LANSEN
WIRELESS BUILDING TECHNOLOGY

WMBUS DATA FORMAT

OUTDOOR PULSE COUNTER: LAN-WMBUS-O-P(-DB)

Version: 1.2

Verify correct device and version

This document applies to the device LAN-WMBUS-O-P and LAN-WMBUS-O-P-DB with protocol version 10. 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.

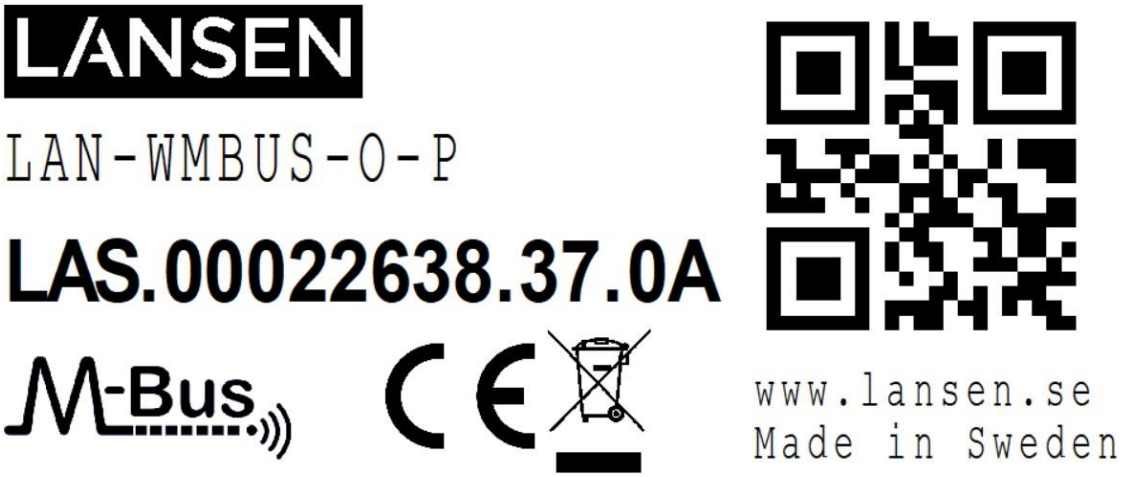
Protocol version in data packets

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.00022638.37.0A, where

- **Manufacturer code**: LAS
- **Serial number**: 00022638
- **Device type**: 37
- **Protocol version**: 0A



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WMBUS-format

Art nr.	LAN-WMBUS-O-P(-DB)
Version	10 (0x0A)
Information	**LAN-WMBUS-O-P**: Packet is sent every 300 seconds (default, can be configured) in T-mode **LAN-WMBUS-O-P-DB**: Packet is sent every 20 seconds (default, can be configured) in T-mode
DR1	Current time
DR2	Number of pulses
DR3	Error flags **Note:** Only visible for software version older than 46
DR4	Number of pulses storage 1 (Due date #0) **Note**: This is only included if the parameter **Due date 0** is active
DR5	Time storage 1 (Due date #0) **Note**: This is only included if the parameter **Due data 0** is active
DR6	Number of pulses storage 2 (Due date #1) **Note**: This is only included if the parameter **Due date 1** is active
DR7	Time storage 2 (Due date #1) **Note**: This is only included if the parameter **Due data 1** is active
DR8	Number of pulses storage 3 (Due date #2) **Note**: This is only included if the parameter **Due date 2** is active
DR9	Time storage 3 (Due date #2) **Note**: This is only included if the parameter **Due data 2** is active
DR10	Software version

