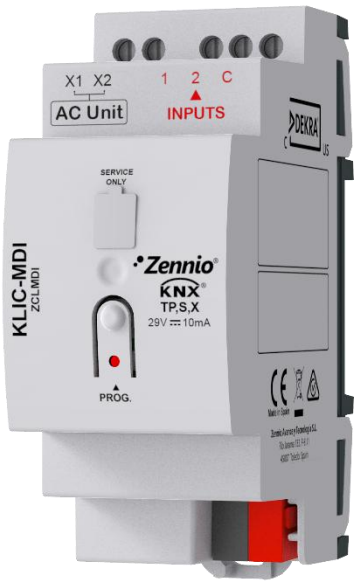


KLIC-MDI

KNX Gateway for Midea VRF Air Conditioning Indoor Units with X1X2 Port

ZCLMDI

Application program version: [1.0]
User manual edition: [1.0]_a

www.zennio.com

USER MANUAL

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1 INTRODUCTION

1.1 KLIC-MDI

KLIC-MDI from Zennio is a KNX gateway that allows bidirectional communication between a KNX installation and Midea VRF indoor units with a **X1X2** port.

The device is aimed at setups with **1:1** control, that is, one gateway per indoor unit. Communication with the machine is carried out using control protocols compatible with Midea's **V6** and **V8** generations.

The most notable features of the KLIC-MDI are:

- **Bidirectional communication** with compatible Midea VRF indoor units.
- **On/Off, operation mode, setpoint temperature, fan** controls and when allowed, **horizontal** and **vertical** flaps.
- Compatibility with advanced modes, such as **silent mode, ECO mode** and external reference temperature through **Follow Me** function.
- Supervision of **communication errors**, errors specific to the A/C unit, filter status and operating time.
- **Automatic shutdown** through object and a configurable delay.
- Up to **5 configurable scenes** for recovering or saving device's status.
- **2 configurable inputs** as binary input, motion detector or temperature probe.
- **10 logic functions**.
- **Heartbeat** or periodic function confirmation.

1.2 CONNECTION WITH THE AC UNIT

KLIC-MDI connects to the X1X2 port of the indoor unit. In an installation with a wired remote, the master/slave configuration indicated for the Midea system must be followed, so that there is only one remote set as master.

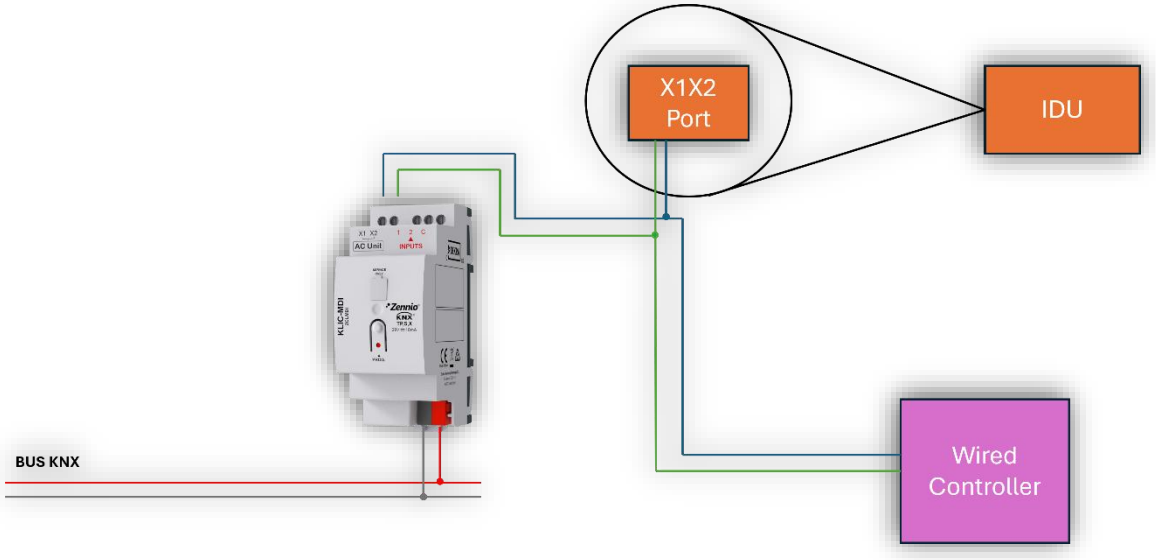


Figure 1: Connection diagram

1.3 START-UP AND POWER LOSS

Depending on the setup, specific actions will run during the device's startup. The integrator can set an initial state of the A/C unit after programming or bus voltage recovery, as well as send certain objects to the KNX bus.

When a power failure occurs, the device stops any pending actions. Once power is restored, the KLIC-MDI reconnects to the unit and updates the states according to the settings defined in ETS.

2 CONFIGURATION

2.1 GENERAL

After importing the corresponding database into ETS and adding the device to the topology of the desired project, the configuration process begins by accessing the device´s parameters tab.

ETS PARAMETRISATION

First the **General** window appears, with the following parameters:

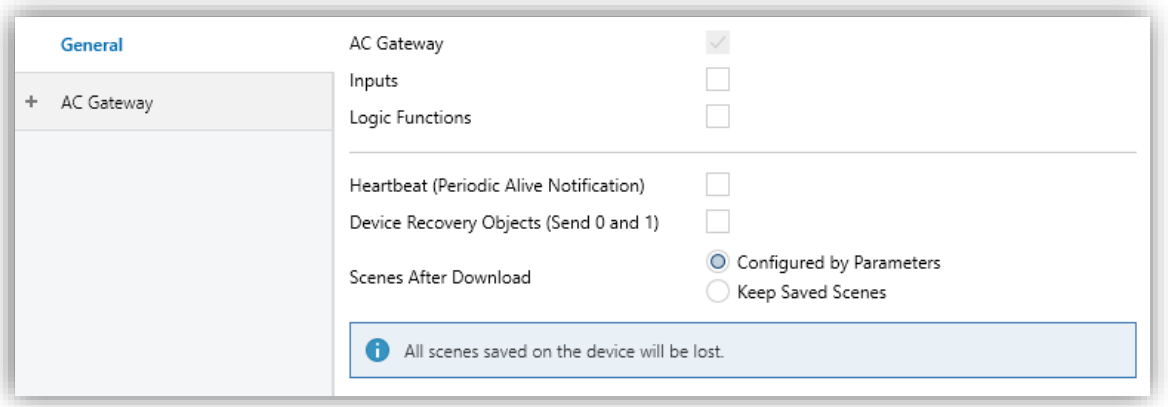


Figure 2: General

- **AC Gateway** [*enabled*]: enables the **AC Gateway** tab in the parameter tree.
- **Inputs** [*disabled / enabled*]: enables or disables the **Inputs** tab, depending on whether the device will connect to external accessories. For more information, see section 2.3.
- **Logic Functions** [*disabled / enabled*]: enables the **Logic Function** tab. For more information, see section 2.4.
- **Heartbeat (Periodic Alive Notification)** [*disabled / enabled*]: it allows adding a one-bit object that will be sent periodically with the value”1” to notify that the device is operational.

Note: *the first transmission after power-up or bus failure occurs with a delay of up to 255 seconds, so as not to overload the bus. Subsequent transmissions then follow the set period.*

- **Device Recovery Objects (Send 0 and 1)** [*disabled / enabled*]: Activates two communication objects that will send the values **0** and **1** to the KNX bus when the device starts to operate, for example after download or after voltage recovery.

- **Scenes After Download** [Configured by Parameters / *Keep Saved*]: define whether, after a download, the values configured by parameter are applied or the previously saved scenes are retained.

Regardless of the previous parameters, the main control and status objects of the AC unit are available by default.

- **[AC] On/Off** and **[AC] On/Off (status)**: Allow the AC unit to power on or off and know its status.

- **[AC] Setpoint Temperature** and **[AC] Setpoint Temperature (status):** Allow to set or monitor the temperature setting.

- **[AC] Mode** and **[AC] Mode (status)**: Allow to be set or monitored the operating mode.

- Various **error objects**.

2.2 AC GATEWAY

The KLIC-MDI allows to monitor and control the indoor air conditioning unit in the same way as you would with the machine's wired remote.

