RailQUAD 8

Analogue/Digital Multifunction Input Module for DIN rail

ZIO-RQUAD8

Application program version: [1.3], [1.4]
User manual edition: [1.4]_a

www.zennio.com

USER MANUAL

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DOCUMENT UPDATES

Version	Changes	Page(s)
[1.3]_a	**Changes in the application program:** • Optimisation of inputs, thermostat and heartbeat modules.	-
	Minor text changes.	-
[1.2]_a	**Changes in the application program**: • Optimisation of the binary inputs, motion detector and thermostat modules.	-
[1.1]_a	**Changes in the application program**: • Support for custom NTC probes. • Heartbeat functionality added.	-

1 INTRODUCTION

1.1 RailQUAD 8

RailQUAD 8 is an analogue / digital input module from **Zennio** featuring eight separate inputs, each configurable as:

- **Binary Input.**
- **Temperature probe**, either models provided by Zennio or other NTC temperature probes from other suppliers, being in that case possible to configure their parameters in ETS.
- **Motion detector.**

Moreover, RailQUAD 8 implements:

- **8 independent thermostats**, which can be enabled and configured separately.
- **Heartbeat** or periodical “still-alive” notification.

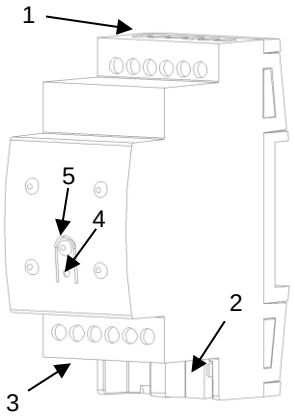
In sum, RailQUAD 8 is an updated version of the popular QUAD from Zennio, with twice the number of inputs and intended to be installed on a DIN rail

1.2 INSTALLATION

RailQUAD 8 is connected to the KNX bus through the incorporated terminal connector.

Once powered through the KNX bus, the device may be downloaded both, an individual address or the application program.

This device does not need any additional external power since it is entirely powered through the KNX bus.



1. Analogue/digital inputs 1 to 4
2. KNX bus connector
3. Analogue/digital inputs 5 to 8
4. Prog./Test LED
5. Prog./Test button

Figure 1 RailQUAD 8. Element diagram.

The main elements are described next:

- **Prog./Test Pushbutton (5)**: a short press on this button sets the device into the programming mode, making the associated LED (4) light in red.

  Note: *if this button is held while plugging the device into the KNX bus, the device will enter into **safe mode**. In such case, the LED will blink in red every 0.5 seconds.*

- **Inputs (1)(3)**: input ports for the insertion of the stripped cables of external elements such as switches / motion detectors / temperature probes, etc. One of the two cables of each element needs to be connected to one of the slots labelled “1” to “8”, while the other cable should be connected to the slot labelled as “C”. Note that all the external input devices share the “C” slot for one of the two cables. Please secure the connection by means of the on-board screws.

To obtain further information about the technical features of RailQUAD 8 and on security and installation procedures, please refer to the **Datasheet** of the device, bundled with the original packaging and also available at the Zennio website, http://www.zennio.com.

2 CONFIGURATION

2.1 GENERAL

After importing the corresponding database in ETS and adding the device into the topology of the desired project, the configuration process begins by entering the Parameters tab of the device.

ETS PARAMETERISATION

The only parameterisable screen available by default is General. From this screen it is possible to activate/deactivate all the required functionality.

