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## WMBUS DATA FORMAT

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OUTDOOR TEMPERATURE DEVICE





## Verify correct device and version

This document applies to the device MOTW1-A with protocol version 65 (0x41)

There are two ways of finding out the protocol version of the device; either by looking at the label on the device or by looking at the data packets sent out by the device. See chapters **Protocol version in data packets** and **Protocol version in label** below for more information.

### Protocol version in data packets

If it is possible to check the information in the data packets sent out by the device, then the protocol version is included in the data field called *A-Field Protocol version*. For more information, see chapter **WMBUS-format**.

### Protocol version in label

The protocol version can be found on the label. An example of identification number on the label is shown below, in this example it is described by LAS.00013870.1B.3C, where

- **Manufacturer code:** LAS
- **Serial number:** 00013870
- **Device type:** 1B
- **Protocol version:** 41 for O-T and 50 for O-T-H



## WMBUS-format

Art nr.	
Version	65 (0x41) / 80 (0x50)
Information	Packet is sent every 90 seconds in T-mode
DR1	Temperature: Last measured value
DR2	Temperature: Average last hour
DR3	Temperature: Average last 24 hours

Byte No	Field Name	Content	Info	Byte data	
1	L-Field	Length			Linklayer
2	C-Field	SND-NR		0x44	
3	M-Field	Meter Manufacturer code	LAS	0x33	
4	M-Field	Meter Manufacturer code		0x30	
5	A-Field	Meter serial number (LSB)	Example: 0001067	0x67	
6	A-Field	Meter serial number		0x00	
7	A-Field	Meter serial number		0x01	
8	A-Field	Meter serial number (MSB)		0x00	
9	A-Field	Protocol version		0x3C / 0x46	
10	A-Field	Meter type	Room sensor	0x1B	
11	CI-Field	Short header		0x7A	Networklayer
12	Access no.	Transmission counter	Example: 7	0x07	
13	Status	Device status (error/alarms)	Refer to <b>Table 1</b> for possible values	0x00	
14	Configuration	Number of encrypted blocks	Example: 3	0x03	
15	Configuration	Encryption		No encryption: 0x00 Encryption mode 5: 0x05	
16	AES-Verify	Encryption Verification		0x2F	DATA blocks
17	AES-Verify	Encryption Verification		0x2F	
18	DR1	DIF	16-bit integer	0x02 = Value OK 0x32 = Value not OK	
19	DR1	VIF	External temperature 0.01°C	0x65	
20	DR1	Value (LSB)	Example: 0x0011	0x11	
21	DR1	Value (MSB)		0x00	
22	DR2	DIF	16-bit integer + Storage 1	0x42 = Value OK 0x72 = Not enough values	
23	DR2	VIF	External temperature 0.01°C	0x65	
24	DR2	Value (LSB)	Example: 0x0001	0x01	
25	DR2	Value (MSB)		0x00	
26	DR3	DIF	16-bit integer + Storage extension	0x82 = Value OK 0xB2 = Not enough values	
27	DR3	DIFE	Storage 2	0x01	
28	DR3	VIF	External temperature 0.01°C	0x65	
29	DR3	Value (LSB)	Example: 0x0012	0x12	
30	DR3	Value (MSB)		0x00	

Table 1: Status byte with errors and alerts

Bit	Info
0 (0x01)	Device not activated
1 (0x02)	
2 (0x04)	Low battery
3 (0x08)	X
4 (0x10)	X
5 (0x20)	X
6 (0x40)	X
7 (0x80)	X