Orders can be sent from the KNX bus to control the main functions of the air conditioning system:

- **On/Off** control of the AC unit.

- **Operating mode**: Auto, Heat, Cool, Ventilation and Dry.

- **Setpoint temperature**, with a resolution of 0.5ºC and proper limits of the unit.

- **Fan speed**, with auto mode and from 3 to 7 speeds depending on the model.

- **Horizontal and vertical flaps**, with oscillating movement and fixed positions when allowed by the AC unit.

- **Silent Mode, ECO Mode, Automatic Off, errors, filter alert, and operating time counter.**

Note: *The real functionality depends on the AC model. For that reason, the application must be parametrised with the available options in the indoor unit being controlled.*

ETS PARAMETERISATION

In the gateway settings tab, the general operating parameters of the AC are defined.

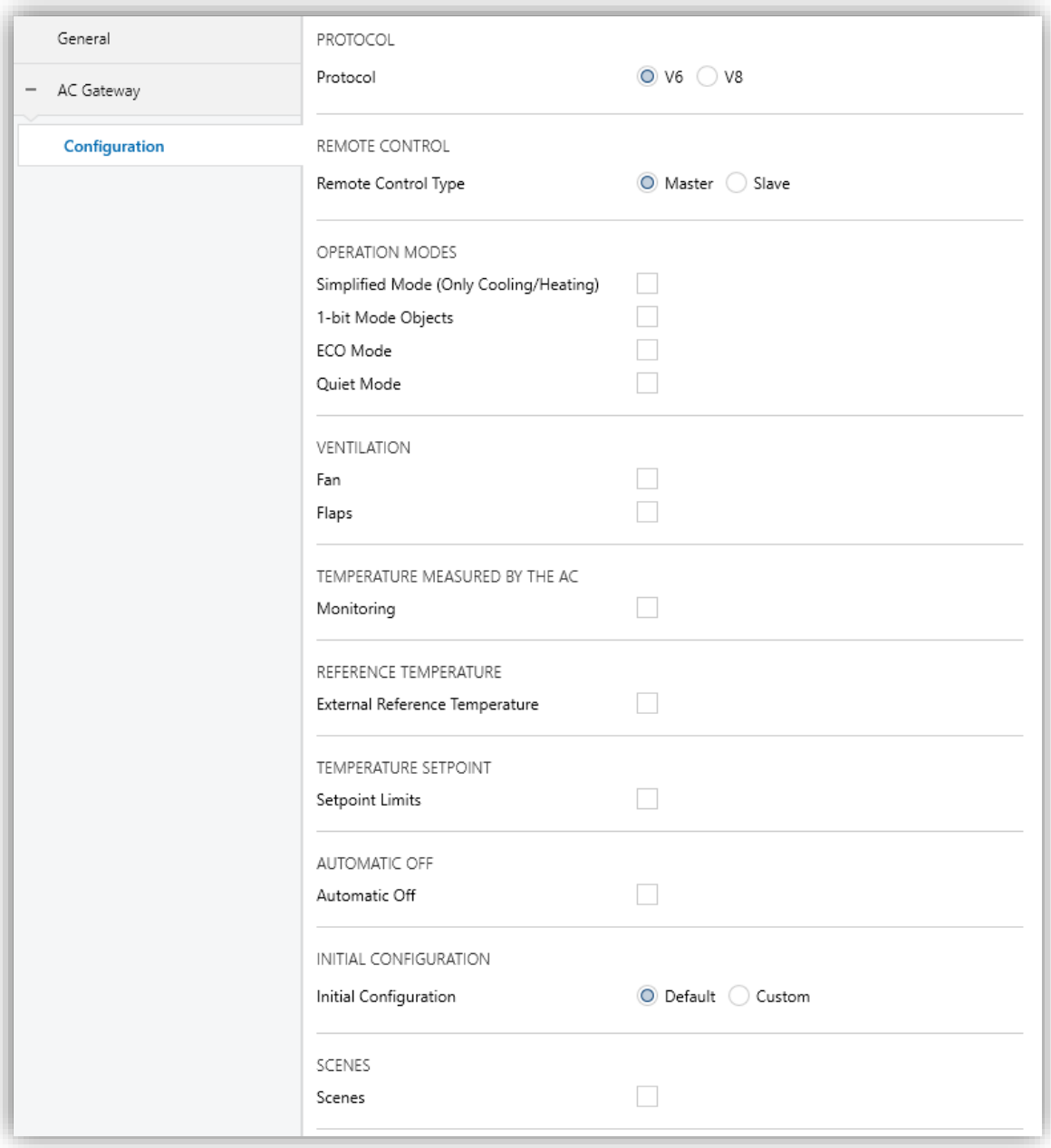


Figure 3: AC gateway setup

Note: *Fan speeds, flaps, and advanced modes should be set according to the functions available on the indoor unit. An unsupported setting might cause certain commands not to work on the machine.*

2.2.1 MASTER/SLAVE CONFIGURATION

For the installation to work properly, there must always be an unique remote configured as master. This remote can be the KLIC-MDI or a Midea controller, but there must be always only one master in the installation.

At protocol level, the master is the only one who sends orders to the machine. The operation of a slave remote on changing a parameter is the following:

- The parameter is modified at the slave, and nothing is sent immediately to the unit.
- The master remote sends a periodic synchronization frame to the slave remote.
- The slave remote only responds to that frame if any parameter has changed.
- The master remote sends to the AC unit the necessary command to reflect the change.

Note: *To send a different reference temperature to the machine from the one measured by the unit probe, the KLIC-MDI must be configured as master.*

2.2.2 POWER ON AND OFF

For the control and monitoring of the machine's power on and off, the following objects are available:

- **[AC] On/Off**.
- **[AC] On/Off (status)**.

The control object allows the sending of the on and off commands. The status object provides the actual status known by the KLIC-MDI after the communication with the indoor unit.

2.2.3 OPERATION MODES

For the control and monitoring of the operating mode these objects are used:

- **[AC] Mode**.
- **[AC] Mode (status)**.

The allowed values are:

Value	Mode
00	Automatic
01	Heat
03	Cool
09	Ventilation
14	Dry

Table 1: Allowed mode values

Additionally, a simplified control and status mode for cooling/heating can be enabled through the objects.

- **[AC] Simplified Mode**.
- **[AC] Simplified Mode (status)**.

In this case, **0** corresponds to cool mode and **1** to heat mode. When the AC is in dry mode the object takes the value **0**. In ventilation mode or automatic mode, this object is not updated.

2.2.4 FAN

Compatible models may have 3 to 7 fan speeds, in addition to an automatic mode. The number of speeds must be configured according to the unit being controlled.

Speeds	3 speeds	4 speeds	5 speeds	6 speeds	7 speeds
Automatic	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)
I	33.33% (85)	25.00% (64)	20.00% (51)	16.67% (43)	14.29% (36)
II	66.67% (170)	50.00% (128)	40.00% (102)	33.33% (85)	28.57% (73)
III	100.00% (255)	75.00% (191)	60.00% (153)	50.00% (128)	42.86% (109)
IV		100.00% (255)	80.00% (204)	66.67% (170)	57.14% (146)
V			100.00% (255)	83.33% (213)	71.43% (182)
VI				100.00% (255)	85.71% (219)
VII					100.00% (255)

Table 2: Fan speeds

For the control and monitoring of the fan there are two available objects. The DPT of both objects is configurable by parameter, being able to choose between scaling encoding (5.001 DPT_Scaling) or enumerated (5.100 DPT_FAN_Stage):

- **[AC] Fan: Percentage Control** / **[AC] Fan: Percentage Control (status)**.
- **[AC] Fan Enumerated Control** / **[AC] Fan: Enumerated Control (status)**.

For the percentage encoding the values defined by the KNX standard are used with the only difference being the value 0% that corresponds to the automatic mode of the AC.

In the enumerated encoding, the value 0 corresponds to the automatic mode. The values 1…N directly select the speed 1…N, where N is the number of configured speeds. The received values above N are limited to the maximum speed available.

Note: *in the dry mode, the AC does not allow setting the fan speed. For this reason, the fan control object is not actually applied in the unit when entering this mode, but it is saved for when another mode that does allow it is selected.*

2.2.4.1 AUTOMATIC SPEED

The option to have two 1-bit objects dedicated to its control/status can be enabled. Regardless of whether the 0% value is also automatic mode:

- **[AC] Fan: Automatic**.
- **[AC] Fan: Automatic (status)**.