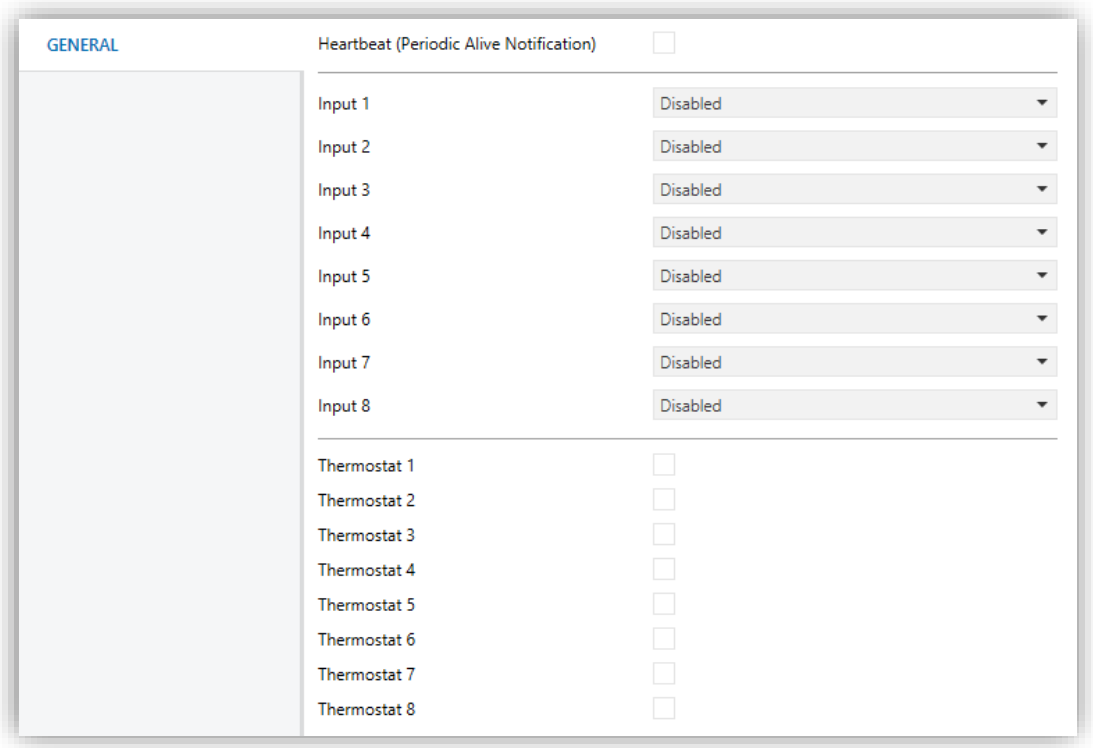


Figure 2 General.

- **Heartbeat (Periodic Alive Notification)** [*enabled/disabled*][1]**:** enables the "**[Heartbeat] Object to Send '1'**" one-bit object, which will be sent with a value of "1" and a configurable period to notify that the device is still working

[1] The default values of each parameter will be highlighted in blue in this document, as follows: [*default/rest of options*].

(*still alive*).

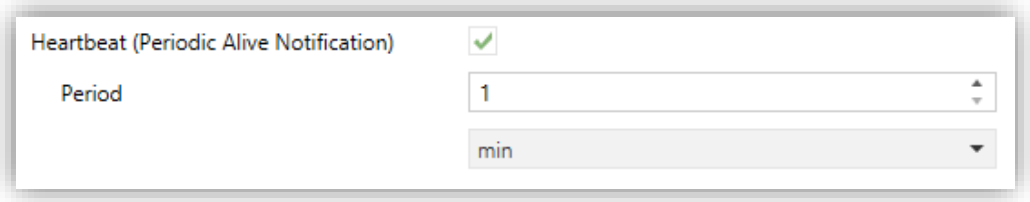


Figure 3 Heartbeat (Periodical Alive Notification).

Note: *the first sending after download or bus failure takes place with a delay of up to 255 seconds, to prevent bus overload. The following sendings match the period set*.

- **Input x** [*Disabled / Binary Input / Temperature Probe / Motion Detector*]: sets the type of input number "x. If such input is not required, it can be left as "Disabled".

- **Thermostat x** [*enabled/disabled*]: enables or disables thermostat number "x".

One entry per input or thermostat will be included into the tab tree on the left.

2.2 INPUTS

RailQUAD 8 incorporates **eight analogue/digital inputs**, each configurable as a:

- **Binary input**, for the connection of a pushbutton or a switch/sensor.

- **Temperature probe**, to connect a temperature sensor from Zennio.

