General description:

The device fits for the particular use of the following tasks:

Monitoring of the air quality in building systems technology, data transfer and regulation via KNX bus system. The device is intended for use in accordance with the defined technical data. Operate the device exclusively in a dry room! This device is not suitable for use in safety-related applications. The device is only intended to increase living comfort.

The carbon monoxide sensor GS 80.22 knx can provide the following data and control for the KNX bus:

CO:	Value output
	Control (step and PI control)
Relative humidity:	Value output
	Control (step and PI control)
	Compare
Temperature:	Value output
	Control heating / cooling (2-point and PI control)
	Alarms
Dew point:	Value output
	Alarms
Inputs:	Value output
	Control options (switching, dimming, etc.)

Please consider that handling and installation of the device is explained in the instruction manual enclosed to the product!

Please take into account the resolution of the 2 Bytes data type (see KNX Specification)!

Application program

Manufacturer:

Hugo Müller GmbH & Co KG
Karlstraße 90
D-78054 VS-Schwenningen, Germany

Application program name:

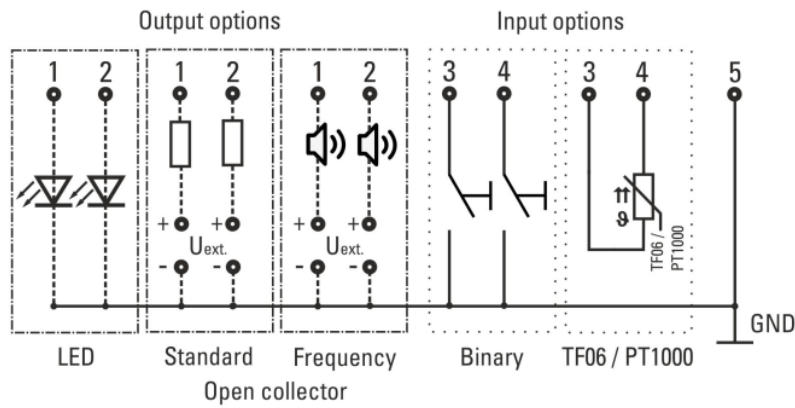[GS 80.22 knx] Climate control with CO-sensor and binary inputs & outputs

Installation:

Add the device to your device list and open a new project. You can download the ETS database on our webpage:
http://www.hugo-mueller.de/en/downloads/knx-product-database/

Technical Specifications

Power supply	Via KNX-Bus voltage
Bus current	< 5 mA
Sensors	Carbon monoxide (CO) Relative humidity Temperature
Inputs	2x configurable binary inputs Inputs 1 & 2 combinable as external temperature sensor input (PT1000 / Müller TF06) (this function occupies both inputs 1 & 2).
Outputs	2x configurable outputs - configurable as LED-driver (< 3 mA) - configurable as PWM output signal - configurable as „open-collector" output with the following specifications: ▪ ext. supply voltage U max . = 50 V DC ▪ max. current (I max) = 80 mA ▪ output level low = 0,5 V DC
Expected life span	8 years
Measuring range CO concentration	5 – 1.000 ppm
Measuring range relative humidity	0 – 100%
Measuring range temperature	0 – 50°C
Permitted ambient temperature	0° … +50°C
Housing	Self-extinguishing thermoplastic
Mounting	Wall or ceiling
Type of connection	Push-in connector
Type of connection external inputs/outputs	Wire diameter max. 6 x 0,5 mm² Strip length 7 mm
Type of protection	IP 20 acc. to DIN EN 60529
Class of protection	III when installed according to regulations

Wiring Diagram

Parameter overview

Parameters	Subcategory parameters	Description
General commands	General commands	Send „in operation "(incl. cycle time), Request status (active/inactive, request with…), Send delay after bus voltage recovers in seconds
CO	CO sensor	CO sensor: enabled – disabled, Send measured values, Notification of sensor error
	CO control	CO control: Type (disabled, 1-/2-/3-step, PI), Output format, Send on change / send cyclically, Hysteresis (symmetrical) Threshold 1,2,3, Switching command above / below threshold, Control value, Blocking object Actual value recording
Relative humidity	Relative humidity sensor	Humidity sensor: enabled – disabled, Send measured values, Offset adjustment, Notification of sensor error
	Relative humidity control	Humidity control: Type (inactive, 1-/2-/3-step, PI), output format, send on change / send cyclically, hysteresis (symmetrical). Threshold 1,2,3, switching command above / below threshold, control value, blocking object. Actual value configuration.
	Humidity comparator	Comparator: enabled – disabled, Output Value 1 + 2 settings, Send control value