The behaviour will be the following. If the automatic speed is activated by the individual object, the fan will be set to automatic mode. If the automatic speed is deactivated by the individual object, the order to put the fan at speed 1 will be sent. If a deactivation order is received while automatic mode is already deactivated, the order will be ignored.

2.2.4.2 STEP CONTROL

Step control can be enabled, in which, through the object "**[AC] Fan: Step Control**", a speed level is decreased (receiving 0) or increased (receiving 1). This control can be cyclic or non-cyclic. Automatic speed will be part of this sequence, positioned before the minimum speed.

- **Non-cyclic**: The new speed will be based on the state of the fan, that is, if the fan is currently at speed 1 and an increment is requested, speed 2 will be activated. Below is an example sequence of 3 speeds.

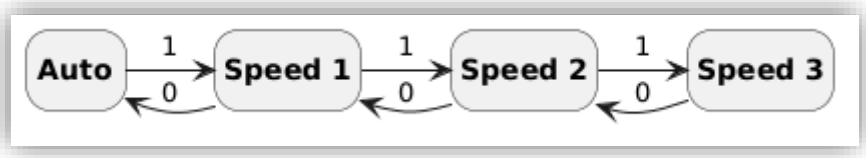


Figure 4: No cyclic sequence

- **Cyclic**: it switches to automatic mode between minimum and maximum available speeds. Below is an example of 3 speeds.

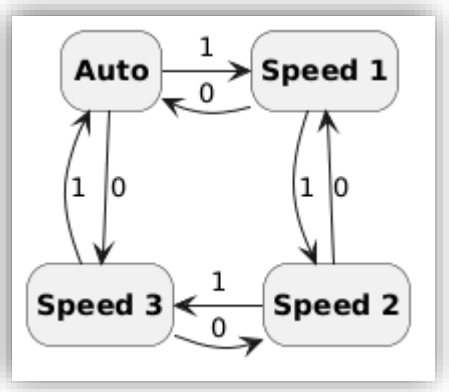


Figure 5: Cyclic sequence

2.2.5 FLAPS

The flaps control allows to activate or deactivate the oscillating movement and determine a fixed position. There are two types of flaps:

- **Horizontal flaps**: up/down movement.
- **Vertical flaps**: right/left movement.

For each type of flap, movement objects, percentage control, state and step control can be enabled.

Flaps position object	Fixed position Nº	Status object
0.00% (0)	Swing	0.00% (0)
0.39% – 20.00% (1 – 51)	I	20.00% (51)
20.39% - 40.00% (52 – 102)	II	40.00% (102)
40.39% - 60.00% (103 – 153)	III	60.00% (153)
60.39% - 80.00% (154 – 204)	IV	80.00% (204)
80.39% - 100.00% (205 – 255)	V	100.00% (255)

Table 3: Flaps position

2.2.5.1 STEP CONTROL

The step control allows to increase or decrease the current position. It can be configured as cyclic or non-cyclic. The swing mode is part of the sequence, and it is located before position I.

2.2.6 SILENT MODE AND ECO MODE

The KLIC-MDI has two specific objects to control and monitor the advanced modes of the AC unit.

- **[AC] Silent Mode** and **[AC] Silent Mode (status)**: reduce operation noise from the AC when the unit supports it.
- **[AC] ECO Mode** and **[AC] ECO mode (status)**: Allow activation or monitoring of the power saving mode.

2.2.7 TEMPERATURE

2.2.7.1 SETPOINT TEMPERATURE

For control and monitoring of the setpoint temperature there are:

- **[AC] Setpoint Temperature**.
- **[AC] Setpoint Temperature (status)**.

The resolution of the temperature data is **0.5ºC**. There can be lower and upper setpoint limits enabled, with a resolution of **1.0ºC**. The setpoint values received by the KNX bus are restricted to the allowed range from the unit, being defined by the machine.

Note: *If the lower limit configured is greater than or equal to the upper limit, the limits are considered invalid and are not applied in automatic mode.*

2.2.7.2 TEMPERATURE MEASURED BY THE AC

The object **[AC] AC Unit: Measured Temperature (status)** gives the internal temperature value measured by indoor unit probe. It can be configured for periodic sending, on a value change or according to both criteria.

2.2.7.3 EXTERNAL REFERENCE TEMPERATURE. FOLLOW ME FUNCTION

When the KLIC-MDI acts as master, the external reference temperature can be modified using the **[AC] External Reference Temperature** object.

If this external temperature is not enabled, the unit uses the measured temperature from its own internal probe. If it is enabled, it is necessary to periodically send the reference value to keep the unit's control updated.

2.2.8 AUTOMATIC OFF

The automatic off allows the delayed shutdown when the associated object is activated. The function is designed to respond to events such as the opening of a window or an external energy-saving condition.

The associated objects are:

- **[AC] Automatic Off**.
- **[AC] Automatic Off (status)**.
- **[AC] Automatic Off: Delay**.

During the automatic off state, the On/Off commands received from the bus are ignored while the condition remains active. The rest of the orders keep being attended during the delay timing.

2.2.9 SCENES

Up to **5 parameterisable scenes** can be enabled. The scenes allow to run, save or modify a set of operating values from the unit.

The available values in each scene depend on the enabled control options in the AC gateway, such as mode, setpoint, fan, flaps, advanced modes and automatic off.

2.2.9.1 SCENE SAVING BETWEEN DOWNLOADS

The global parameter "**Scenes after download**" allows to choose between applying configured scenes by parameter or maintain the previously saved scenes in the device.

2.2.10 INITIAL STATUS

There may be configured the desired state of the AC unit after download and bus voltage recovery. If a custom initial configuration is selected, there may be set the initial values of the enabled controls.

ETS PARAMETRISATION

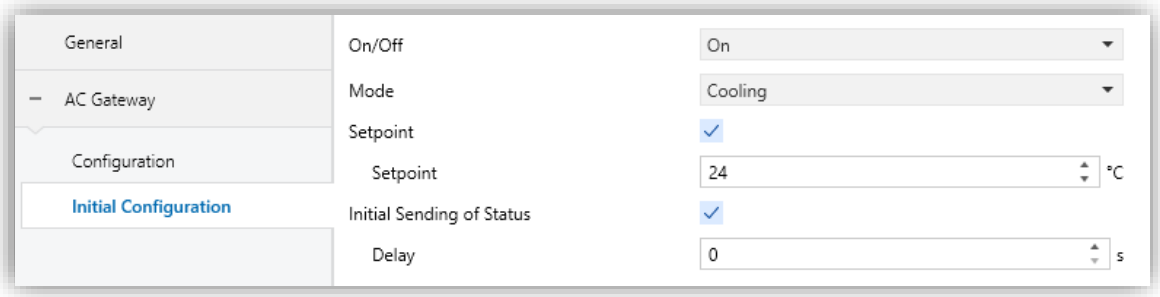


Figure 6: Initial Configuration

2.2.11 FILTER

The KLIC-MDI allows the configuration and reset of the filter alarm for the AC unit by communication objects:

- **[AC] Filter (status)**: It is sent with value 1 when the filter reminder alarm is activated.
- **[AC] Filter: reset**: The filter resets when the unit allows it.

Note: *The filter alarm can be only configured and used if the KLIC-MDI acts as master.*

2.2.12 ERRORS

- **Internal Errors**: It will be possible to distinguish between a total communication error and a partial communication error.
- **Failure/error from AC**: reported errors by the indoor unit.

2.2.12.1 INTERNAL ERRORS

The object **[AC] Internal Error: Communication**, is triggered when the KLIC-MDI cannot establish communication with the indoor unit. This error can be also be detected by the activation of the device's green LED remaining lit.

The object **[AC] Internal alert: low communication quality**, its activation is possible when the installation is of poor quality, and some frame may be lost, but without impeding communication with the machine. This error can also be detected through the blinking of the device's green LED at 0.5-second intervals.

2.2.12.2 FAILURE/ERROR FROM AC

For monitoring the unit errors there are used:

- **[AC] AC Unit Error: Active Error**.
- **[AC] AC Unit Error: Error Code**.