- **Motion detector**, to connect a motion detector (models ZN1IO-DETEC-P and ZN1IO-DETEC-X from Zennio).

  Important: *older models of the Zennio motion detector (e.g., ZN1IO-DETEC and ZN1IO-DETEC-N) will not work properly with this device*

2.2.1 BINARY INPUT

Please refer to the specific user manual "**Binary Inputs**", available in the RailQUAD 8 product section at the Zennio website, http://www.zennio.com.

2.2.2 TEMPERATURE PROBE

Please refer to the specific user manual "**Temperature Probe**", available in the RailQUAD 8 product section at the Zennio website, http://www.zennio.com.

2.2.3 MOTION DETECTOR

It is possible to connect motion detectors (models **ZN1IO-DETEC-P** and **ZN1IO-DETEC-X** from Zennio) to the input ports of RailQUAD 8. This brings the device with the possibility of monitoring motion and presence in the room, as well as the light level. Depending on the detection, different response actions can be parameterised.

Please refer to the "**Motion Detector**" user manual, available under the RailQUAD 8 product section at the Zennio website (www.zennio.com), for detailed information about the functionality and the configuration of the related parameters.

Notes:

- *The ZN1IO-DETEC-P motion detector is compatible with a variety of Zennio devices. However, depending on the device it is actually being connected to, the functionality may differ slightly. Therefore, please refer specifically to the aforementioned user manual.*
- *Motion detectors with references ZN1IO-DETEC and ZN1IO-DETEC-N are **not compatible** with RailQUAD 8 (may report inaccurate measurements if connected to this device).*
- *When connected to RailQUAD 8, the rear micro-switch of model ZN1IO-DETEC-P should be set to position "**Type B**".*

2.3 THERMOSTATS

RailQUAD 8 allows independently enabling and configuring **up to eight thermostat** functions, with independence of the number of the inputs that have been configured.

Please refer to the specific "**Zennio Thermostat**" user manual available under the RailQUAD 8 product section at the Zennio homepage (www.zennio.com) for detailed information about the functionality and the configuration of the related parameters.

ANNEX I. COMMUNICATION OBJECTS

- "**Functional range**" shows the values that, with independence of any other values permitted by the bus according to the object size, may be of any use or have a particular meaning because of the specifications or restrictions from both the KNX standard or the application program itself.

Number	Size	I/O	Flags	Data type (DPT)	Functional Range	Name	Function
1	1 Bit		C T - - -	DPT_Trigger	0/1	[Heartbeat] Object to Send '1'	Sending of '1' Periodically
2	1 Byte	I	C - - W -	DPT_SceneControl	0-63; 128-191	[Thermostat] Scene Input	Scene Value
3, 4, 33, 34, 63, 64, 93, 94, 123, 124, 153, 154, 183, 184, 213, 214	2 Bytes	I	C - - W -	DPT_Value_Temp	-273.00º - 670760.00º	[Tx] Temperature Source X	External Sensor Temperature
5, 35, 65, 95, 125, 155, 185, 215	2 Bytes	O	C T R - -	DPT_Value_Temp	-273.00º - 670760.00º	[Tx] Effective Temperature	Effective Control Temperature
6, 36, 66, 96, 126, 156, 186, 216	1 Byte	I	C - - W -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[Tx] Special Mode	1-byte HVAC Mode
7, 37, 67, 97, 127, 157, 187, 217	1 Bit	I	C - - W -	DPT_Ack	0/1	[Tx] Special Mode: Comfort	0 = Nothing; 1 = Trigger
	1 Bit	I	C - - W -	DPT_Switch	0/1	[Tx] Special Mode: Comfort	0 = Off; 1 = On
8, 38, 68, 98, 128, 158, 188, 218	1 Bit	I	C - - W -	DPT_Ack	0/1	[Tx] Special Mode: Standby	0 = Nothing; 1 = Trigger
	1 Bit	I	C - - W -	DPT_Switch	0/1	[Tx] Special Mode: Standby	0 = Off; 1 = On
9, 39, 69, 99, 129, 159, 189, 219	1 Bit	I	C - - W -	DPT_Ack	0/1	[Tx] Special Mode: Economy	0 = Nothing; 1 = Trigger
	1 Bit	I	C - - W -	DPT_Switch	0/1	[Tx] Special Mode: Economy	0 = Off; 1 = On
10, 40, 70, 100, 130, 160, 190, 220	1 Bit	I	C - - W -	DPT_Ack	0/1	[Tx] Special Mode: Protection	0 = Nothing; 1 = Trigger
	1 Bit	I	C - - W -	DPT_Switch	0/1	[Tx] Special Mode: Protection	0 = Off; 1 = On
11, 41, 71, 101, 131, 161, 191, 221	1 Bit	I	C - - W -	DPT_Window_Door	0/1	[Tx] Window Status (Input)	0 = Closed; 1 = Open
12, 42, 72, 102, 132, 162, 192, 222	1 Bit	I	C - - W -	DPT_Ack	0/1	[Tx] Comfort Prolongation	0 = Nothing; 1 = Timed Comfort
13, 43, 73, 103, 133, 163, 193, 223	1 Byte	O	C T R - -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[Tx] Special Mode Status	1-byte HVAC Mode
14, 44, 74, 104, 134,	2 Bytes	I	C - - W -	DPT_Value_Temp	-273.00º - 670760.00º	[Tx] Setpoint	Thermostat Setpoint Input

