

## EnOcean Equipment Profiles

### REVISION HISTORY

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

Copyright © EnOcean Alliance Inc. (2019). All rights reserved.

The information within this document is the property of the EnOcean Alliance and its use and disclosure are restricted. Elements of the EnOcean Alliance specifications may also be subject to third party intellectual property rights, including without limitation, patent, copyright or trademark rights (such a third party may or may not be a member of the EnOcean Alliance.)

The EnOcean Alliance is not responsible and shall not be held responsible in any manner for identifying or failing to identify any or all such third party intellectual property rights. This document and the information contained herein are provided on an “as is” basis and the EnOcean Alliance disclaims all warranties express or implied, including but not limited to

- (1) any warranty that the use of the information herein will not infringe any rights of third parties (including any intellectual property rights, patent, copyright or trademark rights, or
- (2) any implied warranties of merchantability, fitness for a particular purpose, title or non-infringement.

In no event will the EnOcean Alliance be liable for any loss of profits, loss of business, loss of use of data, interruption of business, or for any other direct, indirect, special or exemplary, incidental, punitive or consequential damages of any kind, in contract or in tort, in connection with this document or the information contained herein, even if advised of the possibility of such loss or damage. All Company, brand and product names may be trademarks that are the sole property of their respective owners.

The above notice and this paragraph must be included on all copies of this document that are made.

The EnOcean Alliance “EnOcean Equipment Profiles definitions” are available free of charge to companies, individuals and institutions for all non-commercial purposes (including educational research, technical evaluation and development of non-commercial tools or documentation.)

This specification includes intellectual property („IPR“) of the EnOcean Alliance and joint intellectual properties („joint IPR“) with contributing member companies. No part of this

## System Specification



specification may be used in development of a product or service for sale without being a participant or promoter member of the EnOcean Alliance and/or joint owner of the appropriate joint IPR.

These errata may not have been subjected to an Intellectual Property review, and as such, may contain undeclared Necessary Claims.

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

### D2-02: Sensors for Temperature, Illumination, Occupancy And Smoke

This EEP family shall be used for bidirectional sensors that measure temperature, illumination, and detect room occupancy and smoke presence.

The EEP may be used in conjunction with the Smart Acknowledge protocol.

For teach-in and teach-out the "Universal Uni- and Bidirectional Teach-In Procedure for EEP based Communication" shall be used. Alternatively the Smart Acknowledge Teach-In Procedure is used for those sensors supporting Smart Acknowledge.

Supported function	Type 0x00	Type 0x01	Type 0x02
Temperature Sensor	X	X	X
Illumination Sensor	X	X	-
Occupancy Detector	X	-	-
Smoke Detector	X	X	X

<b>RORG</b>	D2	<b>VLD Telegram</b>
<b>FUNC</b>	02	Sensors for Temperature, Illumination, Occupancy And Smoke
<b>TYPE</b>	01	Type 0x01 (description: see table)

Submitter: MSR-Office

#### CMD 0x1 - Sensor Measurement

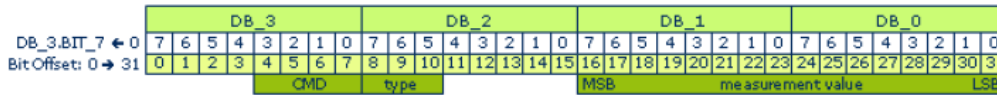
This message is sent by a sensor if one of the following events occurs:

- Measurement results trigger an automated transmission (see Actuator Set Measurement message)
- Message Actuator Measurement Query has been received

Response Timing: None

# System Specification

## Command ID 01 (CMD)



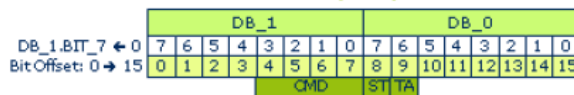
Offset	Size	Data	ShortCut	Description	Valid Range	Scale	Unit
0	4	Not Used (= 0)					
4	4	Command ID	CMD	command identifier	Enum: 0x01: ID 01		
8	3	Measurement type	type		Enum: Temperature (0...65535: -40 to +120°C) 0x00: Illumination (0...65535: 0 to 2047lx) 0x01: Occupancy (0: not detected; 1: detected) 0x02: Smoke 0x03: The following content applies for the value in DB_0 and DB_1: 0x00 - No smoke detected 0x01 - Smoke detected via ionization chamber 0x02 - Smoke detected via optical chamber 0x03 - Smoke detected via both chambers		
11	5	Not Used (= 0)					
16	16	Measurement value (2 bytes)	MV	DB_0 = LSB / DB_1 = MSB	0...65535	...	N/A

## CMD 0x2 - Sensor Test/Trigger

This message is sent to a sensor. It causes the sensor to enter self-test mode or trigger an alarm (if supported).