The error code shown by the second object is the alphanumeric code established by Midea for the detected error. The codification differs from protocols V6 and V8; the AC unit manual must be checked to interpret the received code.

2.2.13 OPERATING TIME COUNTER

The KLIC-MDI includes an operating time counter for the AC unit. The counter can be expressed in seconds or hours by the communication objects:

- **[AC] Operating Time (s)**.
- **[AC] Operating Time (h)**.

The counter might be reset or modified at runtime by writing in any of the objects. Both objects are referenced to the same counter.

2.3 INPUTS

The KLIC-MDI includes **two general purpose inputs**. Each input can be configured independently according to the connected accessory. There are three possible parametrisations, which are explained below.

2.3.1 BINARY INPUT

Configuration for the connection of a pushbutton, pulse counter or a switch/sensor. Please refer to the "**Binary Inputs**" user manual, available under the product section at www.zennio.com.

2.3.2 TEMPERATURE PROBE

Configuration for the connection of a temperature sensor from Zennio of 6.8k or 10k Ohms or a custom NTC probe. Please refer to the "**Temperature Probe**" user manual, available under the product section at www.zennio.com.

2.3.3 MOTION DETECTOR

Configuration for the connection of a motion detector. It is possible to connect motion detectors from Zennio. Please refer to the "**Motion Detector**" user manual, available under the product section at www.zennio.com, for detailed information about the functionality and the configuration of the related parameters.

2.4 LOGIC FUNCTIONS

This module allows the execution of numeric operations or binary logic with the data proceeding from the KNX bus and send the result through the communication objects enabled.

In the KLIC-MDI there can be implemented up to **10 different and independent logic functions**.

The execution of each function can be dependable from a configurable condition. Said condition is checked every time the function is activated through the specific and parametrizable communication objects.

The result after execution of the operations might be checked if some conditions are met or after sending, or not, to the KNX bus. The sending might be every time the function is executed, in a periodic way or only if the result is different from the previous one.

Please refer to the "**Logic Functions**" user manual, available under the product section at www.zennio.com.

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 Byte	I/O	C R W T U	18.001 - DPT_SceneControl	0-63; 128-191	[AC] Scene	0 - 63 (Execute 1 - 64); 128 - 191 (Save 1 - 64)
2	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[AC] On/Off	0 = Off; 1 = On
3	1 Bit	O	C R - T -	1.001 - DPT_Switch	0/1	[AC] On/Off (Status)	0 = Off; 1 = On
4	2 Bytes	I	C - W - -	9.001 - DPT_Value_Temp	-273.00º - 670433.28º	[AC] Temperature Setpoint	[17 ... 30] °C
5	2 Bytes	O	C R - T -	9.001 - DPT_Value_Temp	-273.00º - 670433.28º	[AC] Temperature Setpoint (Status)	[17 ... 30] °C
6	2 Bytes	I	C - W - -	9.001 - DPT_Value_Temp	-273.00º - 670433.28º	[AC] Temperature Setpoint: Lower Limit	[17 ... 30] °C
7	2 Bytes	O	C R - T -	9.001 - DPT_Value_Temp	-273.00º - 670433.28º	[AC] Temperature Setpoint: Lower Limit (Status)	[17 ... 30] °C
8	2 Bytes	I	C - W - -	9.001 - DPT_Value_Temp	-273.00º - 670433.28º	[AC] Temperature Setpoint: Upper Limit	[17 ... 30] °C
9	2 Bytes	O	C R - T -	9.001 - DPT_Value_Temp	-273.00º - 670433.28º	[AC] Temperature Setpoint: Upper Limit (Status)	[17 ... 30] °C
10	1 Byte	I	C - W - -	20.105 - DPT_HVACContrMode	0=Auto 1=Heat 3=Cool 9=Fan 14=Dry	[AC] Mode	0 = Automatic; 1 = Heating; 3 = Cooling; 9 = Fan; 14 = Dry
11	1 Byte	O	C R - T -	20.105 - DPT_HVACContrMode	0=Auto 1=Heat 3=Cool 9=Fan 14=Dry	[AC] Mode (Status)	0 = Automatic; 1 = Heating; 3 = Cooling; 9 = Fan; 14 = Dry
12	1 Bit	I	C - W - -	1.100 - DPT_Heat_Cool	0/1	[AC] Simplified Mode	0 = Cooling; 1 = Heating
13	1 Bit	O	C R - T -	1.100 - DPT_Heat_Cool	0/1	[AC] Simplified Mode (Status)	0 = Cooling; 1 = Heating
14	1 Bit	I	C - W - -	1.016 - DPT_Ack	0/1	[AC] Heat Mode	0 = Nothing; 1 = Activate
15	1 Bit	O	C R - T -	1.011 - DPT_State	0/1	[AC] Heat Mode (Status)	0 = Inactive; 1 = Active
16	1 Bit	I	C - W - -	1.016 - DPT_Ack	0/1	[AC] Cool Mode	0 = Nothing; 1 = Activate
17	1 Bit	O	C R - T -	1.011 - DPT_State	0/1	[AC] Cool Mode (Status)	0 = Inactive; 1 = Active

18	1 Bit	I	C - W - -	1.016 - DPT_Ack	0/1	[AC] Dry Mode	0 = Nothing; 1 = Activate
19	1 Bit	O	C R - T -	1.011 - DPT_State	0/1	[AC] Dry Mode (Status)	0 = Inactive; 1 = Active
20	1 Bit	I	C - W - -	1.016 - DPT_Ack	0/1	[AC] Fan Mode	0 = Nothing; 1 = Activate
21	1 Bit	O	C R - T -	1.011 - DPT_State	0/1	[AC] Fan Mode (Status)	0 = Inactive; 1 = Active
22	1 Bit	I	C - W - -	1.016 - DPT_Ack	0/1	[AC] Auto Mode	0 = Nothing; 1 = Activate
23	1 Bit	O	C R - T -	1.011 - DPT_State	0/1	[AC] Auto Mode (Status)	0 = Inactive; 1 = Active
24	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[AC] Fan: Percentage Control	0% = Auto; [0.4...14.1]% = S1; [14.5...28.6]% = S2; [29.0...42.7]% = S3; [43.1...57.3]% = S4; [57.6...71.4]% = S5; [71.8...85.9]% = S6; [86.3...100]% = S7
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[AC] Fan: Percentage Control	0% = Auto; [0,4...33.33] % = S1; [33.73...66.67] % = S2; [67.06...100] % = S3
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[AC] Fan: Percentage Control	0% = Auto; [0.4...25.10]% = S1; [25.49...50.20]% = S2; [50.59...75.29]% = S3; [75.69...100]% = S4
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[AC] Fan: Percentage Control	0% = Auto; [0.4...20.00]% = S1; [20.39...40.00]% = S2; [40.39...60.00]% = S3; [60.39...80.00]% = S4; [80.39...100]% = S5
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[AC] Fan: Percentage Control	0% = Auto; [0.39...16.86]% = S1; [17.25...33.33]% = S2; [33.73...50.20]% = S3; [50.59...66.67]% = S4; [67.06...83.53]% = S5; [83.92...100]% = S6
	1 Byte	I	C - W - -	5.100 - DPT_Fan_Stage	0 - 255	[AC] Fan: Enumerated Control	0 = Auto; 1 = S1; 2 = S2; 3 = S3
	1 Byte	I	C - W - -	5.100 - DPT_Fan_Stage	0 - 255	[AC] Fan: Enumerated Control	0 = Auto; 1 = S1; 2 = S2; 3 = S3; 4 = S4
	1 Byte	I	C - W - -	5.100 - DPT_Fan_Stage	0 - 255	[AC] Fan: Enumerated Control	0 = Auto; 1 = S1; 2 = S2; 3 = S3; 4 = S4; 5 = S5
	1 Byte	I	C - W - -	5.100 - DPT_Fan_Stage	0 - 255	[AC] Fan: Enumerated Control	0 = Auto; 1 = S1; 2 = S2; 3 = S3; 4 = S4; 5 = S5; 6 = S6
	1 Byte	I	C - W - -	5.100 - DPT_Fan_Stage	0 - 255	[AC] Fan: Enumerated Control	0 = Auto; 1 = S1; 2 = S2; 3 = S3; 4 = S4; 5 = S5; 6 = S6; 7 = S7
25	1 Byte	O	C R - T -	5.001 - DPT_Scaling	0% - 100%	[AC] Fan: Percentage Control (Status)	0% = Auto; 14.1% = S1; 28.6% = S2; 42.7% = S3; 57.3% = S4; 71.4% = S5; 85.9% = S6; 100% = S7
	1 Byte	O	C R - T -	5.001 - DPT_Scaling	0% - 100%	[AC] Fan: Percentage Control (Status)	0% = Auto; 33.33% = S1; 66.67% = S2; 100% = S3
	1 Byte	O	C R - T -	5.001 - DPT_Scaling	0% - 100%	[AC] Fan: Percentage Control (Status)	0% = Auto; 25.10% = S1; 50,20% = S2; 75,29% = S3; 100% = S4