164, 194, 224	2 Bytes	I	C - - W -	DPT_Value_Temp	-273.00º - 670760.00º	[Tx] Basic Setpoint	Reference Setpoint
15, 45, 75, 105, 135, 165, 195, 225	1 Bit	I	C - - W -	DPT_Step	0/1	[Tx] Setpoint Step	0 = -0.5ºC; 1 = +0.5ºC
16, 46, 76, 106, 136, 166, 196, 226	2 Bytes	I	C - - W -	DPT_Value_Tempd	-670760.00º - 670760.00º	[Tx] Setpoint Offset	Float Offset Value
17, 47, 77, 107, 137, 167, 197, 227	2 Bytes	O	C T R - -	DPT_Value_Temp	-273.00º - 670760.00º	[Tx] Setpoint Status	Current Setpoint
18, 48, 78, 108, 138, 168, 198, 228	2 Bytes	O	C T R - -	DPT_Value_Temp	-273.00º - 670760.00º	[Tx] Basic Setpoint Status	Current Basic Setpoint
19, 49, 79, 109, 139, 169, 199, 229	2 Bytes	O	C T R - -	DPT_Value_Tempd	-670760.00º - 670760.00º	[Tx] Setpoint Offset Status	Current Setpoint Offset
20, 50, 80, 110, 140, 170, 200, 230	1 Bit	I	C - - W -	DPT_Reset	0/1	[Tx] Setpoint Reset	Reset Setpoint to Default
	1 Bit	I	C - - W -	DPT_Reset	0/1	[Tx] Offset Reset	Reset offset
21, 51, 81, 111, 141, 171, 201, 231	1 Bit	I	C - - W -	DPT_Heat_Cool	0/1	[Tx] Mode	0 = Cool; 1 = Heat
22, 52, 82, 112, 142, 172, 202, 232	1 Bit	O	C T R - -	DPT_Heat_Cool	0/1	[Tx] Mode Status	0 = Cool; 1 = Heat
23, 53, 83, 113, 143, 173, 203, 233	1 Bit	I	C - - W -	DPT_Switch	0/1	[Tx] On/Off	0 = Off; 1 = On
24, 54, 84, 114, 144, 174, 204, 234	1 Bit	O	C T R - -	DPT_Switch	0/1	[Tx] On/Off Status	0 = Off; 1 = On
25, 55, 85, 115, 145, 175, 205, 235	1 Byte	O	C T R - -	DPT_Scaling	0% - 100%	[Tx] Control Variable (Cool)	PI Control (Continuous)
26, 56, 86, 116, 146, 176, 206, 236	1 Byte	O	C T R - -	DPT_Scaling	0% - 100%	[Tx] Control Variable (Heat)	PI Control (Continuous)
27, 57, 87, 117, 147, 177, 207, 237	1 Bit	O	C T R - -	DPT_Switch	0/1	[Tx] Control Variable (Cool)	2-Point Control
	1 Bit	O	C T R - -	DPT_Switch	0/1	[Tx] Control Variable (Cool)	PI Control (PWM)
28, 58, 88, 118, 148, 178, 208, 238	1 Bit	O	C T R - -	DPT_Switch	0/1	[Tx] Control Variable (Heat)	2-Point Control
	1 Bit	O	C T R - -	DPT_Switch	0/1	[Tx] Control Variable (Heat)	PI Control (PWM)
29, 59, 89, 119, 149, 179, 209, 239	1 Bit	O	C T R - -	DPT_Switch	0/1	[Tx] Additional Cool	Temp >= (Setpoint+Band) => "1"
30, 60, 90, 120, 150, 180, 210, 240	1 Bit	O	C T R - -	DPT_Switch	0/1	[Tx] Additional Heat	Temp <= (Setpoint-Band) => "1"
31, 61, 91, 121, 151, 181, 211, 241	1 Bit	O	C T R - -	DPT_Switch	0/1	[Tx] PI State (Cool)	0 = PI signal 0%; 1 = PI signal greater than 0%
32, 62, 92, 122, 152, 182, 212, 242	1 Bit	O	C T R - -	DPT_Switch	0/1	[Tx] PI State (Heat)	0 = PI signal 0%; 1 = PI signal greater than 0%
243, 247, 251, 255, 259, 263, 267, 271	2 Bytes	O	C T R - -	DPT_Value_Temp	-273.00º - 670760.00º	[Ix] Current Temperature	Temperature sensor value
244, 248, 252, 256,	1 Bit	O	C T R - -	DPT_Alarm	0/1	[Ix] Overcooling	0 = No Alarm; 1 = Alarm

