value generator ramp acceleration time

The *acceleration time* parameter defines the rising speed of the output for ramps with type = 1, 2, 4.

#### OBJECT DESCRIPTION

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7.2.7.3.17  **Object 65B2<sub>h</sub>: dfpc demand value generator ramp acceleration time positive**

This object is used with *ramp type* = 3 (see /VDMAPROP/, chapter 9.3.3).

**OBJECT DESCRIPTION**

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### 7.2.7.3.18 Object 65Bₜₜ: dfpc demand value generator ramp acceleration time negative

This object is used with \( \text{ramp type} = 3 \) (see /VDMAPROP/, chapter 9.3.3).

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7.2.7.3.19 Object 65B4h: dfpc demand value generator ramp deceleration time

The *deceleration time* parameter defines the falling speed of the output for ramps with *type* = 2.

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Device profile fluid power technology proportional valves and hydrostatic transmission

Object dictionary

CiA DSP 408 V 1.5.1

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**7.2.7.3.20 Object 65B5h: dfpc demand value generator ramp deceleration time positive**

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

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<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
</tbody>
</table>
### 7.2.7.3.21 Object 65B6h: dfpc demand value generator ramp deceleration time negative

This object is used with `ramp type = 3` (see /VDMAPROP/, chapter 9.3.3).

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
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<th>65B6h</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>dfpc demand value generator ramp deceleration time negative</td>
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</tr>
<tr>
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<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if <code>ramp type = 3</code></td>
</tr>
</tbody>
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#### ENTRY DESCRIPTION

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<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
### Object 65D0h: dfpc control deviation

This object holds the difference between demand value and actual value:

\[
\text{control deviation} = \text{demand value} - \text{actual value}.
\]

Remark: The SI unit of the control deviation is the same as the input (set point).

#### OBJECT DESCRIPTION

<table>
<thead>
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<th>65D0h</th>
</tr>
</thead>
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</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
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<tr>
<td>Category</td>
<td>Optional</td>
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### ENTRY DESCRIPTION

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<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
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</thead>
<tbody>
<tr>
<td>00(^h)</td>
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<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01(^h)</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>0</td>
</tr>
<tr>
<td>02(^h)</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>4E(^h) ((s))</td>
</tr>
<tr>
<td>03(^h)</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 ((\text{milli}))</td>
</tr>
</tbody>
</table>
7.2.7.3.23 **Object 65D1<sub>n</sub>: dfpc control monitoring type**

This object defines the type of the control monitoring function (see /VDMAPROP/, chapter 9.8).

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No control monitoring</td>
</tr>
<tr>
<td>1</td>
<td>Standard control monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>2</td>
<td>Standard control monitoring (symmetric threshold)</td>
</tr>
<tr>
<td>3</td>
<td>Dynamic control monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>4</td>
<td>Dynamic control (symmetric threshold)</td>
</tr>
<tr>
<td>5 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

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<th>Name</th>
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</thead>
<tbody>
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<td>dfpc control monitoring type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
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<tr>
<td>Data type</td>
<td>INTEGER8</td>
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<td>Category</td>
<td>Conditional; Mandatory, if control monitoring implemented</td>
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**ENTRY DESCRIPTION**

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<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>rw</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.7.3.24 **Object 65D2<sub>n</sub>: dfpc control monitoring delay time**

After the *delay time* a *control deviation* will be shown as a control fault.

**OBJECT DESCRIPTION**

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<th>Name</th>
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</thead>
<tbody>
<tr>
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<td>dfpc control monitoring delay time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0085&lt;sub&gt;n&lt;/sub&gt;)</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
</tr>
<tr>
<td>Sub-index</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>00h</td>
<td>Number of entries</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
</tr>
</tbody>
</table>
7.2.7.3.25 Object 65D₃ₙ: dfpc control monitoring threshold

This parameter defines the threshold for control monitoring type = 2.

OBJECT DESCRIPTION

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</tr>
</thead>
<tbody>
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<td>Name</td>
<td>dfpc control monitoring threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085ₙ)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 2</td>
</tr>
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</table>

ENTRY DESCRIPTION

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01ₙ</th>
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</thead>
<tbody>
<tr>
<td>Description</td>
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<td>Entry category</td>
<td>Mandatory</td>
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<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
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<table>
<thead>
<tr>
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<tr>
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<td>SI unit</td>
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<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>4Eₙ (bar)</td>
</tr>
</tbody>
</table>
### 7.2.7.3.26 Object 65D4h: dfpc control monitoring upper threshold

This parameter defines the upper threshold for control monitoring type = 1.

#### OBJECT DESCRIPTION

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<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
</tbody>
</table>
| Access | ro;  
  rw, if prefix changeable |
| PDO mapping | Optional |
| Value range | INTEGER8 |
| Default value | -3 (milli) |

#### ENTRY DESCRIPTION

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
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<td>Number of entries</td>
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<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
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</table>

<table>
<thead>
<tr>
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<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
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</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
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</table>
### Object 65D5₉: dfpc control monitoring lower threshold

This parameter defines the lower threshold for control monitoring type = 1.

#### OBJECT DESCRIPTION

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<th>02₉</th>
</tr>
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<tbody>
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<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>4E₉ (bar)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03₉</th>
</tr>
</thead>
<tbody>
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<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
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</tbody>
</table>

7.2.7.3.27

#### ENTRY DESCRIPTION

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<tbody>
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<td>Entry Category</td>
<td>Mandatory</td>
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<td>Access</td>
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</tr>
<tr>
<td>PDO Mapping</td>
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</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
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### Sub-index 01h

<table>
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<tbody>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
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### Sub-index 02h

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<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>4E₈ (bar)</td>
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### Sub-index 03h

<table>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

### 7.2.7.3.28 Object 65D6h: dfpc control monitoring threshold Vmax

This parameter defines the threshold at maximum velocity for symmetric dynamic monitoring (control monitoring type = 4) (see /VDMAPROP/, chapter 9.8.4).

