WMBUS DATA FORMAT

OUTDOOR EXTERNAL TEMPERATURE DEVICE: LAN-WMBUS-O-EXT

Verify correct device and version

This document applies to the device LAN-WMBUS-O-EXT with protocol version 75. 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.
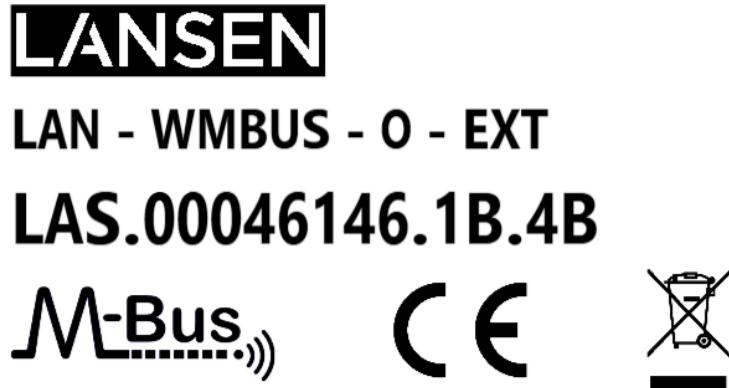
Protocol version in data packets

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.00029870.00.4B, where

- **Manufacturer code**: LAS
- **Serial number**: 00046146
- **Device type**: 1B
- **Protocol version**: 4B

LANSEN

LAN - WMBUS - O - EXT

LAS.00046146.1B.4B

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WMBUS-format

Art nr.	LAN-WMBUS-O-EXT
Version	75 (0x4B)
Information	Packet is sent every 300 seconds in T-mode
DR1	Temperature: Last measured value on first temperature probe **Note:** Only visible if at least one external temperature probe has been detected
DR2	Serial number on first external temperature probe **Note:** Only visible if at least one external temperature probe has been detected
DR3	Temperature: Last measured value on second temperature probe **Note:** Only visible if at least two external temperature probes have been detected
DR4	Serial number on second external temperature probe **Note:** Only visible if at least two external temperature probes have been detected
DR5	Temperature: Last measured value on third temperature probe **Note:** Only visible if at least three external temperature probes have been detected
DR6	Serial number on third external temperature probe **Note:** Only visible if at least three external temperature probes have been detected
DR7	Temperature: Last measured value on fourth temperature probe **Note:** Only visible if four external temperature probes have been detected
DR8	Serial number on fourth external temperature probe **Note:** Only visible if four external temperature probes have been detected

Byte No	Field Name	Content	Info	Byte data	
1	L-Field	Length			
2	C-Field	SND-NR		0x44	
3	M-Field	Meter Manufacturer code	LAS	0x33	
4	M-Field	Meter Manufacturer code		0x30	Linklayer
5	A-Field	Meter serial number (LSB)		0x67	
6	A-Field	Meter serial number	**Example:** 0001067	0x00	
7	A-Field	Meter serial number		0x01	
8	A-Field	Meter serial number (MSB)		0x00	
9	A-Field	Protocol version		0x4B	
10	A-Field	Meter type	Room sensor device	0x1B	
11	CI-Field	Short header		0x7A	
12	Access no.	Transmission counter	**Example:** 7	0x07	
13	Status	Device status (error/alarms)	Refer to **Table** 1 for possible values	0x00	Networklayer
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	
17	AES-Verify	Encryption Verification		0x2F	
18	DR1	DIF	16-bit integer	0x02 = Value OK 0x32 = Measurement error	
19	DR1	VIF	External temperature 0.01°C	0x65	
20	DR1	Value (LSB)	**Example:** 0x0992	0x92	
21	DR1	Value (MSB)		0x09	
22	DR2	DIF	64-bit integer	0x07	
23	DR2	VIF	Serial	0x78	
24	DR2	Value (MSB)		0x28	
25	DR2	Value		0xDF	
26	DR2	Value		0xE8	DATA blocks
27	DR2	Value	**Example:** 0x28DFE8460A000099	0x46	
28	DR2	Value		0x0A	
29	DR2	Value		0x00	
30	DR2	Value		0x00	
31	DR2	Value (LSB)		0x99	
32	DR3	DIF	16-bit integer + extension	0x82 = Value OK 0xB2 = Measurement error	
33	DR3	DIFE	Subunit 1	0x40	
34	DR3	VIF	External temperature 0.01°C	0x65	
35	DR3	Value (LSB)	**Example:** 0x0992	0x92	
36	DR3	Value (MSB)		0x09	

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37	DR4	DIF	64-bit integer + extension	0x87
38	DR4	DIFE	Subunit 1	0x40
39	DR4	VIF	Serial	0x78
40	DR4	Value (MSB)		0x28
41	DR4	Value		0x87
42	DR4	Value		0x86
43	DR4	Value	**Example:** 0x288786430A000024	0x43
44	DR4	Value		0x0A
45	DR4	Value		0x00
46	DR4	Value		0x00
47	DR4	Value (LSB)		0x24
48	DR5	DIF	16-bit integer + extension	0x82 = Value OK 0xB2 = Measurement error
49	DR5	DIFE	Subunit 2	0x80
50	DR5	DIFE		0x40
51	DR5	VIF	External temperature 0.01℃	0x65
52	DR5	Value (LSB)	**Example:** 0x1122	0x22
53	DR5	Value (MSB)		0x11
54	DR6	DIF	64-bit integer + extension	0x87
55	DR6	DIFE	Subunit 2	0x80
56	DR6	DIFE		0x40
57	DR6	VIF	Serial	0x78
58	DR6	Value (MSB)		0x28
59	DR6	Value		0xDD
60	DR6	Value		0x0D
61	DR6	Value	**Example:** 0x28DD0D440A0000F8	0x44
62	DR6	Value		0x0A
63	DR6	Value		0x00
64	DR6	Value		0x00
65	DR6	Value (LSB)		0xF8
66	DR7	DIF	16-bit integer + extension	0x82 = Value OK 0xB2 = Measurement error
67	DR7	DIFE	Subunit 3	0xC0
68	DR7	DIFE		0x40
69	DR7	VIF	External temperature 0.01℃	0x65
70	DR7	Value (LSB)	**Example:** 0x1122	0x22
71	DR7	Value (MSB)		0x11
72	DR8	DIF	64-bit integer + extension	0x87
73	DR8	DIFE	Subunit 3	0xC0
74	DR8	DIFE		0x40
75	DR8	VIF	Serial	0x78
76	DR8	Value (MSB)		0x28
77	DR8	Value		0x3E
78	DR8	Value		0x27
79	DR8	Value	**Example:** 0x283eE27470A000045	0x47
80	DR8	Value		0x0A
81	DR8	Value		0x00
82	DR8	Value		0x00
83	DR8	Value (LSB)		0x45

Table 1: Status byte with errors and alerts

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