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WIRELESS BUILDING TECHNOLOGY

WMBUS DATA FORMAT

OUTDOOR TEMP/HUMIDITY DEVICE (LAN-WMBUS-O2-TH)

Version: 1.0

Verify correct device and version

This document applies to the device LAN-WMBUS-O2-TH with protocol version 60. 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 a label is shown in the figure below and the relevant information is described by LAS.00013870.1B.3C, where

- **Manufacturer code**: LAS
- **Serial number**: 00013870
- **Device type**: 1B
- **Protocol version**: 3C for O2-TH

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WMBUS-format

Art nr.	LAN-WMBUS-O2-TH
Version	60 (0x3C) / 70 (0x46)
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
DR4	Humidity: Last measured value
DR5	Humidity: Average last hour
DR6	Humidity: 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 Table 1 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 0.01ºC	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 0.01ºC	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 0.01ºC	0x65	
29	DR3	Value (LSB)	**Example**: 0x0012	0x12	
30	DR3	Value (MSB)		0x00	
31	DR4	DIF	16-bit integer	0x02 = Value OK 0x32 = Value not OK	
32	DR4	VIF	Extension table	0xFB	
33	DR4	VIFE	Relative humidity 0.1%RH	0x1A	
34	DR4	Value (LSB)	**Example**: 0x0102	0x02	
35	DR4	Value (MSB)		0x01	
36	DR5	DIF	16-bit integer + Storage 1	0x42 = Value OK 0x72 = Not enough values	
37	DR5	VIF	Extension table	0xFB	
38	DR5	VIFE	Relative humidity 0.1%RH	0x1A	
39	DR5	Value (LSB)	**Example:** 0x0702	0x02	
40	DR5	Value (MSB)		0x07	
41	DR6	DIF	16-bit integer + Storage extension	0x82 = Value OK 0xB2 = Not enough values	
42	DR6	DIF	Storage 2	0x01	
43	DR6	VIF	Extension table	0xFB	
44	DR6	VIFE	Relative humidity 0.1%RH	0x1A	
45	DR6	Value (LSB)	**Example:** 0x0201	0x01	
46	DR6	Value (MSB)		0x02	

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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