**OBJECT DESCRIPTION**

<table>
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<td>dfpc control monitoring threshold Vmax</td>
</tr>
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<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 4</td>
</tr>
<tr>
<td>Sub-index</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------------</td>
</tr>
<tr>
<td>00h</td>
<td>Number of entries</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
</tr>
</tbody>
</table>
7.2.7.3.29 Object 65D7_h: dfpc control monitoring upper threshold $V_{\text{max}}$ positive

This parameter defines the threshold at maximum velocity for asymmetric dynamic monitoring (control monitoring type = 3) (see /VDMAPROP/, chapter 9.8.3).

**OBJECT DESCRIPTION**

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<td>Object code</td>
<td>RECORD</td>
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<td>Data type</td>
<td>value parameter record INTEGER32 (0085_h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 3</td>
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</tbody>
</table>

**ENTRY DESCRIPTION**

### Sub-index 00_h

- **Description**: Number of entries
- **Entry Category**: Mandatory
- **Access**: ro
- **PDO Mapping**: No
- **Value Range**: 1 to 3
- **Default Value**: No

### Sub-index 01_h

- **Description**: Value
- **Entry Category**: Mandatory
- **Access**: rw
- **PDO mapping**: Optional
- **Value range**: INTEGER32
- **Default value**: 0

### Sub-index 02_h

- **Description**: SI unit
- **Entry category**: Optional
- **Access**: ro; rw, if SI unit changeable
- **PDO mapping**: Optional
- **Value range**: UNSIGNED8
- **Default value**: 4E_h (bar)
7.2.7.3.30  **Object 65D8₉h: dfpc control monitoring lower threshold V\textsubscript{max} negative**

This parameter defines the threshold at maximum velocity for asymmetric dynamic monitoring (control monitoring type = 3) (see /VDMAPROP/, chapter 9.8.3).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
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<th>65D8₉h</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>dfpc control monitoring lower threshold V\textsubscript{max} negative</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085₉h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 3</td>
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**ENTRY DESCRIPTION**

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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01₉h</th>
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</thead>
<tbody>
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<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>0</td>
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</table>
### Sub-index 02

<table>
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<th>SI unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>(4E_\text{h}) (bar)</td>
</tr>
</tbody>
</table>

### Sub-index 03

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<th>Prefix</th>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

### 7.2.7.3.31 Object 65F0\text{h}: dfpc target window monitoring type

This object defines the type of target monitoring function (see /VDMAPROP/, chapter 9.9).

#### VALUE DESCRIPTION

<table>
<thead>
<tr>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No target window monitoring</td>
</tr>
<tr>
<td>1</td>
<td>Standard target window monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>2</td>
<td>Standard target window monitoring (symmetric threshold)</td>
</tr>
<tr>
<td>3 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
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<th>65F0\text{h}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dfpc target window monitoring type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring implemented</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.7.3.32 Object 65F1h: dfpc target window monitoring switch on time

This parameter defines the time delay, if the bit of the status word is set to 1, after the control deviation reached the target window range.

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>62B1h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>drv controller output dead band compensation A side</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record unsi (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if dead band compensation type = [1, 2]</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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</tr>
<tr>
<td>Default value</td>
<td>0</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03h (s)</td>
</tr>
</tbody>
</table>
Sub-index | 03<sub>h</sub>  
Description | Prefix  
Entry category | Optional  
Access | ro; rw, if prefix changeable  
PDO mapping | Optional  
Value range | INTEGER8  
Default value | -3 (milli)

7.2.7.3.33 Object 65F2<sub>h</sub>: dfpc target window monitoring switch off time

This parameter defines the time delay, if the bit of the status word is reset to 0, after the control deviation is outside the target window range.

OBJECT DESCRIPTION

| Index | 65F2<sub>h</sub>  
Name | dfpc target window monitoring switch off time  
Object code | RECORD  
Data type | value parameter record UNSIGNED32 (0082<sub>h</sub>)  
Category | Optional

ENTRY DESCRIPTION

| Sub-index | 00<sub>h</sub>  
Description | Number of entries  
Entry Category | Mandatory  
Access | ro  
PDO Mapping | No  
Value Range | 1 to 3  
Default Value | No

| Sub-index | 01<sub>h</sub>  
Description | Value  
Entry category | Mandatory  
Access | rw  
PDO mapping | Optional  
Value range | UNSIGNED32  
Default value | No
<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02ₜₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03ₜₜ (s)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03ₜₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

### 7.2.7.3.34 Object 65Fₜₜₜ: dfpc target window monitoring threshold

This parameter defines the threshold for target monitoring type = 2.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>65Fₜₜₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dfpc target window monitoring threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085ₜₜ)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target monitoring type = 2</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00ₜₜ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydostatic transmission

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>4Eh (bar)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

Object 65F4h: dfpc target window monitoring upper threshold

This object defines the upper threshold for target window monitoring type = 1.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>65F4h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dfpc target window monitoring upper threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if window monitoring type = 1</td>
</tr>
</tbody>
</table>
### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>No</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>4Eh (bar)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>
### 7.2.7.3.36 Object 65F5_h: dfpc target window monitoring lower threshold

This object defines the lower threshold for target window monitoring type = 1.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>65F5_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dfpc target window monitoring lower threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if window monitoring type = 1</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>No</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>4E_h (bar)</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

Object dictionary

CiA DSP 408 V 1.5.1

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

7.2.7.4 Control mode: position control closed loop

The objects defined in this chapter refer to the control mode drive position control closed loop (see /VDMAPROP/, chapter 7.1.2).