	1 Byte	O	C R - T -	5.001 - DPT_Scaling	0% - 100%	[AC] Fan: Percentage Control (Status)	0% = Auto; 20.00% = S1; 40.00% = S2; 60.00% = S3; 80.00% = S4; 100% = S5
	1 Byte	O	C R - T -	5.001 - DPT_Scaling	0% - 100%	[AC] Fan: Percentage Control (Status)	0% = Auto; 16.86% = S1; 33.33% = S2; 50.20% = S3; 66.67% = S4; 83.53% = S5; 100% = S6
	1 Byte	O	C R - T -	5.100 - DPT_Fan_Stage	0 - 255	[AC] Fan: Enumerated Control (Status)	0 = Auto; 1 = S1; 2 = S2; 3 = S3
	1 Byte	O	C R - T -	5.100 - DPT_Fan_Stage	0 - 255	[AC] Fan: Enumerated Control (Status)	0 = Auto; 1 = S1; 2 = S2; 3 = S3; 4 = S4
	1 Byte	O	C R - T -	5.100 - DPT_Fan_Stage	0 - 255	[AC] Fan: Enumerated Control (Status)	0 = Auto; 1 = S1; 2 = S2; 3 = S3; 4 = S4; 5 = S5
	1 Byte	O	C R - T -	5.100 - DPT_Fan_Stage	0 - 255	[AC] Fan: Enumerated Control (Status)	0 = Auto; 1 = S1; 2 = S2; 3 = S3; 4 = S4; 5 = S5; 6 = S6
	1 Byte	O	C R - T -	5.100 - DPT_Fan_Stage	0 - 255	[AC] Fan: Enumerated Control (Status)	0 = Auto; 1 = S1; 2 = S2; 3 = S3; 4 = S4; 5 = S5; 6 = S6; 7 = S7
26	1 Bit	I	C - W - -	1.003 - DPT_Enable	0/1	[AC] Fan: Automatic	0 = Automatic Off (Speed 1); 1 = Automatic On
	1 Bit	I	C - W - -	1.003 - DPT_Enable	0/1	[AC] Fan: Automatic	0 = Automatic On; 1 = Automatic Off (Speed 1)
27	1 Bit	O	C R - T -	1.003 - DPT_Enable	0/1	[AC] Fan: Automatic (Status)	0 = Automatic On; 1 = Automatic Off
	1 Bit	O	C R - T -	1.003 - DPT_Enable	0/1	[AC] Fan: Automatic (Status)	0 = Automatic Off; 1 = Automatic On
28	1 Bit	I	C - W - -	1.007 - DPT_Step	0/1	[AC] Fan: Step Control	0 = Down;1 = Up
29	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[AC] Horizontal Flaps: Up/Down Swing	0 = Swing Off; 1 = Swing On
	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[AC] Horizontal Flaps: Up/Down Swing	0 = Swing On; 1 = Swing Off
30	1 Bit	O	C R - T -	1.001 - DPT_Switch	0/1	[AC] Horizontal Flaps: Up/Down Swing (Status)	0 = Swing On; 1 = Swing Off
	1 Bit	O	C R - T -	1.001 - DPT_Switch	0/1	[AC] Horizontal Flaps: Up/Down Swing (Status)	0 = Swing Off; 1 = Swing On
31	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[AC] Vertical Flaps: Left/Right Swing	0 = Swing Off; 1 = Swing On
	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[AC] Vertical Flaps: Left/Right Swing	0 = Swing On; 1 = Swing Off
32	1 Bit	O	C R - T -	1.001 - DPT_Switch	0/1	[AC] Vertical Flaps: Left/Right Swing (Status)	0 = Swing Off; 1 = Swing On
	1 Bit	O	C R - T -	1.001 - DPT_Switch	0/1	[AC] Vertical Flaps: Left/Right Swing (Status)	0 = Swing On; 1 = Swing Off
33	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[AC] Horizontal Flaps: Up/Down Percentage Control	0% = Swing; [0.39...20] % = P1; [20.39...40] % = P2; [40.39...60] % = P3; [60.39...80] % = P4; [80.39...100] % = P5
34	1 Byte	O	C R - T -	5.001 - DPT_Scaling	0% - 100%	[AC] Horizontal Flaps: Up/Down Percentage Control (Status)	0% = Swing; 20% = P1; 40% = P2; 60% = P3; 80% = P4; 100% = P5
35	1 Bit	I	C - W - -	1.007 - DPT_Step	0/1	[AC] Horizontal Flaps: Up/Down Step Control	0 = Down;1 = Up

36	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[AC] Vertical Flaps: Left/Right Percentage Control	0% = Swing; [0.39...20] % = P1; [20.39...40] % = P2; [40.39...60] % = P3; [60.39...80] % = P4; [80.39...100] % = P5
37	1 Byte	O	C R - T -	5.001 - DPT_Scaling	0% - 100%	[AC] Vertical Flaps: Left/Right Percentage Control (Status)	0% = Swing; 20% = P1; 40% = P2; 60% = P3; 80% = P4; 100% = P5
38	1 Bit	I	C - W - -	1.007 - DPT_Step	0/1	[AC] Vertical Flaps: Left/Right Step Control	0 = Down;1 = Up
39	2 Bytes	I	C - W - -	9.001 - DPT_Value_Temp	-273.00º - 670433.28º	[AC] External Reference Temperature	[0 ... 50] °C
40	2 Bytes	O	C R - T -	9.001 - DPT_Value_Temp	-273.00º - 670433.28º	[AC] AC Unit Measured Temperature (Status)	Temperature from the internal sensor (°C)
41	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[AC] Automatic Off	0 = Deactivate; 1 = Activate
	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[AC] Automatic Off	0 = Activate; 1 = Deactivate
42	1 Bit	O	C R - T -	1.001 - DPT_Switch	0/1	[AC] Automatic Off (Status)	0 = Activated; 1 = Deactivated
	1 Bit	O	C R - T -	1.001 - DPT_Switch	0/1	[AC] Automatic Off (Status)	0 = Deactivated; 1 = Activated
43	2 Bytes	I	C - W - -	7.005 - DPT_TimePeriodSec	0 - 65535	[AC] Automatic Off: Delay	[0...3600] s (0 = Disabled)
44	4 Bytes	I/O	C R W T -	13.100 - DPT_LongDeltaTimeSec	-2147483648 s - 2147483647 s	[AC] Operating Time (s)	Operation time in seconds
45	2 Bytes	I/O	C R W T -	7.007 - DPT_TimePeriodHrs	0 - 65535	[AC] Operating Time (h)	Operation time in hours
46	1 Bit	O	C R - T -	1.005 - DPT_Alarm	0/1	[AC] Internal Error: Communication	Unable to Set AC Communication
47	1 Bit	O	C R - T -	1.005 - DPT_Alarm	0/1	[AC] Internal Error: Wrong Acknowledgement	Acknowledgement Received with Errors
48	1 Bit	O	C R - T -	1.005 - DPT_Alarm	0/1	[AC] AC Unit Error: Active Error	AC Unit Error
49	14 Bytes	O	C R - T -	16.000 - DPT_String_ASCII	14 chars ASCII	[AC] AC Unit Error: Error Code	See AC Unit Manual
50	1 Bit	I	C - W - -	1.017 - DPT_Trigger	0/1	[AC] Filter: Reset	Filter Status Reset
51	1 Bit	O	C R - T -	1.003 - DPT_Enable	0/1	[AC] Filter (Status)	0 = No Alarm; 1 = Alarm
52	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[AC] Quiet Mode	0 = Deactivate; 1 = Activate
53	1 Bit	O	C R - T -	1.001 - DPT_Switch	0/1	[AC] Quiet Mode (Status)	0 = Deactivated; 1 = Activated
54	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[AC] ECO Mode	0 = Deactivate; 1 = Activate
55	1 Bit	O	C R - T -	1.001 - DPT_Switch	0/1	[AC] ECO Mode (Status)	0 = Deactivated; 1 = Activated
56	1 Bit	O	C R - T -	1.017 - DPT_Trigger	0/1	[Heartbeat] Object to Send '1'	Sending of '1' Periodically
57	1 Bit	O	C R - T -	1.017 - DPT_Trigger	0/1	[Heartbeat] Device Recovery	Send 0
58	1 Bit	O	C R - T -	1.017 - DPT_Trigger	0/1	[Heartbeat] Device Recovery	Send 1
59, 68	1 Bit	I	C - W - -	1.003 - DPT_Enable	0/1	[Ix] Input Lock	0 = Unlock; 1 = Lock
60, 69	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Short Press] 0	Sending of 0
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Short Press] 1	Sending of 1
	1 Bit	I	C - W T -	1.001 - DPT_Switch	0/1	[Ix] [Short Press] 0/1 Switching	Switching 0/1
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Short Press] Move Up Shutter	Sending of 0 (Up)
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Short Press] Move Down Shutter	Sending of 1 (Down)
	1 Bit	I	C - W T -	1.008 - DPT_UpDown	0/1	[Ix] [Short Press] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Short Press] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)

