
WMBUS DATA FORMAT

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



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.

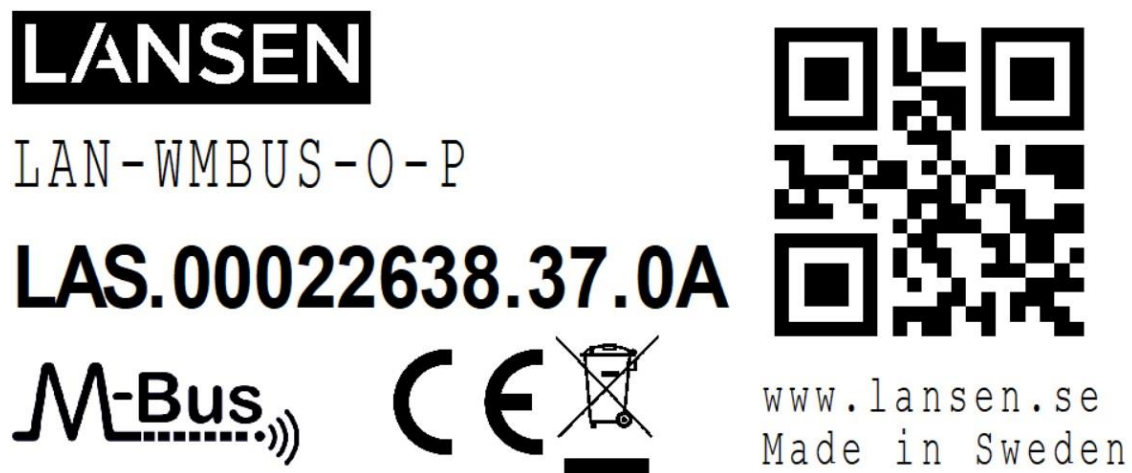
Protocol version in data packets

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



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
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	Device type	Other	0x00	
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	32-bit integer	0x04	
19	DR1	VIF	Time type F-format	0x6D	
20	DR1	Value (LSB)	Current time Example: 2019-10-09 09:33	0x21	
21	DR1	Value		0x29	
22	DR1	Value		0x69	
23	DR1	Value (MSB)		0x2A	
24	DR2	DIF	32-bit integer	0x04	
25	DR2	VIF	Value depends on parameter <i>VIF</i>	0xFD	
26	DR2	VIFE	Example: Dimensionless	0x3A	
27	DR2	Value (LSB)	Number of pulses Example: 67 305 958	0x01	
28	DR2	Value		0x02	
29	DR2	Value		0x03	
30	DR2	Value (MSB)		0x04	
31	DR3	DIF	16-bit integer	0x02	
32	DR3	VIF	Extension table or other unit	0xFD	

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