Temperature	Temperature sensor	Settings temperature sensor: enabled – disabled, Send measured values, Offset adjustment, Notification of sensor error
	Temperature alarms	Settings frost- and/or heat alarms: enabled – disabled, Send measured values.
	Temperature control	Settings temperature control: Type (inactive, heating, cooling, heating & cooling), Different control values (extra cooling level & guide) Actual value configuration.
Dew point	Dew point temperature	Settings dew point: enabled – disabled, Send measured values
	Dew point alarm	Settings dew point alarm: enabled – disabled, Send measured values, Hysteresis (symmetrical), Switching command on alarm
VAV control	Configuration	Settings VAV control: enabled – disabled for different (already configured) PI controls, Send control values according to defined parameters and values Blocking object
Entrances	General	Limitation of number and interval of telegrams to be send
	E1 General	Labeling of inputs, Selection of function as inactive, binary or temperature input (functions depending on input)
		Binary input: switching/alarm, dimming, blinds/shutters, value, scene, switching sequences, multiple operation, pulse counter
		Temperature sensor input (E1+E2): Function temperature / temperature limiter floor heater, sensor type, offset, error compensation, threshold 1, threshold 2
	E2 General	Labeling of inputs, Selection of function as inactive or binary input (functions depending on input)
		Binary input: switching/alarm, dimming, blinds/shutters, value, scene, switching sequences, multiple operation, pulse counter
Outputs	Output 1 + 2 General	Labeling of inputs,
		Selection of function as disabled, LED/constant current, open collector or frequency output (functions depending on output)
		Output settings (depend on the function): frequency, conditions, time limiter, send status, output condition after bus voltage recovery

Communication objects

Object number	Object name	Object function	Object size	Flag* C - R - W - T- U	Data Type
1	Send '1' in operation	Output	1 Bit	--CT--	[1.2] DPT_Bool
1	Send '0' in operation	Output	1 Bit	--CT--	[1.2] DPT_Bool
2	Request status	Input	1 Bit	-WC---	[1.17] DPT_Trigger
3	operating hours counter[s]	Output	4 Bytes	--CT--	[13.100] DPT_LongDeltaTimeSec
4	Request operating hours counter	Input	1 Bit	-WC---	[1.17] DPT_Trigger
16	T: temperature value [°C]	Output	2 Bytes	--CT--	[9.1] DPT_Value_Temp
17	T: request temperature value	Input	1 Bit	-WC---	[1.17] DPT_Trigger
18	T: sensor error	Output	1 Bit	--CT--	[1.2] DPT_Bool
19	T: heat alarm	Output	1 Bit	--CT--	[1.5] DPT_Alarm
20	T: frost alarm	Output	1 Bit	--CT--	[1.5] DPT_Alarm
21	RTC: external temperature value 1	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
22	RTC: external temperature value 2	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
23	RTC: comfort temperature	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
24	RTC: standby setback when heating	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
25	RTC: eco setback when heating	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
26	RTC: standby increment when cooling	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
27	RTC: eco increment when cooling	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
28	RTC: current set point temperature	Output	2 Bytes	--CT--	[9.1] DPT_Value_Temp
29	RTC: comfort temperature +/- 0,1K	Input	1 Bit	-WC---	[1.8] DPT_UpDown
30	RTC: comfort temperature +/- 0,5K	Input	1 Bit	-WC---	[1.8] DPT_UpDown
31	RTC: standby setback when heating +/- 0,1K	Input	1 Bit	-WC---	[1.8] DPT_UpDown
32	RTC: eco setback when heating +/- 0,1K	Input	1 Bit	-WC---	[1.8] DPT_UpDown
33	RTC: standby increment when cooling +/- 0,1K	Input	1 Bit	-WC---	[1.8] DPT_UpDown
34	RTC: eco increment when cooling +/- 0,1K	Input	1 Bit	-WC---	[1.8] DPT_UpDown
35	RTC: HVAC Mode: 1=comf, 2=stdb, 3=eco	Input	1 Byte	-WC---	[20.102] DPT_HVACMode
36	RTC: HVAC Mode: 1=comf, 2=stdb, 3=eco	Output	1 Byte	--CT--	[20.102] DPT_HVACMode
37	RTC: comfort mode enable	Input	1 Bit	-WC---	[1.17] DPT_Trigger
38	RTC: standby mode enable	Input	1 Bit	-WC---	[1.17] DPT_Trigger
39	RTC: eco mode enable	Input	1 Bit	-WC---	[1.17] DPT_Trigger
40	RTC: status heating	Output	1 Bit	--CT--	[1.1] DPT_Switch
41	RTC: status cooling	Output	1 Bit	--CT--	[1.1] DPT_Switch
42	RTC: control value main level heating	Output	1 Bit	--CT--	[1.1] DPT_Switch
42	RTC: control value main level heating	Output	1 Bit	--CT--	[1.1] DPT_Switch
42	RTC: control value main level heating	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
42	RTC: control value main level heating	Output	1 Byte	--CT--	[5.1] DPT_Scaling
43	RTC: control value extra level heating	Output	1 Bit	--CT--	[1.1] DPT_Switch
43	RTC: control value extra level heating	Output	1 Bit	--CT--	[1.1] DPT_Switch
43	RTC: control value extra level heating	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
43	RTC: control value extra level heating	Output	1 Byte	--CT--	[5.1] DPT_Scaling
44	RTC: control value main level cooling	Output	1 Bit	--CT--	[1.1] DPT_Switch