	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Short Press] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
	1 Bit	I	C - W T -	1.007 - DPT_Step	0/1	[Ix] [Short Press] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Short Press] Brighter	Increase Brightness
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Short Press] Darker	Decrease Brightness
	4 Bit	I	C - W T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Short Press] Brighter/Darker	Switch Bright/Dark
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Short Press] Light On	Sending of 1 (On)
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Short Press] Light On/Off	0/1
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Short Press] Light Off	Sending of 0 (Off)
	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Short Press] Run Scene	Sending of 0 - 63
	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Short Press] Save Scene	Sending of 128 - 191
	1 Byte	O	C - - T -	5.010 - DPT_Value_1_Ucount	0 - 255	[Ix] [Short Press] Constant Value (Integer)	0 - 255
	1 Byte	O	C - - T -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Short Press] Constant Value (Percentage)	0% - 100%
	2 Bytes	O	C - - T -	7.001 - DPT_Value_2_Ucount	0 - 65535	[Ix] [Short Press] Constant Value (Integer)	0 - 65535
	2 Bytes	O	C - - T -	9.xxx	-671088.64 - 670433.28	[Ix] [Short Press] Constant Value (Float)	Float Value
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 0	Sending of 0
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 1	Sending of 1
	1 Bit	I	C - W T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 0/1 Switching	Switching 0/1
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Rising Edge] Move Up Shutter	Sending of 0 (Up)
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Rising Edge] Move Down Shutter	Sending of 1 (Down)
	1 Bit	I	C - W T -	1.008 - DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Rising Edge] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Switch/Sensor] [Rising Edge] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Switch/Sensor] [Rising Edge] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
	1 Bit	I	C - W T -	1.007 - DPT_Step	0/1	[Ix] [Switch/Sensor] [Rising Edge] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] Light On	Sending of 1 (On)

	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] Light Off	Sending of 0 (Off)
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] Light On/Off	0/1
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Rising Edge] Brighter	Increase Brightness
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Rising Edge] Darker	Decrease Brightness
	4 Bit	I	C - W T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Rising Edge] Brighter/Darker	Switch Bright/Dark
	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Switch/Sensor] [Rising Edge] Run Scene	Sending of 0 - 63
	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Switch/Sensor] [Rising Edge] Save Scene	Sending of 128 - 191
	1 Byte	O	C - - T -	5.010 - DPT_Value_1_Ucount	0 - 255	[Ix] [Switch/Sensor] [Rising Edge] Constant Value (Integer)	0 - 255
	1 Byte	O	C - - T -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Rising Edge] Constant Value (Percentage)	0% - 100%
	2 Bytes	O	C - - T -	7.001 - DPT_Value_2_Ucount	0 - 65535	[Ix] [Switch/Sensor] [Rising Edge] Constant Value (Integer)	0 - 65535
	2 Bytes	O	C - - T -	9.xxx	-671088.64 - 670433.28	[Ix] [Switch/Sensor] [Rising Edge] Constant Value (Float)	Float Value
	1 Bit	O	C - - T -	1.016 - DPT_Ack	0/1	[Ix] [Pulse Counter] Counter	Send 1
	1 Byte	O	C R - T -	5.010 - DPT_Value_1_Ucount	0 - 255	[Ix] [Pulse Counter] Counter	Number of Pulses
	2 Bytes	O	C R - T -	7.001 - DPT_Value_2_Ucount	0 - 65535	[Ix] [Pulse Counter] Counter	Number of Pulses
	2 Bytes	O	C R - T -	9.024 - DPT_Power	-671088.64 - 670433.28 kW	[Ix] [Pulse Counter] Counter	Power (kW)
	2 Bytes	O	C R - T -	9.025 - DPT_Value_Volume_Flow	-671088,64 - 670433,28	[Ix] [Pulse Counter] Counter	Flow (l/h)
	4 Bytes	O	C R - T -	12.001 - DPT_Value_4_Ucount	0 - 4294967295	[Ix] [Pulse Counter] Counter	Number of Pulses
	4 Bytes	O	C R - T -	13.002 - DPT_FlowRate_m3/h	0 - 2147483647	[Ix] [Pulse Counter] Counter	Flow Rate (m3/h)
	4 Bytes	O	C R - T -	13.010 - DPT_ActiveEnergy	0 - 2147483647	[Ix] [Pulse Counter] Counter	Energy (Wh)
	4 Bytes	O	C R - T -	13.013 - DPT_ActiveEnergy_kWh	0 - 2147483647	[Ix] [Pulse Counter] Counter	Energy (kWh)
	4 Bytes	O	C R - T -	14.056 - DPT_Value_Power	-3.4E+38 W - 3.4E+38 W	[Ix] [Pulse Counter] Counter	Power (W)
	4 Bytes	O	C R - T -	14.076 - DPT_Value_Volume	-3,4E+38 - 3,4E+38	[Ix] [Pulse Counter] Counter	Volume (m3)
	1 Bit	I/O	C R W T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] Edge	0/1
61, 70	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Short Press] Shutter Status (Input)	0% = Top; 100% = Bottom
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Short Press] Dimming Status (Input)	0% - 100%

	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Rising Edge] Dimming Status (Input)	0% - 100%
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Rising Edge] Shutter Status (Input)	0% = Top; 100% = Bottom
	1 Bit	I	C - W T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 0/1 Switching (Immediate Object)	Switching 0/1
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 0 (Immediate Object)	Sending of 0
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 1 (Immediate Object)	Sending of 1
	1 Bit	I/O	C R W T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] Edge (Immediate Object)	0/1
62, 71	1 Bit	I	C - W - -	1.015 - DPT_Reset	0/1	[Ix] [Pulse Counter] Reset	0 = No Action; 1 = Reset
	1 Bit	O	C R - T -	1.005 - DPT_Alarm	0/1	[Ix] [Switch/Sensor] Alarm: Breakdown or Sabotage	1 = Alarm; 0 = No Alarm
63, 72	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Double Press] 0	Sending of 0
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Double Press] 1	Sending of 1
	1 Bit	I	C - W T -	1.001 - DPT_Switch	0/1	[Ix] [Double Press] 0/1 Switching	Switching 0/1
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Double Press] Move Up Shutter	Sending of 0 (Up)
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Double Press] Move Down Shutter	Sending of 1 (Down)
	1 Bit	I	C - W T -	1.008 - DPT_UpDown	0/1	[Ix] [Double Press] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Double Press] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Double Press] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
	1 Bit	I	C - W T -	1.007 - DPT_Step	0/1	[Ix] [Double Press] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Double Press] Brighter	Increase Brightness
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Double Press] Darker	Decrease Brightness
	4 Bit	I	C - W T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Double Press] Brighter/Darker	Switch Bright/Dark
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Double Press] Light On	Sending of 1 (On)
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Double Press] Light Off	Sending of 0 (Off)
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Double Press] Light On/Off	0/1
	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Double Press] Run Scene	Sending of 0 - 63
	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Double Press] Save Scene	Sending of 128 - 191