260, 264, 268, 272							
245, 249, 253, 257, 261, 265, 269, 273	1 Bit	O	C T R - -	DPT_Alarm	0/1	[Ix] Overheating	0 = No Alarm; 1 = Alarm
246, 250, 254, 258, 262, 266, 270, 274	1 Bit	O	C T R - -	DPT_Alarm	0/1	[Ix] Probe Error	0 = No Alarm; 1 = Alarm
275, 281, 287, 293, 299, 305, 311, 317	1 Bit	I	C - - W -	DPT_Enable	0/1	[Ix] Input Lock	0 = Unlock; 1 = Lock
276, 282, 288, 294, 300, 306, 312, 318	1 Bit		C T - - -	DPT_Switch	0/1	[Ix] [Short Press] 0	Sending of 0
	1 Bit		C T - - -	DPT_Switch	0/1	[Ix] [Short Press] 1	Sending of 1
	1 Bit	I	C T - W -	DPT_Switch	0/1	[Ix] [Short Press] 0/1 Switching	Switching 0/1
	1 Bit		C T - - -	DPT_UpDown	0/1	[Ix] [Short Press] Move Up Shutter	Sending of 0 (Up)
	1 Bit		C T - - -	DPT_UpDown	0/1	[Ix] [Short Press] Move Down Shutter	Sending of 1 (Down)
	1 Bit		C T - - -	DPT_UpDown	0/1	[Ix] [Short Press] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Bit		C T - - -	DPT_Step	0/1	[Ix] [Short Press] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
	1 Bit		C T - - -	DPT_Step	0/1	[Ix] [Short Press] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
	1 Bit		C T - - -	DPT_Step	0/1	[Ix] [Short Press] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
	4 Bit		C T - - -	DPT_Control_Dimming	0x0 (Stop) 0x1 (Dec. by 100%) 0x2 (Dec. by 50%) 0x3 (Dec. by 25%) 0x4 (Dec. by 12%) 0x5 (Dec. by 6%) 0x6 (Dec. by 3%) 0x7 (Dec. by 1%) 0x8 (Stop) 0x9 (Inc. by 100%) 0xA (Inc. by 50%) 0xB (Inc. by 25%) 0xC (Inc. by 12%) 0xD (Inc. by 6%) 0xE (Inc. by 3%) 0xF (Inc. by 1%)	[Ix] [Short Press] Brighter	Increase Brightness
	4 Bit		C T - - -	DPT_Control_Dimming	0x0 (Stop) 0x1 (Dec. by 100%) ... 0x7 (Dec. by 1%) 0x8 (Stop) 0x9 (Inc. by 100%)	[Ix] [Short Press] Darker	Decrease Brightness