44	RTC: control value main level cooling	Output	1 Bit	--CT--	[1.1] DPT_Switch
44	RTC: control value main level cooling	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
44	RTC: control value main level cooling	Output	1 Byte	--CT--	[5.1] DPT_Scaling
45	RTC: control value extra level cooling	Output	1 Bit	--CT--	[1.1] DPT_Switch
45	RTC: control value extra level cooling	Output	1 Bit	--CT--	[1.1] DPT_Switch
45	RTC: control value extra level cooling	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
45	RTC: control value extra level cooling	Output	1 Byte	--CT--	[5.1] DPT_Scaling
46	RTC: guide value [°C]	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
47	RTC: blocking object heating	Input	1 Bit	-WC---	[1.3] DPT_Enable
48	RTC: blocking object cooling	Input	1 Bit	-WC---	[1.3] DPT_Enable
49	RTC: blocking object extra level heating	Input	1 Bit	-WC---	[1.3] DPT_Enable
50	RTC: blocking object extra level cooling	Input	1 Bit	-WC---	[1.3] DPT_Enable
64	CO: CO value [ppm]	Output	2 Bytes	--CT--	[9.8] DPT_Value_AirQuality
65	CO: request CO value	Input	1 Bit	-WC---	[1.17] DPT_Trigger
66	CO: sensor error	Output	1 Bit	--CT--	[1.2] DPT_Bool
67	CO: max value	Output	2 Bytes	--CT--	[9.8] DPT_Value_AirQuality
68	CO: request max value	Input	1 Bit	-WC---	[1.17] DPT_Trigger
69	CO: reset max value	Input	1 Bit	-WC---	[1.17] DPT_Trigger
70	CO: sensor expiration date	Output	3 Bytes	--CT--	[11.1] DPT_Date
71	CO: request sensor expiration date	Input	1 Bit	-WC---	[1.17] DPT_Trigger
72	COC: CO external value 1 [ppm]	Input	2 Bytes	-WC---	[9.8] DPT_Value_AirQuality
73	COC: CO external value 2 [ppm]	Input	2 Bytes	-WC---	[9.8] DPT_Value_AirQuality
74	COC: control value (0...100%)	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
74	COC: control value (0...255)	Output	1 Byte	--CT--	[17.1] DPT_SceneNumber
74	COC: scene (1...64)	Output	1 Byte	--CT--	[5.1] DPT_Scaling
75	COC: control value level 1 (priority)	Output	2 Bit	--CT--	[2.1] DPT_Switch_Control
75	COC: control value level 1 (switching object)	Output	1 Bit	--CT--	[1.1] DPT_Switch
76	COC: control value level 2 (priority)	Output	2 Bit	--CT--	[1.1] DPT_Switch
76	COC: control value level 2 (switching object)	Output	1 Bit	--CT--	[2.1] DPT_Switch_Control
77	COC: control value level 3 (priority)	Output	2 Bit	--CT--	[1.1] DPT_Switch
77	COC: control value level 3 (switching object)	Output	1 Bit	--CT--	[2.1] DPT_Switch_Control
78	COC: base set point [ppm]	Input	2 Bytes	-WC---	[9.8] DPT_Value_AirQuality
79	COC: blocking object level 1	Input	1 Bit	-WC---	[1.3] DPT_Enable
80	COC: blocking object level 2	Input	1 Bit	-WC---	[1.3] DPT_Enable
81	COC: blocking object level 3	Input	1 Bit	-WC---	[1.3] DPT_Enable
82	COC: blocking object	Input	1 Bit	-WC---	[1.3] DPT_Enable
82	COC: blocking object	Input	1 Bit	-WC---	[1.3] DPT_Enable
140	E1 1-byte value (0 to 255) (event 0)	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
140	E1 1-byte value (-128 to 127) (event 0)	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
140	E1 Switching sensor	Output	1 Bit	-WCT--	[1.1] DPT_Switch
140	E1 Scene (event 0)	Output	1 Byte	--CT--	[18.1] DPT_SceneControl
140	E1 Switching	Output	1 Bit	-WCT--	[1.1] DPT_Switch
140	E1 Priority (event 0)	Output	2 Bit	--CT--	[2.1] DPT_Switch_Control
140	E1 Switch (event 0)	Output	1 Bit	--CT--	[1.1] DPT_Switch