	1 Byte	O	C - - T -	5.010 - DPT_Value_1_Ucount	0 - 255	[Ix] [Double Press] Constant Value (Integer)	0 - 255
	1 Byte	O	C - - T -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Double Press] Constant Value (Percentage)	0% - 100%
	2 Bytes	O	C - - T -	7.001 - DPT_Value_2_Ucount	0 - 65535	[Ix] [Double Press] Constant Value (Integer)	0 - 65535
	2 Bytes	O	C - - T -	9.xxx	-671088.64 - 670433.28	[Ix] [Double Press] Constant Value (Float)	Float Value
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 0	Sending of 0
	1 Bit	I	C - W T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 0/1 Switching	Switching 0/1
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 1	Sending of 1
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Falling Edge] Brighter	Increase Brightness
	4 Bit	I	C - W T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Falling Edge] Brighter/Darker	Switch Bright/Dark
	2 Bytes	O	C - - T -	9.xxx	-671088.64 - 670433.28	[Ix] [Switch/Sensor] [Falling Edge] Constant Value (Float)	Float Value
	2 Bytes	O	C - - T -	7.001 - DPT_Value_2_Ucount	0 - 65535	[Ix] [Switch/Sensor] [Falling Edge] Constant Value (Integer)	0 - 65535
	1 Byte	O	C - - T -	5.010 - DPT_Value_1_Ucount	0 - 255	[Ix] [Switch/Sensor] [Falling Edge] Constant Value (Integer)	0 - 255
	1 Byte	O	C - - T -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Falling Edge] Constant Value (Percentage)	0% - 100%
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Falling Edge] Darker	Decrease Brightness
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] Light Off	Sending of 0 (Off)
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] Light On	Sending of 1 (On)
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] Light On/Off	0/1
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Falling Edge] Move Down Shutter	Sending of 1 (Down)
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Falling Edge] Move Up Shutter	Sending of 0 (Up)
	1 Bit	I	C - W T -	1.008 - DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Falling Edge] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Switch/Sensor] [Falling Edge] Run Scene	Sending of 0 - 63
	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Switch/Sensor] [Falling Edge] Save Scene	Sending of 128 - 191

	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Switch/Sensor] [Falling Edge] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
	1 Bit	I	C - W T -	1.007 - DPT_Step	0/1	[Ix] [Switch/Sensor] [Falling Edge] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Switch/Sensor] [Falling Edge] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
64, 73	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Double Press] Shutter Status (Input)	0% = Top; 100% = Bottom
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Double Press] Dimming Status (Input)	0% - 100%
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Falling Edge] Dimming Status (Input)	0% - 100%
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Falling Edge] Shutter Status (Input)	0% = Top; 100% = Bottom
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 0 (Immediate Object)	Sending of 0
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 1 (Immediate Object)	Sending of 1
	1 Bit	I	C - W T -	1.001 - DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 0/1 Switching (Immediate Object)	Switching 0/1
65, 74	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Long Press] 0	Sending of 0
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Long Press] 1	Sending of 1
	1 Bit	I	C - W T -	1.001 - DPT_Switch	0/1	[Ix] [Long Press] 0/1 Switching	Switching 0/1
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Long Press] Move Up Shutter	Sending of 0 (Up)
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Long Press] Move Down Shutter	Sending of 1 (Down)
	1 Bit	I	C - W T -	1.008 - DPT_UpDown	0/1	[Ix] [Long Press] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Long Press] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Long Press] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
	1 Bit	I	C - W T -	1.007 - DPT_Step	0/1	[Ix] [Long Press] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Long Press] Brighter	Long Pr. -> Brighter; Release -> Stop
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Long Press] Darker	Long Pr. -> Darker; Release -> Stop
	4 Bit	I	C - W T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Long Press] Brighter/Darker	Long Pr. -> Brighter/Darker; Release -> Stop
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Long Press] Light On	Sending of 1 (On)
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Long Press] Light Off	Sending of 0 (Off)
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Long Press] Light On/Off	0/1

	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Long Press] Run Scene	Sending of 0 - 63
	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Long Press] Save Scene	Sending of 128 - 191
	1 Byte	O	C - - T -	5.010 - DPT_Value_1_Ucount	0 - 255	[Ix] [Long Press] Constant Value (Integer)	0 - 255
	1 Byte	O	C - - T -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Long Press] Constant Value (Percentage)	0% - 100%
	2 Bytes	O	C - - T -	7.001 - DPT_Value_2_Ucount	0 - 65535	[Ix] [Long Press] Constant Value (Integer)	0 - 65535
	2 Bytes	O	C - - T -	9.xxx	-671088.64 - 670433.28	[Ix] [Long Press] Constant Value (Float)	Float Value
	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Triple Press] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
	1 Bit	I	C - W T -	1.007 - DPT_Step	0/1	[Ix] [Triple Press] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
	1 Bit	O	C - - T -	1.007 - DPT_Step	0/1	[Ix] [Triple Press] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Triple Press] Save Scene	Sending of 128 - 191
	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Ix] [Triple Press] Run Scene	Sending of 0 - 63
	1 Bit	I	C - W T -	1.008 - DPT_UpDown	0/1	[Ix] [Triple Press] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Triple Press] Move Up Shutter	Sending of 0 (Up)
	1 Bit	O	C - - T -	1.008 - DPT_UpDown	0/1	[Ix] [Triple Press] Move Down Shutter	Sending of 1 (Down)
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Triple Press] Light On/Off	0/1
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Triple Press] Light On	Sending of 1 (On)
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Triple Press] Light Off	Sending of 0 (Off)
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Triple Press] Darker	Decrease Brightness
	1 Byte	O	C - - T -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Triple Press] Constant Value (Percentage)	0% - 100%
	2 Bytes	O	C - - T -	7.001 - DPT_Value_2_Ucount	0 - 65535	[Ix] [Triple Press] Constant Value (Integer)	0 - 65535
	1 Byte	O	C - - T -	5.010 - DPT_Value_1_Ucount	0 - 255	[Ix] [Triple Press] Constant Value (Integer)	0 - 255
	2 Bytes	O	C - - T -	9.xxx	-671088.64 - 670433.28	[Ix] [Triple Press] Constant Value (Float)	Float Value
	4 Bit	I	C - W T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Triple Press] Brighter/Darker	Switch Bright/Dark
	4 Bit	O	C - - T -	3.007 - DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Triple Press] Brighter	Increase Brightness
	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Triple Press] 1	Sending of 1
	1 Bit	I	C - W T -	1.001 - DPT_Switch	0/1	[Ix] [Triple Press] 0/1 Switching	Switching 0/1