7.2.7.4.1 Object 6600h: dpc set point

This object corresponds to the drive position control set point (see /VDMAPROP/, chapter 7.1.2).

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6600h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc set point</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control mode = 9</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
Sub-index | 02_h |
---|---|
Description | SI unit |
Entry category | Optional |
Access | ro; rw, if SI unit changeable |
PDO mapping | Optional |
Value range | UNSIGNED8 |
Default value | 01_h (m) |

Sub-index | 03_h |
---|---|
Description | Prefix |
Entry category | Optional |
Access | ro; rw, if prefix changeable |
PDO mapping | Optional |
Value range | INTEGER8 |
Default value | -6 (micro) |

### 7.2.7.4.2 Object 6601_h: dpc actual value

This object holds the actual value of the sensor interface instance used for the control algorithm (see /VDMAPROP/, chapter 7.1.2).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6601_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc actual value</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085_h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control mode = 9</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
### Object dictionary

**Device profile fluid power technology proportional valves and hydrostatic transmission**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>ro</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>No</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro;</td>
<td>rw, if SI unit changeable</td>
<td>UNSIGNED8</td>
<td>01h (m)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro;</td>
<td>rw, if prefix changeable</td>
<td>INTEGER8</td>
<td>-6 (micro)</td>
</tr>
</tbody>
</table>

#### 7.2.7.4.3 **Object 6602h: dpc interface reference**

This object creates a reference between the controller and the *actual value*. The parameter specifies the number of the *interface*, which provides the *actual value*. A write to this object with a value greater than *maximum interface number* has to be rejected.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
<th>Object code</th>
<th>Data type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>6602h</td>
<td>dpc interface reference</td>
<td>VAR</td>
<td>UNSIGNED8</td>
<td>Optional</td>
</tr>
</tbody>
</table>
ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.7.4.4 Object 6603h: dpc Kp

This object defines the proportional factor of a PDT1-controller (see /VDMAPROP/, chapter 7.1.2).

OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6603h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc Kp</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control mode = 9</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

Sub-index 00h

<table>
<thead>
<tr>
<th>Description</th>
<th>Number of entries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

Sub-index 01h

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.7.4.5  **Object 6604h: dpc \( T_d \)**

This object defines the rate time DT1 of a PDT1-controller (see \( \text{VDMAPROP} \), chapter 7.1.2).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6604h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc ( T_d )</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ( \text{control mode} = 9 )</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
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</tr>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
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<tr>
<td>Default Value</td>
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</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

<table>
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<td>Entry category</td>
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</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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</tr>
<tr>
<td>Default value</td>
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<td>SI unit</td>
</tr>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
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</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
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<tr>
<td>PDO mapping</td>
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</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.7.4.6 **Object 6605h: dpc T1**

This object defines the time delay DT1 of a PDT1-controller (see /VDMAPROP/, chapter 7.1.2).

**OBJECT DESCRIPTION**

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<thead>
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<th>6605h</th>
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<tbody>
<tr>
<td>Name</td>
<td>dpc T1</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
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<td>Conditional; Mandatory, if control mode = 9</td>
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## ENTRY DESCRIPTION

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<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED32</td>
<td>No</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>03h (s)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.7.4.7 **Object 6608_h: dpc switched integrator type**

This object defines the type of the switched integrator (see /VDMAPROP/, chapter 7.1.2.1).

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>No switched integrator or deactivated</td>
</tr>
<tr>
<td>1</td>
<td>Standard - switched integrator</td>
</tr>
<tr>
<td>2 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-127 to -1</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

<table>
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<th>6608_h</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc switched integrator type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if switched integrator implemented</td>
</tr>
</tbody>
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**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.7.4.8 **Object 6609_h: dpc switched integrator T_i**

This object defines the integration time of the switched integrator type = 1 (see /VDMAPROP/, chapter 7.1.2.1)

**OBJECT DESCRIPTION**

<table>
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<th>62B1_h</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc switched integrator T_i</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082_h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if switched integrator type = 1</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
### 7.2.7.4.9 Object 660Ah: dpc switched integrator dX

This object defines the position window of the switched integrator type = 1 (see /VDMAPROPI/, chapter 7.1.2.1)

**OBJECT DESCRIPTION**

<table>
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<th>660Ah</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc switched integrator dX</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if switched integrator type = 1</td>
</tr>
</tbody>
</table>
## ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>01&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED32</td>
<td>No</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>02&lt;sub&gt;h&lt;/sub&gt;</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>01&lt;sub&gt;h&lt;/sub&gt; (m)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>03&lt;sub&gt;h&lt;/sub&gt;</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-6 (micro)</td>
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</table>
Object 660C_h: DrivePositionControl_ConditionFeedback_Kv

This object defines the velocity feedback of the feedback function (see /VDMAPROP/, chapter 7.1.2.2).

OBJECT DESCRIPTION

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<th>660C_h</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc condition feedback Kv</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082_h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if condition feedback function implemented</td>
</tr>
</tbody>
</table>

ENTRY DESCRIPTION

| Sub-index | 00_h |
| Description | Number of entries |
| Entry Category | Mandatory |
| Access | ro |
| PDO Mapping | No |
| Value Range | 1 to 3 |
| Default Value | No |

| Sub-index | 01_h |
| Description | Value |
| Entry category | Mandatory |
| Access | rw |
| PDO mapping | Optional |
| Value range | UNSIGNED32 |
| Default value | No |

| Sub-index | 02_h |
| Description | SI unit |
| Entry category | Optional |
| Access | ro; rw, if SI unit changeable |
| PDO mapping | Optional |
| Value range | UNSIGNED8 |
| Default value | No |
### 7.2.7.4.11 Object 660Dh: dpc condition feedback Ka

This object defines the acceleration feedback of the feedback function (see /VDMAPROPI/, chapter 7.1.2.2).