140	E1 Blind UP/DOWN	Output	1 Bit	-WCT--	[1.8] DPT_UpDown
140	E1 Alarm sensor	Output	1 Bit	-WCT--	[1.5] DPT_Alarm
140	E1 HZ: Counter reading 1-byte value	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
140	E1 HZ: Counter reading 1-byte value	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
140	E1 HZ: Counter reading 2-byte value	Output	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
140	E1 HZ: Counter reading 2-byte value	Output	2 Bytes	--CT--	[8.1] DPT_Value_2_Count
140	E1 4-byte value (-2,147,483,648 to 2,147,483,647) (event 0)	Output	4 Bytes	--CT--	[13.1] DPT_Value_4_Count
140	E1 4-byte value (0 to 4294967295) (event 0)	Output	4 Bytes	--CT--	[12.1] DPT_Value_4_Ucount
140	E1 2-byte floating point (event 0)	Output	2 Bytes	--CT--	[9.1] DPT_Value_Temp
140	E1 Switching 1 actuation	Output	1 Bit	-WCT--	[1.1] DPT_Switch
140	E1 Scene	Output	1 Byte	-WCTU-	[18.1] DPT_SceneControl
140	E1 HZ: Counter reading 4-byte value	Output	4 Bytes	--CT--	[13.1] DPT_Value_4_Count
140	E1 Output value	Output	2 Bytes	--CT--	[9.1] DPT_Value_Temp
140	E1 Output value	Output	2 Bytes	--CT--	[9.1] DPT_Value_Temp
140	E1 Switching step 1	Output	1 Bit	-WCT--	[1.1] DPT_Switch
140	E1 2-byte value (0 to 65,535) (event 0)	Output	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
140	E1 2-byte value (-32,768 to 32,767) (event 0)	Output	2 Bytes	--CT--	[8.1] DPT_Value_2_Count
141	E1 2-byte value (0 to 65,535) (event 1)	Output	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
141	E1 Priority (event 1)	Output	2 Bit	--CT--	[2.1] DPT_Switch_Control
141	E1 1-byte value (-128 to 127) (event 1)	Output	1 Byte	--CT--	[6.10] DPT_Value_1_Count
141	E1 2-byte value (-32,768 to 32,767) (event 1)	Output	2 Bytes	--CT--	[8.1] DPT_Value_2_Count
141	E1 STOP/slat adjustment	Output	1 Bit	--CT--	[1.7] DPT_Step
141	E1 Dimming	Output	4 Bit	--CT--	[3.7] DPT_Control_Dimming
141	E1 4-byte value (-2,147,483,648 to 2,147,483,647) (event 1)	Output	4 Bytes	--CT--	[13.1] DPT_Value_4_Count
141	E1 Switch (event 1)	Output	1 Bit	--CT--	[1.1] DPT_Switch
141	E1 4-byte value (0 to 4294967295) (event 1)	Output	4 Bytes	--CT--	[12.1] DPT_Value_4_Ucount
141	E1 ZZ: Counter reading 2-byte value	Output	2 Bytes	--CT--	[8.1] DPT_Value_2_Count
141	E1 ZZ: Counter reading 1-byte value	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
141	E1 ZZ: Counter reading 1-byte value	Output	1 Byte	--CT--	[6.10] DPT_Value_1_Count
141	E1 Request output value	Input	1 Bit	-WC---	[1.17] DPT_Trigger
141	E1 ZZ: Counter reading 4-byte value	Output	4 Bytes	--CT--	[13.1] DPT_Value_4_Count
141	E1 ZZ: Counter reading 2-byte value	Output	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
141	E1 2-byte floating point (event 1)	Output	2 Bytes	--CT--	[9.1] DPT_Value_Temp
141	E1 Scene (event 1)	Output	1 Byte	--CT--	[18.1] DPT_SceneControl
141	E1 1-byte value (0 to 255) (event 1)	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
141	E1 Switching 2 actuations	Output	1 Bit	-WCT--	[1.1] DPT_Switch
141	E1 Switching step 2	Output	1 Bit	-WCT--	[1.1] DPT_Switch
141	E1 Request output value	Input	1 Bit	-WC---	[1.17] DPT_Trigger
142	E1 Switching step 3	Output	1 Bit	-WCT--	[1.1] DPT_Switch
142	E1 Switching 3 actuations	Output	1 Bit	-WCT--	[1.1] DPT_Switch
142	E1 Measured value outside of range	Output	1 Bit	--CT--	[1.1] DPT_Switch
142	E1 Measured value outside of range	Output	1 Bit	--CT--	[1.1] DPT_Switch