					... 0xF (Inc. by 1%)		
	4 Bit		C T - - -	DPT_Control_Dimming	0x0 (Stop) 0x1 (Dec. by 100%) ... 0x7 (Dec. by 1%) 0x8 (Stop) 0x9 (Inc. by 100%) ... 0xF (Inc. by 1%)	[Ix] [Short Press] Brighter/Darker	Switch Bright/Dark
	1 Bit		C T - - -	DPT_Switch	0/1	[Ix] [Short Press] Light On	Sending of 1 (On)
	1 Bit		C T - - -	DPT_Switch	0/1	[Ix] [Short Press] Light Off	Sending of 0 (Off)
	1 Bit	I	C T - W -	DPT_Switch	0/1	[Ix] [Short Press] Light On/Off	Switching 0/1
	1 Byte		C T - - -	DPT_SceneControl	0-63; 128-191	[Ix] [Short Press] Run Scene	Sending of 0 - 63
	1 Byte		C T - - -	DPT_SceneControl	0-63; 128-191	[Ix] [Short Press] Save Scene	Sending of 128 - 191
	1 Bit	I/O	C T R W -	DPT_Switch	0/1	[Ix] [Switch/Sensor] Edge	Sending of 0 or 1
	1 Byte		C T - - -	DPT_Value_1_Ucount	0 – 255	[Ix] [Short Press] Constant Value (Integer)	0 - 255
	1 Byte		C T - - -	DPT_Scaling	0% - 100%	[Ix] [Short Press] Constant Value (Percentage)	0% - 100%
	2 Bytes		C T - - -	DPT_Value_2_Ucount	0 – 65535	[Ix] [Short Press] Constant Value (Integer)	0 - 65535
	2 Bytes		C T - - -	9.xxx	-671088.64 - 670760.96	[Ix] [Short Press] Constant Value (Float)	Float Value
277, 283, 289, 295, 301, 307, 313, 319	1 Byte	I	C - - W -	DPT_Scaling	0% - 100%	[Ix] [Short Press] Shutter Status (Input)	0% = Top; 100% = Bottom
	1 Byte	I	C - - W -	DPT_Scaling	0% - 100%	[Ix] [Short Press] Dimming Status (Input)	0% - 100%
278, 284, 290, 296, 302, 308, 314, 320	1 Bit		C T - - -	DPT_Switch	0/1	[Ix] [Long Press] 0	Sending of 0
	1 Bit		C T - - -	DPT_Switch	0/1	[Ix] [Long Press] 1	Sending of 1
	1 Bit	I	C T - W -	DPT_Switch	0/1	[Ix] [Long Press] 0/1 Switching	Switching 0/1
	1 Bit		C T - - -	DPT_UpDown	0/1	[Ix] [Long Press] Move Up Shutter	Sending of 0 (Up)
	1 Bit		C T - - -	DPT_UpDown	0/1	[Ix] [Long Press] Move Down Shutter	Sending of 1 (Down)
	1 Bit		C T - - -	DPT_UpDown	0/1	[Ix] [Long Press] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Bit		C T - - -	DPT_Step	0/1	[Ix] [Long Press] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
	1 Bit		C T - - -	DPT_Step	0/1	[Ix] [Long Press] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
	1 Bit		C T - - -	DPT_Step	0/1	[Ix] [Long Press] Stop/Step Shutter	Switching of 0/1 (Stop/Step Up/Down)