#### OBJECT DESCRIPTION

<table>
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<th>03h</th>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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<tr>
<td>Default value</td>
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#### ENTRY DESCRIPTION

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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
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<td>Default Value</td>
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<table>
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<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
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<tr>
<td>PDO mapping</td>
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<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
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</table>
7.2.7.4.12 **Object 660Eₜ: dpc condition feedback Kpp**

This object defines the *pressure gain factor of the feedback function* (see /VDMAPROP/, chapter 7.1.2.2).

**OBJECT DESCRIPTION**

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<td>Object code</td>
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</tr>
<tr>
<td>Data type</td>
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<td>Category</td>
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**ENTRY DESCRIPTION**

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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
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### Sub-index 01h

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<tr>
<td>Access</td>
<td>rw</td>
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<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
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### Sub-index 02h

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<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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### Sub-index 03h

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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
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</tr>
</tbody>
</table>

### 7.2.7.4.13 Object 660Fh: dpc condition feedback T1pp

This object defines the time constant high pass filter (DT1) of the feedback function (see \(V/DMAPROPI, \) chapter 7.1.2.2).

**OBJECT DESCRIPTION**

<table>
<thead>
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<th>660Fh</th>
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<tbody>
<tr>
<td>Name</td>
<td>dpc condition feedback T1pp</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if condition feedback function implemented</td>
</tr>
<tr>
<td>Sub-index</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------</td>
</tr>
<tr>
<td>00h</td>
<td>Number of entries</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
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</table>
7.2.7.4.14   **Object 6610h: dpc demand value generator demand value**

This object contains the output of the *demand value generator* (see /VDMAPROP/, chapter 7.2).

**OBJECT DESCRIPTION**

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<th>6610h</th>
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<tbody>
<tr>
<td>Name</td>
<td>dpc demand value generator demand value</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
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<tr>
<td>Category</td>
<td>Optional</td>
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</table>

**ENTRY DESCRIPTION**

<table>
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</tr>
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<tbody>
<tr>
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<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>Description</td>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO mapping</td>
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<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
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<table>
<thead>
<tr>
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<th>02h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>01h (m)</td>
</tr>
</tbody>
</table>
### 7.2.7.4.15 Object 6612h: dpc demand value generator reference A value

This object contains the reference value for direction A, a value corresponding to 100% of physical capabilities (see /VDMAPROP/, chapter 7.2). If only one reference value is used, reference A value is valid for both directions.

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6612h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc demand value generator reference A value</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
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<tr>
<td>Category</td>
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#### ENTRY DESCRIPTION

**Sub-index** 00h

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</tr>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
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<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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</table>

**Sub-index** 01h

<table>
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<th>Value</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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</table>
### Sub-index 02<sub>h</sub>

**Description**: SI unit

**Entry Category**: Optional

**Access**: 
- ro;
- rw, if SI unit changeable

**PDO Mapping**: Optional

**Value Range**: UNSIGNED8

**Default Value**: 01<sub>h</sub> (m)

### Sub-index 03<sub>h</sub>

**Description**: Prefix

**Entry Category**: Optional

**Access**: 
- ro;
- rw, if prefix changeable

**PDO Mapping**: Optional

**Value Range**: INTEGER8

**Default Value**: -6 (micro)

#### 7.2.7.4.16 Object 6613<sub>h</sub>: dpc demand value generator reference B value

This object contains the *reference value* for *direction B*, a value corresponding to 100% of physical capabilities (see /VDMAPROP/, chapter 7.2).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6613&lt;sub&gt;h&lt;/sub&gt;</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc demand value generator reference B Value</td>
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</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085&lt;sub&gt;h&lt;/sub&gt;)</td>
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**ENTRY DESCRIPTION**

<table>
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<th>00&lt;sub&gt;h&lt;/sub&gt;</th>
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</thead>
<tbody>
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<td>Access</td>
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<tr>
<td>Value Range</td>
<td>1 to 3</td>
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### Object dictionary

#### Sub-index 01h

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<tr>
<td>Access</td>
<td>rw</td>
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<tr>
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#### Sub-index 02h

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<tr>
<td>PDO mapping</td>
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<tr>
<td>Value range</td>
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<td>Default value</td>
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#### Sub-index 03h

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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-6 (micro)</td>
</tr>
</tbody>
</table>

### 7.2.7.4.17 Object 6614h: dpc demand value generator hold set point

This object contains the `hold set point` (see /VDMAPROP/, chapter 7.2).

#### OBJECT DESCRIPTION

<table>
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<th>6614h</th>
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<tr>
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<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
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<tr>
<td>Category</td>
<td>Optional</td>
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<tr>
<td>Sub-index</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>00h</td>
<td>Number of entries</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
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<tr>
<td>02h</td>
<td>SI unit</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
</tr>
</tbody>
</table>
7.2.7.4.18  **Object 6620₇₇: dpc demand value generator upper limit**

This object contains the **upper limit** of the limit function in the demand value generator (see \(\text{VDMAPROPI} /\text{chapter 7.2.1})\). **Upper limit < lower limit** has to be rejected.

**OBJECT DESCRIPTION**

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<td>dpc demand value generator upper limit</td>
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<td>Object code</td>
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</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085₁₇h)</td>
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**ENTRY DESCRIPTION**

**Sub-index 00₁₇h**

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<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
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**Sub-index 01₁₇h**

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</tr>
<tr>
<td>Access</td>
<td>rw</td>
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<tr>
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**Sub-index 02₁₇h**

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</tr>
<tr>
<td>PDO mapping</td>
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<tr>
<td>Value range</td>
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<tr>
<td>Default value</td>
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### Sub-index 03h

<table>
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<td>ro; rw, if prefix changeable</td>
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<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-6 (micro)</td>
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</table>

#### 7.2.7.4.19 Object 6621h: dpc demand value generator lower limit

This object contains the lower limit of the limit function in the demand value generator (see VDMAPROP/, chapter 7.2.1). Lower limit > upper limit has to be rejected.