142	E1 Scene storage display	Output	1 Bit	--CT--	[1.3] DPT_Enable
142	E1 Top end position	Input	1 Bit	-WC---	[1.2] DPT_Bool
142	E1 Start event 0/1	Input	1 Bit	-WC---	[1.1] DPT_Switch
142	E1 HZ: Request counter reading	Input	1 Bit	-WC---	[1.17] DPT_Trigger
143	E1 HZ: Limit value exceeded	Output	1 Bit	--CT--	[1.2] DPT_Bool
143	E1 Heating temperature limit	Output	1 Bit	--CT--	[1.1] DPT_Switch
143	E1 Bottom end position	Input	1 Bit	-WC---	[1.2] DPT_Bool
143	E1 Switching step 4	Output	1 Bit	-WCT--	[1.1] DPT_Switch
143	E1 Switching 4 actuations	Output	1 Bit	-WCT--	[1.1] DPT_Switch
144	E1 Bit threshold value 1	Output	1 Bit	--CT--	[1.1] DPT_Switch
144	E1 Temperature threshold value 1	Output	2 Bytes	--CT--	[9.1] DPT_Value_Temp
144	E1 2-byte threshold value 1	Output	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
144	E1 Byte threshold value 1	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
144	E1 Switching step 5	Output	1 Bit	-WCT--	[1.1] DPT_Switch
144	E1 Switching, long actuation	Output	1 Bit	-WCT--	[1.1] DPT_Switch
144	E1 Save scene	Input	1 Bit	-WC---	[1.3] DPT_Enable
144	E1 Enable save	Input	1 Bit	-WC---	[1.3] DPT_Enable
145	E1 Send if threshold value 1 undershot	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
145	E1 Send if threshold value 1 undershot	Input	2 Bytes	-WC---	[7.1] DPT_Value_2_Ucount
145	E1 Switch step UP/DOWN	Input	1 Bit	-WC---	[1.1] DPT_Switch
145	E1 Send if threshold value 1 undershot	Input	1 Byte	-WC---	[5.10] DPT_Value_1_Ucount
145	E1 ZZ: Limit value exceeded	Output	1 Bit	--CT--	[1.2] DPT_Bool
146	E1 Send if threshold value 1 exceeded	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
146	E1 ZZ: Request counter reading	Input	1 Bit	-WC---	[1.17] DPT_Trigger
146	E1 Actuating number	Input	1 Byte	-WCTU-	[5.10] DPT_Value_1_Ucount
146	E1 Send if threshold value 1 exceeded	Input	1 Byte	-WC---	[5.10] DPT_Value_1_Ucount
146	E1 Send if threshold value 1 exceeded	Input	2 Bytes	-WC---	[7.1] DPT_Value_2_Ucount
147	E1 ZZ: Reverse direction	Input	1 Bit	-WC---	[1.2] DPT_Bool
148	E1 Change temperature, tolerance band 1 lower limit	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
148	E1 ZZ: Reset	Input	1 Bit	-WC---	[1.2] DPT_Bool
149	E1 ZZ: Stop	Input	1 Bit	-WC---	[1.2] DPT_Bool
149	E1 Change temperature, tolerance band 1 upper limit	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
150	E1 Byte threshold value 2	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
150	E1 Bit threshold value 2	Output	1 Bit	--CT--	[1.1] DPT_Switch
150	E1 2-byte threshold value 2	Output	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
150	E1 Temperature threshold value 2	Output	2 Bytes	--CT--	[9.1] DPT_Value_Temp
151	E1 Send if threshold value 2 undershot	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
151	E1 Send if threshold value 2 undershot	Input	2 Bytes	-WC---	[7.1] DPT_Value_2_Ucount
151	E1 Send if threshold value 2 undershot	Input	1 Byte	-WC---	[5.10] DPT_Value_1_Ucount
152	E1 Send if threshold value 2 exceeded	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
152	E1 Send if threshold value 2 exceeded	Input	2 Bytes	-WC---	[7.1] DPT_Value_2_Ucount
152	E1 Send if threshold value 2 exceeded	Input	1 Byte	-WC---	[5.10] DPT_Value_1_Ucount
154	E1 Change temperature, tolerance band 2 lower limit	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
155	E1 Change temperature, tolerance band 2 upper limit	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp

158	E1 Disable	Input	1 Bit	-WC---	[1.3] DPT_Enable
160	E2 HZ: Counter reading 1-byte value	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
160	E2 HZ: Counter reading 1-byte value	Output	1 Byte	--CT--	[6.10] DPT_Value_1_Count
160	E2 Switching	Output	1 Bit	-WCT--	[1.1] DPT_Switch
160	E2 Alarm sensor	Output	1 Bit	-WCT--	[1.5] DPT_Alarm
160	E2 HZ: Counter reading 2-byte value	Output	2 Bytes	--CT--	[8.1] DPT_Value_2_Count
160	E2 HZ: Counter reading 2-byte value	Output	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
160	E2 Blind UP/DOWN	Output	1 Bit	-WCT--	[1.8] DPT_UpDown
160	E2 Switch (event 0)	Output	1 Bit	--CT--	[1.1] DPT_Switch
160	E2 Switching sensor	Output	1 Bit	-WCT--	[1.1] DPT_Switch
160	E2 Switching step 1	Output	1 Bit	-WCT--	[1.1] DPT_Switch
160	E2 1-byte value (-128 to 127) (event 0)	Output	1 Byte	--CT--	[6.10] DPT_Value_1_Count
160	E2 1-byte value (0 to 255) (event 0)	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
160	E2 Priority (event 0)	Output	2 Bit	--CT--	[2.1] DPT_Switch_Control
160	E2 Switching 1 actuation	Output	1 Bit	-WCT--	[1.1] DPT_Switch
160	E2 4-byte value (-2,147,483,648 to 2,147,483,647) (event 0)	Output	4 Bytes	--CT--	[13.1] DPT_Value_4_Count
160	E2 2-byte floating point (event 0)	Output	2 Bytes	--CT--	[9] 9.xxx, [9.1] DPT_Value_Temp
160	E2 2-byte value (0 to 65,535) (event 0)	Output	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
160	E2 4-byte value (0 to 4294967295) (event 0)	Output	4 Bytes	--CT--	[12.1] DPT_Value_4_Ucount
160	E2 HZ: Counter reading 4-byte value	Output	4 Bytes	--CT--	[13.1] DPT_Value_4_Count
160	E2 2-byte value (-32,768 to 32,767) (event 0)	Output	2 Bytes	--CT--	[8.1] DPT_Value_2_Count
160	E2 Scene	Output	1 Byte	-WCTU-	[18.1] DPT_SceneControl
160	E2 Scene (event 0)	Output	1 Byte	--CT--	[18.1] DPT_SceneControl
161	E2 Switch (event 1)	Output	1 Bit	--CT--	[1.1] DPT_Switch
161	E2 4-byte value (-2,147,483,648 to 2,147,483,647) (event 1)	Output	4 Bytes	--CT--	[13.1] DPT_Value_4_Count
161	E2 STOP/slat adjustment	Output	1 Bit	--CT--	[1.7] DPT_Step
161	E2 Dimming	Output	4 Bit	--CT--	[3.7] DPT_Control_Dimming
161	E2 2-byte floating point (event 1)	Output	2 Bytes	--CT--	[9.1] DPT_Value_Temp
161	E2 Switching step 2	Output	1 Bit	-WCT--	[1.1] DPT_Switch
161	E2 4-byte value (0 to 4294967295) (event 1)	Output	4 Bytes	--CT--	[12.1] DPT_Value_4_Ucount
161	E2 ZZ: Counter reading 2-byte value	Output	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
161	E2 Scene (event 1)	Output	1 Byte	--CT--	[18.1] DPT_SceneControl
161	E2 ZZ: Counter reading 4-byte value	Output	4 Bytes	--CT--	[13.1] DPT_Value_4_Count
161	E2 ZZ: Counter reading 2-byte value	Output	2 Bytes	--CT--	[8.1] DPT_Value_2_Count
161	E2 1-byte value (0 to 255) (event 1)	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
161	E2 ZZ: Counter reading 1-byte value	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
161	E2 ZZ: Counter reading 1-byte value	Output	1 Byte	--CT--	[6.10] DPT_Value_1_Count
161	E2 2-byte value (0 to 65,535) (event 1)	Output	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
161	E2 Switching 2 actuations	Output	1 Bit	-WCT--	[1.1] DPT_Switch
161	E2 Priority (event 1)	Output	2 Bit	--CT--	[2.1] DPT_Switch_Control
161	E2 2-byte value (-32,768 to 32,767) (event 1)	Output	2 Bytes	--CT--	[8.1] DPT_Value_2_Count
161	E2 1-byte value (-128 to 127) (event 1)	Output	1 Byte	--CT--	[6.10] DPT_Value_1_Count