Byte No	Field Name	Content	Info	Byte data	
1	L-Field	Length			Linklayer
2	C-Field	SND-NR		0x44	
3	M-Field	Pulse counter manufacturer code	LAS	0x33	
4	M-Field	Pulse counter manufacturer code		0x30	
5	A-Field	Pulse counter serial number (LSB)	**Example**: 0001067	0x67	
6	A-Field	Pulse counter serial number		0x00	
7	A-Field	Pulse counter serial number		0x01	
8	A-Field	Pulse counter serial number (MSB)		0x00	
9	A-Field	Protocol version		0x0A	
10	A-Field	Pulse counter type	Radio converter unit	0x37	
11	CI-Field	Long header		0x72	Networklayer
12	Meter-ID	Meter serial number (LSB)	Depends on parameter *Meter ID* **Example:** *12131415*	0x15	
13	Meter-ID	Meter serial number		0x14	
14	Meter-ID	Meter serial number		0x13	
15	Meter-ID	Meter serial number (MSB)		0x12	
16	Meter-Man	Meter manufacturer code	LAS	0x33	
17	Meter-Man	Meter manufacturer code		0x30	
18	Meter-Ver	Meter version		0x28	
19	Meter-Med	Meter medium type	Depends on parameter *Node type*	0xXX	
20	Access no.	Transmission counter	**Example**: 7	0x07	
21	Status	Device status (error/alarms)	Refer to Table 1 for possible values	0x00	
22	Configuration	Number of encrypted blocks	**Example**: 3	0x03	
23	Configuration	Encryption		**No encryption**: 0x00 **Encryption mode 5**: 0x05	
24	AES-Verify	Encryption Verification		0x2F	DATA blocks
25	AES-Verify	Encryption Verification		0x2F	
26	DR1	DIF	32-bit integer	0x04	
27	DR1	VIF	Time type F-format	0x6D	
28	DR1	Value (LSB)	Current time **Example**: 2019-10-09 09:33	0x21	
29	DR1	Value		0x29	
30	DR1	Value		0x69	
31	DR1	Value (MSB)		0x2A	
32	DR2	DIF	32-bit integer	0x04	
33	DR2	VIF	Value depends on parameter *VIF* **Example:** Dimensionless	0xFD	
34	DR2	VIFE		0x3A	
35	DR2	Value (LSB)	Number of pulses	0x01	

36	DR2	Value	**Example:** 67 305 958	0x02
37	DR2	Value		0x03
38	DR2	Value (MSB)		0x04
39	DR3	DIF	16-bit integer	0x02
40	DR3	VIF	Extension table or other unit	0xFD
41	DR3	VIFE	Error flags (binary)	0x97
42	DR3	VIFE	Standard conform data content	0x1D
43	DR3	Value (LSB)	**Example**: No error	0x00
44	DR3	Value (MSB)		0x00
45	DR4	DIF	32-bit integer + Storage 1	0x44
46	DR4	VIF	Value depends on parameter *VIF*	0xFD
47	DR4	VIFE	**Example:** Dimensionless	0x3A
48	DR4	Value (LSB)	Number of pulses **Example**: 67 305 985	0x01
49	DR4	Value		0x02
50	DR4	Value		0x03
51	DR4	Value (MSB)		0x04
52	DR5	DIF	32-bit integer + Storage 1	0x44
53	DR5	VIF	Time type F-format	0x6D
54	DR5	Value (LSB)	Due date and time **Example:** 2019-10-09 09:33	0x21
55	DR5	Value		0x29
56	DR5	Value		0x69
57	DR5	Value (MSB)		0x2A
58	DR6	DIF	32-bit integer + extension	0x84
59	DR6	DIFE	Storage 2	0x01
60	DR6	VIF	Value depends on parameter *VIF*	0xFD
61	DR6	VIFE	**Example:** Dimensionless	0x3A
62	DR6	Value (LSB)	Number of pulses **Example:** 67 305 985	0x01
63	DR6	Value		0x02
64	DR6	Value		0x03
65	DR6	Value (MSB)		0x04
66	DR7	DIF	32-bit integer + extension	0x84
67	DR7	DIFE	Storage 2	0x01
68	DR7	VIF	Time type F-format	0x6D
69	DR7	Value (LSB)	Due date and time **Example:** 2019-10-09 09:33	0x21
70	DR7	Value		0x29
71	DR7	Value		0x69
72	DR7	Value (MSB)		0x2A
73	DR8	DIF	32-bit integer + extension	0xC4
74	DR8	DIFE	Storage 3	0x01
75	DR8	VIF	Value depends on parameter *VIF*	0xFD
76	DR8	VIFE	**Example:** Dimensionless	0x3A
77	DR8	Value (LSB)	Number of pulses **Example:** 67 305 985	0x01
78	DR8	Value		0x02
79	DR8	Value		0x03
80	DR8	Value (MSB)		0x04
81	DR9	DIF	32-bit integer + extension	0xC4
82	DR9	DIFE	Storage 3	0x01
83	DR9	VIF	Time type F-format	0x6D
84	DR9	Value (LSB)	Due date and time **Example:** 2019-10-09 09:33	0x21
85	DR9	Value		0x29
86	DR9	Value		0x69
87	DR9	Value (MSB)		0x2A
88	DR10	DIF	16-bit integer	0x02
89	DR10	VIF	Extension table	0xFD
90	DR10	VIFE	Version	0x0F
91	DR10	Value (LSB)	**Example:** 0x0025	0x25
92	DR10	Value (MSB)		0x00

Table 1: Status byte with errors and alerts

Bit	Info
0 (0x01)	X
1 (0x02)	X
2 (0x04)	Low battery
3 (0x08)	X
4 (0x10)	X
5 (0x20)	X
6 (0x40)	X
7 (0x80)	X

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