**OBJECT DESCRIPTION**

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<td>Category</td>
<td>Conditional; Mandatory, if limit function implemented</td>
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**ENTRY DESCRIPTION**

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<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
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</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<td>Access</td>
<td>rw</td>
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<td>PDO mapping</td>
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<tr>
<td>Value range</td>
<td>INTEGER32</td>
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<tr>
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Device profile fluid power technology proportional valves and hydrostatic transmission

<table>
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<td>Optional</td>
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<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
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<td>Value range</td>
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<tr>
<td>Default value</td>
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<table>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
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</tr>
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</table>

### 7.2.7.4.20 Object 6630_h: dpc demand value generator ramp type

This object defines the ramp type used in the ramp function of the demand value generator (see /VDMAPROPI/, chapter 9.3).

**VALUE DESCRIPTION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
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<tbody>
<tr>
<td>0</td>
<td>No ramp</td>
</tr>
<tr>
<td>1</td>
<td>Linear (same value for all quadrants)</td>
</tr>
<tr>
<td>2</td>
<td>Linear (2 parameters for acceleration and deceleration, pos. and neg. values equal)</td>
</tr>
<tr>
<td>3</td>
<td>Linear (4 parameters for all quadrants)</td>
</tr>
<tr>
<td>4</td>
<td>Sine square</td>
</tr>
<tr>
<td>5</td>
<td>Profile generator linear</td>
</tr>
<tr>
<td>6</td>
<td>Profile generator sine square</td>
</tr>
<tr>
<td>7 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

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<th>6630_h</th>
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<tbody>
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<td>Name</td>
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</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp function implemented</td>
</tr>
</tbody>
</table>
7.2.7.4.21 **Object 6631\textsubscript{h}: dpc demand value generator ramp acceleration time**

The *acceleration time* parameter defines the rising speed of the output for ramps with *type* = \{1, 2, 4\} (see /VDMAPROP/, chapter 9.3.3).

<table>
<thead>
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<th>6631\textsubscript{h}</th>
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</thead>
<tbody>
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<td>dpc demand value generator ramp acceleration time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
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<tr>
<td>Data type</td>
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<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp type = {1, 2, 4}</td>
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</table>

<table>
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<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
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<tr>
<td>Value Range</td>
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</table>
7.2.7.4.22  **Object 6632_h: dpc demand value generator ramp acceleration time positive**

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

**OBJECT DESCRIPTION**

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**ENTRY DESCRIPTION**

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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

Object dictionary

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</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
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<tr>
<td>Value range</td>
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<table>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
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<tr>
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</thead>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
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<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
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</table>

7.2.7.4.23 Object 6633h: dpc demand value generator ramp acceleration time negative

This object is used with ramp type = 3 (see /VDMAPROP/, chapter 9.3.3).

OBJECT DESCRIPTION

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<tr>
<td>Category</td>
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### ENTRY DESCRIPTION

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<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
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<tbody>
<tr>
<td>00h</td>
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<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED32</td>
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</tr>
<tr>
<td>02h</td>
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<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>03h (s)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
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</table>

---

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7.2.7.4.24 Object 6634_h: dpc demand value generator ramp deceleration time

The *deceleration time* parameter defines the falling speed of the output for ramps with *type* = 2.

**OBJECT DESCRIPTION**

<table>
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<th>6634_h</th>
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<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082_h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp type = 2</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
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<tr>
<th>Sub-index</th>
<th>00_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Number of entries</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>01_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
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<tr>
<td>Default value</td>
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</tr>
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<table>
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<tr>
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<th>02_h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>SI unit</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03_h (s)</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

Object dictionary

CiA DSP 408 V 1.5.1

Sub-index | 03h
Description | Prefix
Entry category | Optional
Access | ro;
          | rw, if prefix changeable
PDO mapping | Optional
Value range | INTEGER8
Default value | -3 (milli)

7.2.7.4.25 Object 6635h: dpc demand value generator ramp deceleration time positive

This object is used with ramp type = 3 (see /VDMAPROP/; chapter 9.3.3).

OBJECT DESCRIPTION

Index | 6635h
Name | dpc demand value generator ramp deceleration time positive
Object code | RECORD
Data type | value parameter record UNSIGNED32 (0085h)
Category | Conditional, if ramp type = 3

ENTRY DESCRIPTION

Sub-index | 00h
Description | Number of entries
Entry Category | Mandatory
Access | ro
PDO Mapping | No
Value Range | 1 to 3
Default Value | No

Sub-index | 01h
Description | Value
Entry category | Mandatory
Access | rw
PDO mapping | Optional
Value range | UNSIGNED32
Default value | No
### Sub-index 02h

**Description:** SI unit  
**Entry category:** Optional  
**Access:** ro; rw, if SI unit changeable  
**PDO mapping:** Optional  
**Value range:** UNSIGNED8  
**Default value:** 03h (s)

### Sub-index 03h

**Description:** Prefix  
**Entry category:** Optional  
**Access:** ro; rw, if prefix changeable  
**PDO mapping:** Optional  
**Value range:** INTEGER8  
**Default value:** -3 (milli)

### 7.2.7.4.26 Object 6636h: dpc demand value generator ramp deceleration time negative

This object is used with `ramp type = 3` (see `/VDMAPROP/`, chapter 9.3.3).

#### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6636h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc demand value generator ramp deceleration time negative</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
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<tr>
<td>Data type</td>
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</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp type = 3</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
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<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Number of entries</td>
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<tr>
<td>Entry Category</td>
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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
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</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

Object dictionary  CiA DSP 408 V 1.5.1

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED32</td>
<td>No</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>03h (s)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

7.2.7.4.27 **Object 6637\textsubscript{h}: dpc demand value generator ramp velocity**

The *velocity* parameter defines the velocity to generate the profile (ramp) of the demand value and is used with *ramp type* = 5, 6 (see /VDMAPROP/, chapter 9.3.5 and 9.3.6).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
<th>Object code</th>
<th>Data type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>6637\textsubscript{h}</td>
<td>dpc demand value generator ramp velocity</td>
<td>RECORD</td>
<td>value parameter record INTEGER32 (0085\textsubscript{h})</td>
<td>Conditional; Mandatory, if <em>ramp type</em> = [5, 6]</td>
</tr>
</tbody>
</table>
## ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>No</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>A1h (m/min)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

Object dictionary

CiA DSP 408 V 1.5.1

7.2.7.4.28 **Object 6638h: dpc demand value generator ramp acceleration**

The *acceleration* parameter defines the acceleration to generate the profile (ramp) of the demand value and is used with *ramp type* = 5, 6 (see /VDMAPROP/, chapter 9.3.5 and 9.3.6).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6638h</th>
</tr>
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<tbody>
<tr>
<td>Name</td>
<td>dpc demand value generator ramp acceleration</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if ramp type = [5, 6]</td>
</tr>
</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
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</thead>
<tbody>
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<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
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<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<table>
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</tr>
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<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
<td>Value range</td>
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<table>
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<td>Description</td>
<td>SI unit</td>
</tr>
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<td>Entry category</td>
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</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>A8h (m/s²)</td>
</tr>
</tbody>
</table>
Object 6639<sub>h</sub>: dpc demand value generator ramp deceleration

The deceleration parameter defines the deceleration to generate the profile (ramp) of the demand value and is used with ramp type = 5, 6 (see /VDMAPROP/, chapter 9.3.5 and 9.3.6).

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>03&lt;sub&gt;h&lt;/sub&gt;</th>
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</thead>
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<td>Prefix</td>
</tr>
<tr>
<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
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</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
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<tr>
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</tr>
<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
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</tr>
<tr>
<td>Value Range</td>
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<table>
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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
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</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED32</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

### Object 6650: dpc control deviation

This object holds the difference between demand value and actual value:

\[
\text{control deviation} = \text{demand value} - \text{actual value}
\]

Remark: The SI unit of the control deviation is the same as the input (set point).

#### OBJECT DESCRIPTION

<table>
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<th>6650_h</th>
</tr>
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<tbody>
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<td>Name</td>
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</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085_h)</td>
</tr>
<tr>
<td>Category</td>
<td>Optional</td>
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#### ENTRY DESCRIPTION

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<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
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### Sub-index 01h

<table>
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<tbody>
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</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
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### Sub-index 02h

<table>
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<th>Description</th>
<th>SI unit</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>01h (m)</td>
</tr>
</tbody>
</table>

### Sub-index 03h

<table>
<thead>
<tr>
<th>Description</th>
<th>Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-6 (micro)</td>
</tr>
</tbody>
</table>

### 7.2.7.4.31 Object 6651h: dpc control monitoring type

This object defines the type of the control monitoring function (see /VDMAPROP/, chapter 9.8).

#### VALUE DEFINITION

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No control monitoring</td>
</tr>
<tr>
<td>1</td>
<td>Standard control monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>2</td>
<td>Standard control monitoring (symmetric threshold)</td>
</tr>
<tr>
<td>3</td>
<td>Dynamic control monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>4</td>
<td>Dynamic control (symmetric threshold)</td>
</tr>
<tr>
<td>5 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>
### OBJECT DESCRIPTION

<table>
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<th>Index</th>
<th>Name</th>
<th>Object code</th>
<th>Data type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>6651</td>
<td>dpc control monitoring type</td>
<td>VAR</td>
<td>INTEGER8</td>
<td>Conditional; Mandatory, if control monitoring implemented</td>
</tr>
</tbody>
</table>

### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Access</th>
<th>PDO mapping</th>
<th>Value range</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>rw</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>No</td>
</tr>
</tbody>
</table>

#### 7.2.7.4.32 Object 6652: dpc control monitoring delay time

After the delay time a control deviation will be shown as a control fault.

### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
<th>Object code</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>6652</td>
<td>dpc control monitoring delay time</td>
<td>RECORD</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
</tr>
</tbody>
</table>

### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry category</th>
<th>Access</th>
<th>PDO Mapping</th>
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</thead>
<tbody>
<tr>
<td>01</td>
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<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED32</td>
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</tr>
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### Sub-index 02h

<table>
<thead>
<tr>
<th>Description</th>
<th>SI unit</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>UNSIGNED8</td>
</tr>
<tr>
<td>Default value</td>
<td>03h (s)</td>
</tr>
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</table>

### Sub-index 03h

<table>
<thead>
<tr>
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<th>Prefix</th>
</tr>
</thead>
<tbody>
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<td>Entry category</td>
<td>Optional</td>
</tr>
<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-3 (milli)</td>
</tr>
</tbody>
</table>

### 7.2.7.4.33 Object 6653h: dpc control monitoring threshold

This parameter defines the threshold for control monitoring type = 2.