162	E2 Top end position	Input	1 Bit	-WC---	[1.2] DPT_Bool
162	E2 Scene storage display	Output	1 Bit	--CT--	[1.3] DPT_Enable
162	E2 Switching step 3	Output	1 Bit	-WCT--	[1.1] DPT_Switch
162	E2 Switching 3 actuations	Output	1 Bit	-WCT--	[1.1] DPT_Switch
162	E2 Start event 0/1	Input	1 Bit	-WC---	[1.1] DPT_Switch
162	E2 HZ: Request counter reading	Input	1 Bit	-WC---	[1.17] DPT_Trigger
163	E2 Switching 4 actuations	Output	1 Bit	-WCT--	[1.1] DPT_Switch
163	E2 Bottom end position	Input	1 Bit	-WC---	[1.2] DPT_Bool
163	E2 HZ: Limit value exceeded	Output	1 Bit	--CT--	[1.2] DPT_Bool
163	E2 Switching step 4	Output	1 Bit	-WCT--	[1.1] DPT_Switch
164	E2 Enable save	Input	1 Bit	-WC---	[1.3] DPT_Enable
164	E2 Switching, long actuation	Output	1 Bit	-WCT--	[1.1] DPT_Switch
164	E2 Save scene	Input	1 Bit	-WC---	[1.3] DPT_Enable
164	E2 Switching step 5	Output	1 Bit	-WCT--	[1.1] DPT_Switch
165	E2 ZZ: Limit value exceeded	Output	1 Bit	--CT--	[1.2] DPT_Bool
165	E2 Switch step UP/DOWN	Input	1 Bit	-WC---	[1.1] DPT_Switch
166	E2 ZZ: Request counter reading	Input	1 Bit	-WC---	[1.17] DPT_Trigger
166	E2 Actuating number	Input	1 Byte	-WCTU-	[5.10] DPT_Value_1_Ucount
167	E2 ZZ: Reverse direction	Input	1 Bit	-WC---	[1.2] DPT_Bool
168	E2 ZZ: Reset	Input	1 Bit	-WC---	[1.2] DPT_Bool
169	E2 ZZ: Stop	Input	1 Bit	-WC---	[1.2] DPT_Bool
178	E2 Disable	Input	1 Bit	-WC---	[1.3] DPT_Enable
180	rH: humidity value [%]	Output	2 Bytes	--CT--	[9.7] DPT_Value_Humidity
181	rH: humidity value (1 byte) [%]	Output	1 Byte	--CT--	[5.1] DPT_Scaling
182	rH: request humidity value	Input	1 Bit	-WC---	[1.17] DPT_Trigger
183	rH: sensor error	Output	1 Bit	--CT--	[1.2] DPT_Bool
184	RHC: humidity external value 1 [%]	Input	1 Byte	-WC---	[5.1] DPT_Scaling
185	RHC: external humidity value 2 [%]	Input	1 Byte	-WC---	[5.1] DPT_Scaling
186	RHC: control value (0...255)	Output	1 Byte	--CT--	[5.1] DPT_Scaling
186	RHC: control value (0...100%)	Output	1 Byte	--CT--	[17.1] DPT_SceneNumber
186	RHC: scene (1...64)	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
187	RHC: control value level 1 (priority)	Output	2 Bit	--CT--	[1.1] DPT_Switch
187	RHC: control value level 1 (switching object)	Output	1 Bit	--CT--	[2.1] DPT_Switch_Control
188	RHC: control value level 2 (priority)	Output	2 Bit	--CT--	[1.1] DPT_Switch
188	RHC: control value level 2 (switching object)	Output	1 Bit	--CT--	[2.1] DPT_Switch_Control
189	RHC: control value level 3 (priority)	Output	2 Bit	--CT--	[2.1] DPT_Switch_Control
189	RHC: control value level 3 (switching object)	Output	1 Bit	--CT--	[1.1] DPT_Switch
190	RHC: base set point [%]	Input	2 Bytes	-WC---	[9.7] DPT_Value_Humidity
191	RHC: base set point (1 byte) [%]	Input	1 Byte	-WC---	[5.1] DPT_Scaling
192	RHC: blocking object level 1	Input	1 Bit	-WC---	[1.3] DPT_Enable
193	RHC: blocking object level 2	Input	1 Bit	-WC---	[1.3] DPT_Enable
194	RHC: blocking object level 3	Input	1 Bit	-WC---	[1.3] DPT_Enable
195	RHC: blocking object	Input	1 Bit	-WC---	[1.3] DPT_Enable
195	RHC: blocking object	Input	1 Bit	-WC---	[1.3] DPT_Enable