						(Switched)	
	4 Bit		C T - - -	DPT_Control_Dimming	0x0 (Stop) 0x1 (Dec. by 100%) ... 0x7 (Dec. by 1%) 0x8 (Stop) 0x9 (Inc. by 100%) ... 0xF (Inc. by 1%)	[Ix] [Long Press] Brighter	Long Pr. -> Brighter; Release -> Stop
	4 Bit		C T - - -	DPT_Control_Dimming	0x0 (Stop) 0x1 (Dec. by 100%) ... 0x7 (Dec. by 1%) 0x8 (Stop) 0x9 (Inc. by 100%) ... 0xF (Inc. by 1%)	[Ix] [Long Press] Darker	Long Pr. -> Darker; Release -> Stop
	4 Bit		C T - - -	DPT_Control_Dimming	0x0 (Stop) 0x1 (Dec. by 100%) ... 0x7 (Dec. by 1%) 0x8 (Stop) 0x9 (Inc. by 100%) ... 0xF (Inc. by 1%)	[Ix] [Long Press] Brighter/Darker	Long Pr. -> Brighter/Darker; Release -> Stop
	1 Bit		C T - - -	DPT_Switch	0/1	[Ix] [Long Press] Light On	Sending of 1 (On)
	1 Bit		C T - - -	DPT_Switch	0/1	[Ix] [Long Press] Light Off	Sending of 0 (Off)
	1 Bit	I	C T - W -	DPT_Switch	0/1	[Ix] [Long Press] Light On/Off	Switching 0/1
	1 Byte		C T - - -	DPT_SceneControl	0-63; 128-191	[Ix] [Long Press] Run Scene	Sending of 0 - 63
	1 Byte		C T - - -	DPT_SceneControl	0-63; 128-191	[Ix] [Long Press] Save Scene	Sending of 128 - 191
	1 Bit	O	C T R - -	DPT_Alarm	0/1	[Ix] [Switch/Sensor] Alarm: Breakdown or Sabotage	1 = Alarm; 0 = No Alarm
	2 Bytes		C T - - -	9.xxx	-671088.64 - 670760.96	[Ix] [Long Press] Constant Value (Float)	Float Value
	2 Bytes		C T - - -	DPT_Value_2_Ucount	0 - 65535	[Ix] [Long Press] Constant Value (Integer)	0 - 65535
	1 Byte		C T - - -	DPT_Scaling	0% - 100%	[Ix] [Long Press] Constant Value (Percentage)	0% - 100%
	1 Byte		C T - - -	DPT_Value_1_Ucount	0 - 255	[Ix] [Long Press] Constant Value (Integer)	0 - 255
279, 285, 291, 297, 303, 309, 315, 321	1 Bit		C T - - -	DPT_Trigger	0/1	[Ix] [Long Press/Release] Stop Shutter	Release -> Stop Shutter

