

## EnOcean Equipment Profiles

### REVISION HISTORY

Ver.	Editor	Change	Date
2.6.8	NM	Last xml edition of the EEP-Specification	Dec 31, 2017

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EnOcean Alliance Inc.  
2400 Camino Ramon, Suite 375  
San Ramon, CA 94583  
USA  
Graham Martin  
Chairman & CEO EnOcean Alliance

## D2-11: Bidirectional Room Operating Panel

**TYPE 01,02,03,04,05,06,07,08** *Submitter: Thermokon Sensortechnik GmbH*

**TYPE 20** *Submitter: Menred GmbH*

### EEP Family Table:

Supported Function ... of Type	01	02	03	04	05	06	07	08	20
Temperature Measurement	X	X	X	X	X	X	X	X	-
Setpoint	X	X	X	X	X	X	X	X	-
Humidity Measurement	-	X	-	X	-	X	-	X	-
Fan Speed	-	-	X	X	X	X	-	-	-
Occupancy	-	-	-	-	X	X	X	X	-
Air Condition / FanCoil	-	-	-	-	-	-	-	-	X
Floor Heating	-	-	-	-	-	-	-	-	X
Fan Ventilation	-	-	-	-	-	-	-	-	X
Temperature Sensor	-	-	-	-	-	-	-	-	X
Humidity Sensor	-	-	-	-	-	-	-	-	-
Blind	-	-	-	-	-	-	-	-	-
Dimming	-	-	-	-	-	-	-	-	-
PIR	-	-	-	-	-	-	-	-	-
LUX	-	-	-	-	-	-	-	-	-

For the types 0x01, 0x03, 0x05, 0x07 the value of DB3 at message type C will be 0 = not available.

For the types 0x01, 0x02, 0x07, 0x08 the value of DB0.3 ... DB0.1 at message type B and C will be 7 = not available.

For the types 0x01, 0x02, 0x03, 0x04 the value of DB0.0 at message type C has to be 0 = not used.

RORG	D2	VLD Telegram
FUNC	11	Bidirectional Room Operating Panel
TYPE	04	Type 0x04 (description: see table)

*Submitter: Thermokon Sensortechnik GmbH*

### Data exchange

Direction: bidirectional (Smart-Ack)

Addressing: broadcast and addressed

Communication trigger: event- & time-triggered

Communication interval: time-triggered (configurable at the device) & event-triggered

Trigger event: keypress

Tx delay: -

Rx timeout: -

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## Teach-in

Teach-in method: Smart-Ack teach-in without repeater

## Security

Encryption required: no

Security level format: -

## Product Description

The device represented by this EEP is a "Bidirectional Room Operating Panel with Display". It is powered by solar cell.

It may be equipped with the following features (for details please see the EEP-Family table below):

- Temperature Sensor
- Humidity Sensor
- Temperature Setpoint Adjustment
- Fan Speed Adjustment
- Occupancy-State Adjustment

For pairing the bidirectional "Smart Ack Teach-In without repeater" method is used.

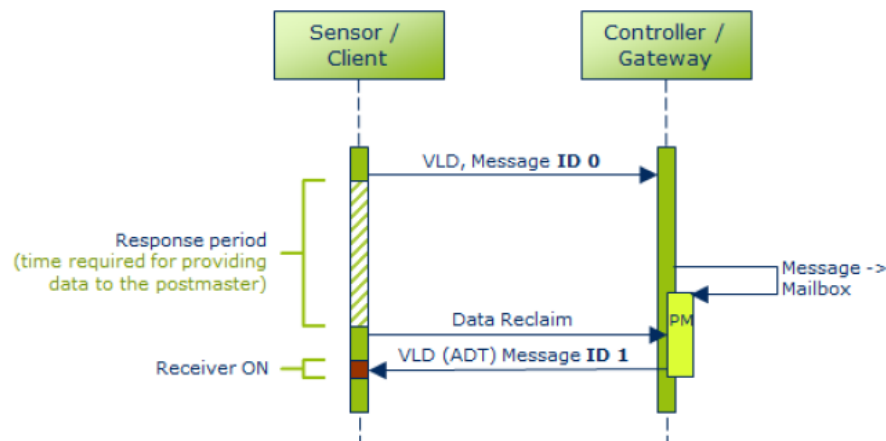
The device transmits the actual sensor values periodically (default: 1000 s) or on the event keypress.