#### OBJECT DESCRIPTION

<table>
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<tr>
<th>Index</th>
<th>6653h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc control monitoring threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 2</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

<table>
<thead>
<tr>
<th>Sub-index</th>
<th>00h</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Entry Category</td>
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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
Sub-index | 01h  
Description | Value  
Entry category | Mandatory  
Access | rw  
PDO mapping | Optional  
Value range | INTEGER32  
Default value | No  

Sub-index | 02h  
Description | SI unit  
Entry category | Optional  
Access | ro;  
 rw, if SI unit changeable  
PDO mapping | Optional  
Value range | UNSIGNED8  
Default value | 01h (m)  

Sub-index | 03h  
Description | Prefix  
Entry category | Optional  
Access | ro;  
 rw, if prefix changeable  
PDO mapping | Optional  
Value range | INTEGER8  
Default value | -6 (micro)  

7.2.7.4.34 Object 6654h: dpc control monitoring upper threshold  
This parameter defines the upper threshold for control monitoring type = 1.  

OBJECT DESCRIPTION  

| Index | 6654h  
Name | dpc control monitoring upper threshold  
Object code | RECORD  
Data type | value parameter record INTEGER32 (0085h)  
Category | Conditional;  
 Mandatory, if control monitoring type = 1
<table>
<thead>
<tr>
<th>Sub-index</th>
<th>Description</th>
<th>Entry Category</th>
<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>No</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>01h (m)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-6 (micro)</td>
</tr>
</tbody>
</table>
Object 6655h: dpc control monitoring lower threshold

This parameter defines the lower threshold for control monitoring type = 1.

### OBJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Index</th>
<th>6655h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc control monitoring lower threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 1</td>
</tr>
</tbody>
</table>

### ENTRY DESCRIPTION

#### Sub-index 00h
- **Description**: Number of entries
- **Entry Category**: Mandatory
- **Access**: ro
- **PDO Mapping**: No
- **Value Range**: 1 to 3
- **Default Value**: No

#### Sub-index 01h
- **Description**: Value
- **Entry Category**: Mandatory
- **Access**: rw
- **PDO mapping**: Optional
- **Value range**: INTEGER32
- **Default value**: No

#### Sub-index 02h
- **Description**: SI unit
- **Entry category**: Optional
- **Access**: ro; rw, if SI unit changeable
- **PDO mapping**: Optional
- **Value range**: UNSIGNED8
- **Default value**: 01h, (m)
### Sub-index 03h

<table>
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<tr>
<td>Access</td>
<td>ro; rw, if prefix changeable</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>-6 (micro)</td>
</tr>
</tbody>
</table>

### 7.2.7.4.36 Object 6656h: dpc control monitoring threshold \(V_{\text{max}}\)

This parameter defines the threshold at maximum velocity for symmetric dynamic monitoring (control monitoring type = 4) (see 'NDMAPROP', chapter 9.8.4).

**OBJECT DESCRIPTION**

<table>
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<tr>
<th>Index</th>
<th>6656h</th>
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<tbody>
<tr>
<td>Name</td>
<td>dpc control monitoring threshold (V_{\text{max}})</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 4</td>
</tr>
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</table>

**ENTRY DESCRIPTION**

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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
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</table>

<table>
<thead>
<tr>
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<th>01h</th>
</tr>
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<tbody>
<tr>
<td>Description</td>
<td>Value</td>
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<tr>
<td>Entry category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER32</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>
### 7.2.7.4.37 Object 6657h: dpc control monitoring upper threshold $V_{\text{max}}^{\text{positive}}$

This parameter defines the threshold at maximum velocity for asymmetric dynamic monitoring (control monitoring type = 3) (see /VDMAPROP/, chapter 9.8.3).

#### OBJECT DESCRIPTION

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<th>6657h</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
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<td>Object code</td>
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<td>Data type</td>
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<tr>
<td>Category</td>
<td>Optional</td>
</tr>
</tbody>
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#### ENTRY DESCRIPTION

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<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
7.2.7.4.38 Object 6658ₘ: dpc conitoring monitoring lower threshold $V_{\text{max}}$ negative

This parameter defines the threshold at maximum velocity for asymmetric dynamic monitoring (control monitoring type = 3) (see /VDMAPROP/, chapter 9.8.3).

OBJECT DESCRIPTION

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<tr>
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<td>dpc control monitoring lower threshold $V_{\text{max}}$ negative</td>
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<td>RECORD</td>
</tr>
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<td>Data type</td>
<td>value parameter record INTEGER32 (0085ₘ)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if control monitoring type = 3</td>
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## ENTRY DESCRIPTION

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<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00h</td>
<td>Number of entries</td>
<td>Mandatory</td>
<td>ro</td>
<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>INTEGER32</td>
<td>No</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>01h (m)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro;</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-6 (micro)</td>
</tr>
</tbody>
</table>
Device profile fluid power technology proportional valves and hydrostatic transmission

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7.2.7.4.39 **Object 6670ₜ: dpc target window monitoring type**

This object defines the type of target monitoring function (see /VDMAPROP/, chapter 9.9).

**VALUE DEFINITION**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>No target window monitoring</td>
</tr>
<tr>
<td>1</td>
<td>Standard target window monitoring (upper and lower threshold)</td>
</tr>
<tr>
<td>2</td>
<td>Standard target window monitoring (symmetric threshold)</td>
</tr>
<tr>
<td>3 to 127</td>
<td>reserved</td>
</tr>
<tr>
<td>-1 to -128</td>
<td>manufacturer specific</td>
</tr>
</tbody>
</table>

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6670ₜ,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc target window monitoring type</td>
</tr>
<tr>
<td>Object code</td>
<td>VAR</td>
</tr>
<tr>
<td>Data type</td>
<td>INTEGER8</td>
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<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring implemented</td>
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</tbody>
</table>