280, 286, 292, 298, 304, 310, 316, 322	1 Byte	I	C - - W -	DPT_Scaling	0% - 100%	[Ix] [Long Press] Dimming Status (Input)	0% - 100%
	1 Byte	I	C - - W -	DPT_Scaling	0% - 100%	[Ix] [Long Press] Shutter Status (Input)	0% = Top; 100% = Bottom
323	1 Byte	I	C - - W -	DPT_SceneControl	0-63; 128-191	[Motion Detector] Scene Input	Scene Value
324	1 Byte		C T - - -	DPT_SceneControl	0-63; 128-191	[Motion Detector] Scene Output	Scene Value
325, 354, 383, 412, 441, 470, 499, 528	1 Byte	O	C T R - -	DPT_Scaling	0% - 100%	[Ix] Luminosity	0-100%
326, 355, 384, 413, 442, 471, 500, 529	1 Bit	O	C T R - -	DPT_Alarm	0/1	[Ix] Open Circuit Error	0 = No Error; 1 = Open Circuit Error
327, 356, 385, 414, 443, 472, 501, 530	1 Bit	O	C T R - -	DPT_Alarm	0/1	[Ix] Short Circuit Error	0 = No Error; 1 = Short Circuit Error
328, 357, 386, 415, 444, 473, 502, 531	1 Byte	O	C T R - -	DPT_Scaling	0% - 100%	[Ix] Presence State (Scaling)	0-100%
329, 358, 387, 416, 445, 474, 503, 532	1 Byte	O	C T R - -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[Ix] Presence State (HVAC)	Auto, Comfort, Standby, Economy, Building Protection
330, 359, 388, 417, 446, 475, 504, 533	1 Bit	O	C T R - -	DPT_Occupancy	0/1	[Ix] Presence State (Binary)	Binary Value
	1 Bit	O	C T R - -	DPT_Ack	0/1	[Ix] Presence: Slave Output	1 = Motion Detected
331, 360, 389, 418, 447, 476, 505, 534	1 Bit	I	C - - W -	DPT_Window_Door	0/1	[Ix] Presence Trigger	Binary Value to Trigger the Presence Detection
332, 361, 390, 419, 448, 477, 506, 535	1 Bit	I	C - - W -	DPT_Ack	0/1	[Ix] Presence: Slave Input	0 = Nothing; 1 = Detection from slave device
333, 362, 391, 420, 449, 478, 507, 536	2 Bytes	I	C - - W -	DPT_TimePeriodSec	0-65535	[Ix] Presence: Waiting Time	0-65535 s.
334, 363, 392, 421, 450, 479, 508, 537	2 Bytes	I	C - - W -	DPT_TimePeriodSec	1-65535	[Ix] Presence: Listening Time	1-65535 s.
335, 364, 393, 422, 451, 480, 509, 538	1 Bit	I	C - - W -	DPT_Enable	0/1	[Ix] Presence: Enable	According to parameters
336, 365, 394, 423, 452, 481, 510, 539	1 Bit	I	C - - W -	DPT_Switch	0/1	[Ix] Presence: Day/Night	According to parameters
337, 366, 395, 424, 453, 482, 511, 540	1 Bit	O	C T R - -	DPT_Occupancy	0/1	[Ix] Presence: Occupancy State	0 = Not Occupied; 1 = Occupied
338, 367, 396, 425, 454, 483, 512, 541	1 Bit	I	C - - W -	DPT_Ack	0/1	[Ix] External Motion Detection	0 = Nothing; 1 = Motion detected by an external sensor
339, 344, 349, 368, 373, 378, 397, 402, 407, 426, 431, 436, 455, 460, 465, 484, 489, 494, 513, 518,	1 Byte	O	C T R - -	DPT_Scaling	0% - 100%	[Ix] [Cy] Detection State (Scaling)	0-100%

523, 542, 547, 552							
340, 345, 350, 369, 374, 379, 398, 403, 408, 427, 432, 437, 456, 461, 466, 485, 490, 495, 514, 519, 524, 543, 548, 553	1 Byte	O	**C T R - -**	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[Ix] [Cy] Detection State (HVAC)	Auto, Comfort, Standby, Economy, Building Protection
341, 346, 351, 370, 375, 380, 399, 404, 409, 428, 433, 438, 457, 462, 467, 486, 491, 496, 515, 520, 525, 544, 549, 554	1 Bit	O	**C T R - -**	DPT_Switch	0/1	[Ix] [Cy] Detection State (Binary)	Binary Value
342, 347, 352, 371, 376, 381, 400, 405, 410, 429, 434, 439, 458, 463, 468, 487, 492, 497, 516, 521, 526, 545, 550, 555	1 Bit	I	**C - - W -**	DPT_Enable	0/1	[Ix] [Cy] Enable Channel	According to parameters
343, 348, 353, 372, 377, 382, 401, 406, 411, 430, 435, 440, 459, 464, 469, 488, 493, 498, 517, 522, 527, 546, 551, 556	1 Bit	I	**C - - W -**	DPT_Switch	0/1	[Ix] [Cy] Force State	0 = No Detection; 1 = Detection

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