## Temperature Sensor, Humidity Sensor

The environmental sensors are updated periodically (adjustable, default: 100 s) and, if there is a change, the updated values will be send immediately.

The Smart Ack functionality will be used for setting display symbols like "window open, heating/cooling, occupancy state" or for overwriting parameters like setpoint, fan speed or occupancy state which are stored at the device.

**Communication flow, triggered by a keystroke (first keystroke within inactive state, display state is off):**

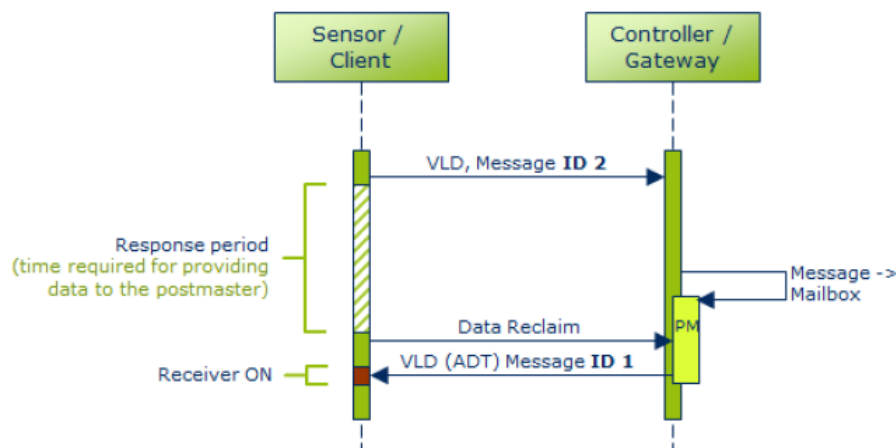


## System Specification



## System Specification

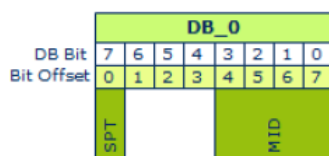
Communication flow, triggered by an event like temperature- and or humidity change or heartbeat:



### Message type A / ID 0 (First switch press after sleep-mode, request new data)

Direction: Sensor -> Gateway

**Bit 0.7** indicates which setpoint type is actual used at the device. The difference is made at the visualization of the setpoint (real temperature setpoint (24.5°C) or setpoint shift (+ 3.0°C)) and this information is needed for interpreting the value of DB2 at Message Type C (ID2).



Offset	Size	Data	ShortCut	Description	Valid Range	Scale	Unit
0	1	Setpoint type	SPT	Setpoint type actual used by the device (temperature correction / temperature setpoint)	Enum: 0: Temperature correction 1: Temperature setpoint		
1	3	Not Used (= 0)					
4	4	Message ID	MID	Message Type A, ID-0	Enum: 0: ID-0 1: ID-1 2: ID-2 3...15: Reserved		