196	HUMCP: Absolute humidity value 1 [g/m3]	Input	2 Bytes	-WC---	[5.1] DPT_Scaling
196	HUMCP: Relative humidity value 1 [%]	Input	1 Byte	-WC---	[9.7] DPT_Value_Humidity
197	HUMCP: Temperature value 1 [°C]	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
198	HUMCP: Relative humidity value 2 [%]	Input	1 Byte	-WC---	[9.7] DPT_Value_Humidity
198	HUMCP: Absolute humidity value 2 [g/m3]	Input	2 Bytes	-WC---	[5.1] DPT_Scaling
199	HUMCP: Temperature value 2 [°C]	Input	2 Bytes	-WC---	[9.1] DPT_Value_Temp
200	HUMCP: Humidity comparator output	Output	1 Bit	--CT--	[1.3] DPT_Enable
202	DEWP: dew point temperature [°C]	Output	2 Bytes	--CT--	[9.1] DPT_Value_Temp
203	DEWP: dew point alarm enabled (0...255)	Output	1 Byte	--CT--	[5.1] DPT_Scaling
203	DEWP: dew point alarm enabled scene (1...64)	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
203	DEWP: dew point alarm enabled (0...100%)	Output	1 Byte	--CT--	[1.1] DPT_Switch
203	DEWP: dew point alarm enabled (switching object)	Output	1 Bit	--CT--	[2.1] DPT_Switch_Control
203	DEWP: dew point alarm enabled (priority)	Output	2 Bit	--CT--	[17.1] DPT_SceneNumber
204	DEWP: request dew point temperature	Input	1 Bit	-WC---	[1.17] DPT_Trigger
216	VAVC: control value (0...100%)	Output	1 Byte	--CT--	[5.1] DPT_Scaling
216	VAVC: control value (0...255)	Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
217	VAVC: external object (0...100%)	Input	1 Byte	-WC---	[5.1] DPT_Scaling
218	VAVC: blocking object	Input	1 Bit	-WC---	[1.3] DPT_Enable
219	Activate output 1	Input	1 Bit	-WC---	[1.1] DPT_Switch
220	Output 1 status	Output	1 Bit	--CT--	[1.1] DPT_Switch
221	Activate output 2	Input	1 Bit	-WC---	[1.1] DPT_Switch
222	Output 2 status	Output	1 Bit	--CT--	[1.1] DPT_Switch

*Flag	Name	Meaning
C	Communication	Object can communicate
R	Read	Object status can be requested (ETS, display etc.)
W	Write	Object can receive information
T	Transmit	Object can send information
U	Update	Object can request a value from another bus participant. The answer is interpreted as write command and updates the value of the communication object. This is typically used to request external sensor data after a bus voltage recovery.