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# WMBUS DATA FORMAT

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## TEMP/HUMIDITY DEVICE (LAN-WMBUS-C-TH)



## Verify correct device and version

This document applies to the device LAN-WMBUS-C-TH with protocol version 7. 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** 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* with content *Protocol version*. For more information, see chapter **WMBUS-data format**.

### Protocol version in label

The protocol version can be found by scanning the QR-code on the label (shown below). Only the serial number of the device is shown in clear text. By scanning the QR-code, the information about the device is shown as LAS.00020011.1B.07, where

- **Manufacturer code:** LAS
- **Serial number:** 00020011
- **Device type:** 1B
- **Protocol version:** 07



## WMBUS-data format

Art nr.	LAN-WMBUS-C-TH				
Version	07 (0x07)				
Information	Message is sent typically every 3 minute (default value) using C-mode with frame format A according to OMS 4				
DR1	Temperature: Last measured value				
DR2	Temperature: Average last hour value				
DR3	Temperature: 24-hour average value				
DR4	Humidity: Last measured value				
DR5	Humidity: Average last hour value				
DR6	Humidity: 24-hour average value				
Byte No	Field Name	Content	Info	Byte data	
1	L-Field	Length		0x2E	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		0x07	
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	Encryption mode 5 + Synchronized: 0x25	0x25	
16	AES-Verify	Encryption Verification		0x2F	DATA blocks
17	AES-Verify	Encryption Verification		0x2F	
18	DR1	DIF	16-bit integer	0x02	
19	DR1	VIF	External temperature 0.01°C	0x65	
20	DR1	Value (LSB)	Example: 0x1122	0x22	
21	DR1	Value (MSB)		0x11	
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: 0x001C	0x1C	
25	DR2	Value (MSB)		0x00	
26	DR3	DIF	16-bit integer + 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: 0x08A9	0xA9	
30	DR3	Value (MSB)		0x08	
31	DR4	DIF	16-bit integer	0x02	
32	DR4	VIF	Extension table	0xFB	
33	DR4	VIFE	Relative humidity 0.1%RH	0x1A	
34	DR4	Value (LSB)	Example: 0x0A78	0x78	
35	DR4	Value (MSB)		0x0A	
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: 0x012C	0x2C	
40	DR5	Value (MSB)		0x01	
41	DR6	DIF	16-bit integer + Extension	0x82 = Value OK 0xB2 = Not enough values	
42	DR6	DIFE	Storage 2	0x01	
43	DR6	VIF	Extension table	0xFB	
44	DR6	VIFE	Relative humidity 0.1%	0x1A	
45	DR6	Value (LSB)	Example: 0x010D	0x0D	
46	DR6	Value (MSB)		0x01	

Table 1: Status byte with errors and alerts

Bit	Info
0 (0x01)	Device not activated
1 (0x02)	Low battery
2 (0x04)	Permanent error/Sabotage enclosure
4 (0x10)	X
5 (0x20)	X
6 (0x40)	Sabotage enclosure
7 (0x80)	X