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16	8	Basetpoint	BSP	Set basetpoint for visualization of the temperature setpoint	Enum:
					0...14: Reserved
					15...30: 15...30 °C
					Reserved
24	4	Valid temperature correction	COA	Set valid temperature correction	31...255:
					Enum:
					0: Reserved
					1: K
					-1...1
					2: K
					-2...2
					3: K
					-3...3
					4: K
					-4...4
					5: K
					-5...5
					6: K
28	3	Fan Speed	OFS	Override actual Fan Speed	7: K
					-6...6
					8: K
					-7...7
					9: K
					-8...8
					10: K
31	1	Occupancy State	OOS	Override actual Occupancy State	-9...9
					10: K
					-10...10
4	4	Message ID	MID	Message Type B, ID-1	11...15: Reserved
					Enum:
					0: Auto
					1: Speed 0
					2: Speed 1
					3: Speed 2
					4: Speed 3
8	8	Temperature correction	OSO	Override Setpoint offset (linear, min. - ... max. +) (valid temperature correction)	5...6: Reserved
					7: Not available
					Enum:
4	4	Message ID	MID	Message Type B, ID-1	0: State Unoccupied
					1: State Occupied
					Enum:
					0: ID-0
8	8	Temperature correction	OSO	Override Setpoint offset (linear, min. - ... max. +) (valid temperature correction)	1: ID-1
					2: ID-2
					3...15: Reserved
8	8	Temperature correction	OSO	Override Setpoint offset (linear, min. - ... max. +) (valid temperature correction)	0...255
					according to COA
					K

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# System Specification

## Message type C / ID 2 (Transmit actual data)

Direction: Sensor -> Gateway

**Bit 5.7** indicates which setpoint type is actual used at the device. The difference is made at the visualization of the setpoint (real temperature setpoint (24.5 °C) or setpoint shift (+ 3.0 °C)) and this information is needed for interpreting the value of DB2.

**Byte 4** transmits the actual measured temperature.

**Byte 2** transmits the actual setpoint shift. How to interpret this value is a combination of Bit 5.7, Byte 1 and Bit 0.7 ... 0.4.

If the actual setpoint type is setpoint shift, then the value of Byte 2 only represents the scaled valid setpoint shift at Bit 0.7 ... 0.4.

If the setpoint type is temperature setpoint, then the temperature setpoint is calculated as sum of the internal basesetpoint at Byte 1 and the scaled valid setpoint shift at Bit 0.7 ... 0.4, transmitted at Byte 2.

**Byte 1** transmits the actual, at the device stored, basesetpoint.

**Bit 0.7 ... 0.4** transmits the actual valid, at the device stored, setpoint shift.

DB Bit Bit Offset	DB_5								DB_4								DB_3								DB_2								DB_1								DB_0															
	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47								
	SPT		TT		MTD								TEMP								HUMI								SP								IBS								BSP				FS				OS			

Offset	Size	Data	ShortCut	Description	Valid Range	Scale	Unit
0	1	Setpoint type	SPT	Setpoint type actual used by the device (temperature correction / temperature setpoint)	Enum: 0: Temperature correction 1: Temperature setpoint		
1	2	Telegram Type	TT	Telegram Trigger	Enum: 0: Heartbeat 1: Change of temperature- or humidity value 2: User caused parameter change		
3	1	Not Used (= 0)					
4	4	Message ID	MID	Message Type C, ID-2	Enum: 0: ID-0 1: ID-1 2: ID-2 3...15: Reserved		
8	8	Temperature	TEMP	Temperature	0...255	0...+40	°C
16	8	Humidity	HUMI	Humidity	0...250	0...+100	%rH
24	8	Setpoint offset	SP	Setpoint shift, linear (refers to valid setpoint shift at DB0.7 ... DB0.4)	0...255	according to <b>BSB</b>	K

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32	8	Basepoint	IBS	Internal basepoint, required for setpoint type "temperature setpoint"	Enum: 0...14: Reserved 15...30: 15...30 °C 31...255: Reserved
40	4	Valid temperature correction	BSB	Valid temperature correction	Enum: 0: Reserved 1: -1...1 K 2: -2...2 K 3: -3...3 K 4: -4...4 K 5: -5...5 K 6: -6...6 K 7: -7...7 K 8: -8...8 K 9: -9...9 K 10: -10...10 K 11...15: Reserved
44	3	Fan Speed	FS	Fan Speed	Enum: 0: Auto 1: Speed 0 2: Speed 1 3: Speed 2 4: Speed 3 5...6: Reserved 7: Not available
47	1	Occupancy State	OS	Occupancy State	Enum: 0: State Unoccupied 1: State Occupied