	1 Bit	O	C - - T -	1.001 - DPT_Switch	0/1	[Ix] [Triple Press] 0	Sending of 0
66, 75	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Long Press] Dimming Status (Input)	0% - 100%
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Long Press] Shutter Status (Input)	0% = Top; 100% = Bottom
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Triple Press] Shutter Status (Input)	0% = Top; 100% = Bottom
	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix] [Triple Press] Dimming Status (Input)	0% - 100%
67, 76	1 Bit	O	C - - T -	1.017 - DPT_Trigger	0/1	[Ix] [Long Press/Release] Stop Shutter	Release -> Stop Shutter
77, 81	2 Bytes	O	C R - T -	9.001 - DPT_Value_Temp	-273.00º - 670433.28º	[Ix] Current Temperature	Temperature Sensor Value
78, 82	1 Bit	O	C R - T -	1.005 - DPT_Alarm	0/1	[Ix] Overcooling	0 = No Alarm; 1 = Alarm
79, 83	1 Bit	O	C R - T -	1.005 - DPT_Alarm	0/1	[Ix] Overheating	0 = No Alarm; 1 = Alarm
80, 84	1 Bit	O	C R - T -	1.005 - DPT_Alarm	0/1	[Ix] Probe Error	0 = No Alarm; 1 = Alarm
85	1 Byte	I	C - W - -	17.001 - DPT_SceneNumber	0 - 63	[Motion Detector] Scene Input	Scene Value
86	1 Byte	O	C - - T -	18.001 - DPT_SceneControl	0-63; 128-191	[Motion Detector] Scene Output	Scene Value
87, 124	1 Byte	O	C R - T -	5.001 - DPT_Scaling	0% - 100%	[Ix] Luminosity	0% - 100%
88, 125	1 Bit	O	C R - T -	1.005 - DPT_Alarm	0/1	[Ix] Open Circuit Error	0 = No Error; 1 = Open Circuit Error
89, 126	1 Bit	O	C R - T -	1.005 - DPT_Alarm	0/1	[Ix] Short Circuit Error	0 = No Error; 1 = Short Circuit Error
90, 127	1 Byte	O	C R - T -	5.001 - DPT_Scaling	0% - 100%	[Ix] Presence State (Scaling)	0% - 100%
91, 128	1 Byte	O	C R - T -	20.102 - DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[Ix] Presence State (HVAC)	Auto, Comfort, Standby, Economy, Building Protection
92, 129	1 Bit	O	C R - T -	1.001 - DPT_Switch	0/1	[Ix] Presence State (Binary)	Binary Value
	1 Bit	O	C R - T -	1.010 - DPT_Start	0/1	[Ix] Presence: Slave Output	1 = Motion Detected
93, 130	1 Bit	I	C - W - -	1.019 - DPT_Window_Door	0/1	[Ix] Presence Trigger	0 = Closed Door; 1 = Open Door
	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[Ix] Presence Trigger	0 = Open Door; 1 = Closed Door
94, 131	1 Bit	I	C - W - -	1.010 - DPT_Start	0/1	[Ix] Presence: Slave Input	0 = Nothing; 1 = Detection from slave device
95, 132	2 Bytes	I/O	C R W - -	7.005 - DPT_TimePeriodSec	0 - 65535	[Ix] Presence: Waiting Time	0 s - 65535 s
96, 133	2 Bytes	I/O	C R W - -	7.005 - DPT_TimePeriodSec	0 - 65535	[Ix] Presence: Listening Time	1 s - 65535 s
97, 134	2 Bytes	I/O	C R W - -	7.006 - DPT_TimePeriodMin	0 - 65535	[Ix] Presence: Safety Time	0 min - 1440 min
98, 135	1 Byte	I/O	C R W - -	5.010 - DPT_Value_1_Ucount	0 - 255	[Ix] Presence: Number of Detections of the Filter	2 - 5
99, 136	1 Byte	I/O	C R W - -	5.010 - DPT_Value_1_Ucount	0 - 255	[Ix] Presence: Filter Detection Window	15 s - 60 s
100, 137	1 Bit	I	C - W - -	1.003 - DPT_Enable	0/1	[Ix] Presence: Enable	0 = Disable; 1 = Enable
	1 Bit	I	C - W - -	1.003 - DPT_Enable	0/1	[Ix] Presence: Enable	0 = Enable; 1 = Disable
101, 138	1 Bit	I/O	C R W - -	1.024 - DPT_DayNight	0/1	[Ix] Presence: Day/Night	0 = Day; 1 = Night
	1 Bit	I/O	C R W - -	1.001 - DPT_Switch	0/1	[Ix] Presence: Day/Night	0 = Night; 1 = Day

102, 139	1 Bit	O	C R - T -	1.018 - DPT_Occupancy	0/1	[Ix] Presence: Occupancy State (Master Output)	0 = Not Occupied; 1 = Occupied
	1 Bit	I	C - W - -	1.018 - DPT_Occupancy	0/1	[Ix] Presence: Occupancy State (Master Input)	0 = Not Occupied; 1 = Occupied
103, 140	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[Ix] Presence: Access Guest/Employee	0 = Guest; 1 = Employee
	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[Ix] Presence: Access Guest/Employee	0 = Employee; 1 = Guest
104, 141	1 Bit	I	C - W - -	1.002 - DPT_Bool	0/1	[Ix] Presence: Sold/Unsold Room	0 = Unsold; 1 = Sold
	1 Bit	I	C - W - -	1.002 - DPT_Bool	0/1	[Ix] Presence: Sold/Unsold Room	0 = Sold; 1 = Unsold
105, 142	1 Bit	I	C - W - -	1.010 - DPT_Start	0/1	[Ix] External Motion Detection	0 = Nothing; 1 = Motion detected by an external sensor
106, 112, 118, 143, 149, 155	1 Byte	O	C R - T -	5.001 - DPT_Scaling	0% - 100%	[Ix][Cx] Detection State (Scaling)	0% - 100%
107, 113, 119, 144, 150, 156	1 Byte	O	C R - T -	20.102 - DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[Ix][Cx] Detection State (HVAC)	Auto, Comfort, Standby, Economy, Building Protection
108, 114, 120, 145, 151, 157	1 Bit	O	C R - T -	1.001 - DPT_Switch	0/1	[Ix][Cx] Detection State (Binary)	Binary Value
109, 115, 121, 146, 152, 158	1 Bit	I	C - W - -	1.003 - DPT_Enable	0/1	[Ix][Cx] Enable Channel	According to parameters
110, 116, 122, 147, 153, 159	1 Bit	I	C - W - -	1.001 - DPT_Switch	0/1	[Ix][Cx] Force State	0 = No Detection; 1 = Detection
111, 117, 123, 148, 154, 160	1 Byte	I	C - W - -	5.001 - DPT_Scaling	0% - 100%	[Ix][Cx] Luminosity Threshold	1% - 100%
161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192	1 Bit	I	C - W - -	1.002 - DPT_Bool	0/1	[LF][x] (1-Bit) Data Entry x	Binary Data Entry (0/1)
193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208	1 Byte	I	C - W - -	5.010 - DPT_Value_1_Ucount	0 - 255	[LF][x] (1-Byte) Data Entry x	1-Byte Data Entry (0-255)
209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224	2 Bytes	I	C - W - -	7.001 - DPT_Value_2_Ucount	0 - 65535	[LF][x] (2-Byte) Data Entry x	2-Byte Data Entry
	2 Bytes	I	C - W - -	8.001 - DPT_Value_2_Count	-32768 - 32767	[LF][x] (2-Byte) Data Entry x	2-Byte Data Entry
	2 Bytes	I	C - W - -	9.xxx	-671088.64 - 670433.28	[LF][x] (2-Byte) Data Entry x	2-Byte Data Entry
225, 226, 227, 228, 229, 230, 231, 232	4 Bytes	I	C - W - -	13.001 - DPT_Value_4_Count	-2147483648 - 2147483647	[LF][x] (4-Byte) Data Entry x	4-Byte Data Entry
	4 Bytes	I	C - W - -	14.xxx		[LF][x] (4-Byte) Data Entry x	4-Byte Data Entry

233, 234, 235, 236, 237, 238, 239, 240, 241, 242	1 Bit	O	C R - T -	1.002 - DPT_Bool	0/1	[LF][x] Function x - Result	(1-Bit) Boolean
	1 Byte	O	C R - T -	5.010 - DPT_Value_1_Ucount	0 - 255	[LF][x] Function x - Result	(1-Byte) Unsigned
	2 Bytes	O	C R - T -	7.001 - DPT_Value_2_Ucount	0 - 65535	[LF][x] Function x - Result	(2-Byte) Unsigned
	4 Bytes	O	C R - T -	13.001 - DPT_Value_4_Count	-2147483648 - 2147483647	[LF][x] Function x - Result	(4-Byte) Signed
	1 Byte	O	C R - T -	5.001 - DPT_Scaling	0% - 100%	[LF][x] Function x - Result	(1-Byte) Percentage
	2 Bytes	O	C R - T -	8.001 - DPT_Value_2_Count	-32768 - 32767	[LF][x] Function x - Result	(2-Byte) Signed
	2 Bytes	O	C R - T -	9.xxx	-671088.64 - 670433.28	[LF][x] Function x - Result	(2-Byte) Float
	4 Bytes	O	C R - T -	14.xxx		[LF][x] Function x - Result	(4-Byte) Float

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