**ENTRY DESCRIPTION**

<table>
<thead>
<tr>
<th>Access</th>
<th>rw</th>
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</thead>
<tbody>
<tr>
<td>PDO mapping</td>
<td>Optional</td>
</tr>
<tr>
<td>Value range</td>
<td>INTEGER8</td>
</tr>
<tr>
<td>Default value</td>
<td>No</td>
</tr>
</tbody>
</table>

7.2.7.4.40 **Object 6671ₜ: dpc target window monitoring switch on time**

This parameter defines the time delay the bit of the status word is set to 1, after the control deviation reached the target window range.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6671ₜ,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc target window monitoring switch on time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082ₜₜ)</td>
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<tr>
<td>Category</td>
<td>Optional</td>
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**ENTRY DESCRIPTION**

<table>
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<th>00ₜ,</th>
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<tbody>
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<td>Entry Category</td>
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</tr>
<tr>
<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
<td>No</td>
</tr>
</tbody>
</table>
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**Sub-index**: 01h
**Description**: Value
**Entry category**: Mandatory
**Access**: rw
**PDO mapping**: Optional
**Value range**: UNSIGNED32
**Default value**: No

**Sub-index**: 02h
**Description**: SI unit
**Entry category**: Optional
**Access**: ro;
 rw, if SI unit changeable
**PDO mapping**: Optional
**Value range**: UNSIGNED8
**Default value**: 03h (s)

**Sub-index**: 03h
**Description**: Prefix
**Entry category**: Optional
**Access**: ro;
 rw, if prefix changeable
**PDO mapping**: Optional
**Value range**: INTEGER8
**Default value**: -3 (milli)

### 7.2.7.4.41 Object 6672h: dpc target window monitoring switch off time

This parameter defines the *time delay* the bit of the *status word* is reset to 0, after the *control deviation* is outside the *target window range*.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6672h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc target window monitoring switch off time</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record UNSIGNED32 (0082h)</td>
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<td>Category</td>
<td>Optional</td>
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### ENTRY DESCRIPTION

<table>
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<th>Sub-index</th>
<th>Description</th>
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<th>Access</th>
<th>PDO Mapping</th>
<th>Value Range</th>
<th>Default Value</th>
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<tbody>
<tr>
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<td>Mandatory</td>
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<td>No</td>
<td>1 to 3</td>
<td>No</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
<td>Mandatory</td>
<td>rw</td>
<td>Optional</td>
<td>UNSIGNED32</td>
<td>No</td>
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<tr>
<td>02h</td>
<td>SI unit</td>
<td>Optional</td>
<td>ro; rw, if SI unit changeable</td>
<td>Optional</td>
<td>UNSIGNED8</td>
<td>03h (s)</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
<td>Optional</td>
<td>ro; rw, if prefix changeable</td>
<td>Optional</td>
<td>INTEGER8</td>
<td>-3 (milli)</td>
</tr>
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</table>
7.2.7.4.42 Object 6673h: dpc target window monitoring threshold

This parameter defines the width of the target window range band for target window monitoring type = 2.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
<th>Index</th>
<th>6673h</th>
</tr>
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<tbody>
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<td>dpc target window monitoring threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085h)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring type = 2</td>
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**ENTRY DESCRIPTION**

<table>
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<td>Access</td>
<td>ro</td>
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<tr>
<td>PDO Mapping</td>
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<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<table>
<thead>
<tr>
<th>Sub-index</th>
<th>01h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>Entry Category</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
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<tr>
<td>Value range</td>
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<table>
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<tr>
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<tr>
<td>Description</td>
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<td>Optional</td>
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<tr>
<td>Access</td>
<td>ro; rw, if SI unit changeable</td>
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<tr>
<td>PDO mapping</td>
<td>Optional</td>
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<tr>
<td>Value range</td>
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<tr>
<td>Default value</td>
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**Sub-index**: 03<sub>h</sub>  
**Description**: Prefix  
**Entry category**: Optional  
**Access**: ro; rw, if prefix changeable  
**PDO mapping**: Optional  
**Value range**: INTEGER8  
**Default value**: -6 (micro)

### 7.2.7.4.43 Object 6674<sub>h</sub>: dpc target window monitoring upper threshold

This object defines the upper threshold for target window monitoring type = 1.

**OBJECT DESCRIPTION**

<table>
<thead>
<tr>
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<th>6674&lt;sub&gt;h&lt;/sub&gt;</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>dpc target window monitoring upper threshold</td>
</tr>
<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085&lt;sub&gt;h&lt;/sub&gt;)</td>
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<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring type = 1</td>
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**ENTRY DESCRIPTION**

<table>
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<tr>
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</tr>
<tr>
<td>Access</td>
<td>ro</td>
</tr>
<tr>
<td>PDO Mapping</td>
<td>No</td>
</tr>
<tr>
<td>Value Range</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Default Value</td>
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<table>
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</thead>
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<td>Mandatory</td>
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<tr>
<td>Access</td>
<td>rw</td>
</tr>
<tr>
<td>PDO mapping</td>
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### Object 6675H: dpc target window monitoring lower threshold

This object defines the lower threshold for target window monitoring type = 1.

#### OBJECT DESCRIPTION

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<tbody>
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<tr>
<td>Object code</td>
<td>RECORD</td>
</tr>
<tr>
<td>Data type</td>
<td>value parameter record INTEGER32 (0085H)</td>
</tr>
<tr>
<td>Category</td>
<td>Conditional; Mandatory, if target window monitoring type = 1</td>
</tr>
</tbody>
</table>

#### ENTRY DESCRIPTION

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<td>Access</td>
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<td>PDO Mapping</td>
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<td>No</td>
</tr>
<tr>
<td>Sub-index</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>01h</td>
<td>Value</td>
</tr>
<tr>
<td>02h</td>
<td>SI unit</td>
</tr>
<tr>
<td>03h</td>
<td>Prefix</td>
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