Response Timing: None

## Command ID 02 (CMD)



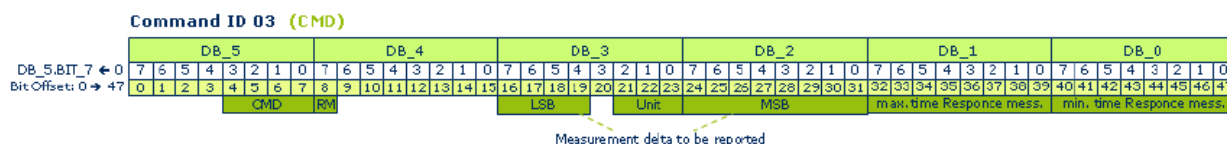
Offset	Size	Data	ShortCut	Description	Valid Range	Scale	Unit
0	4	Not Used (= 0)					
4	4	Command ID	CMD	Command identifier	Enum: 0x02: ID 02		
8	1	Self-test	ST		Enum: 0b0: Self-test mode 0b1: Normal operation		
9	1	Trigger alarm	TA		Enum: 0b0: Trigger alarm 0b1: Normal operation		
10	6	Not Used (= 0)					

# System Specification

## CMD 0x3 - Actuator Set Measurement

This message is sent to a sensor. It configures the measurement behaviour of the sensor.

Response Timing: None



Offset	Size	Data	ShortCut	Description	Valid Range	Scale	Unit
0	4	Not Used (= 0)					
4	4	Command ID	CMD	Command identifier	Enum: 0x03: ID 03		
8	1	Report measurement	RM		Enum: 0b0: Report measurement: query only 0b1: Report measurement: query / auto reporting		
9	7	Not Used (= 0)					
16	4	Measurement delta to be reported (LSB)	MD_LSB		0...4095	0...4095	N/A
20	1	Not Used (= 0)					
21	3	Unit	UN		Enum: 0x00: Temperature (°C) 0x01: Illumination (lx) 0x02...0x07: Not used		
24	8	Measurement delta to be reported (MSB)	MD_MSB		0...4095	0...4095	N/A
32	8	Maximum time between two subsequent Actuator	MAT	Measurement Response messages [10s]	0...255	10...2550	s
40	8	Minimum time between two subsequent Actuator	MIT	Measurement Response messages [s]	0...255	0...255	s

## CMD 0x4 - Sensor Measurement Query

This message is sent to a sensor. The sensor replies with an Sensor Measurement message.

Response Timing:

A Sensor Measurement message shall be received within a maximum of 300ms from the time of transmission of this message.

In case no such response is received within this time frame the action shall be treated as completed without result.

# System Specification

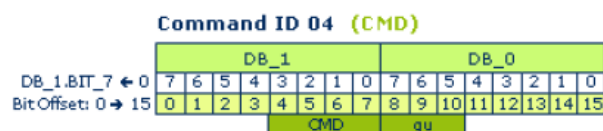
## CMD 0x4 - Sensor Measurement Query

This message is sent to a sensor. The sensor replies with an Sensor Measurement message.

### Response Timing:

A Sensor Measurement message shall be received within a maximum of 300ms from the time of transmission of this message.

In case no such response is received within this time frame the action shall be treated as completed without result.



Offset	Size	Data	ShortCut	Description	Valid Range	Scale	Unit
0	4	Not Used (= 0)					
4	4	Command ID	CMD	Command identifier	Enum: 0x04: ID 04		
8	3	Query	qu		Enum: 0x0: Query temperature 0x1: Query illumination 0x2: Query occupancy 0x3: Query smoke 0x4...0x7: Not used		
11	5	Not Used (= 0)					