

MBWSENS amb



The MBWSENS amb(iance) has got sensors to measure the ambient temperature, air humidity and barometric pressure in smart home applications. The values are updated every 32 seconds and sent away using the device's Wireless M-Bus mode T1 radio interface.

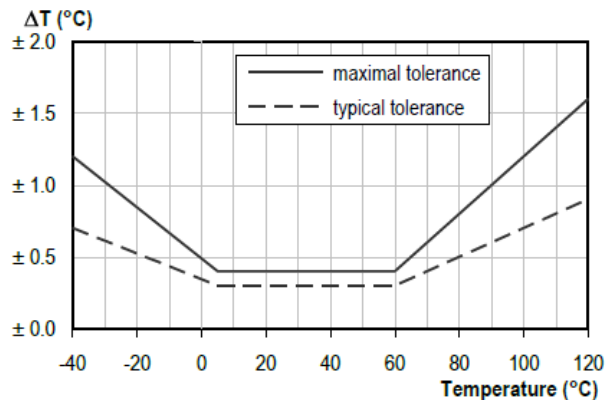
Specifications

Wireless M-Bus transmitter

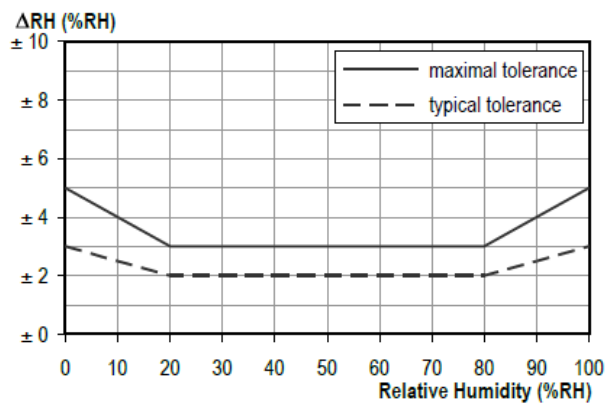
Operating mode	T1 according to EN13757-4 (unidirectional)
Frequency	868.95 MHz
Protocol	compatible OMS Version 3.x / 4.x alternatively mode 0 (no ciphering) or mode 5 (AES 128 ciphering) or mode 7 (AES128 ciphering with authentication)
Data update interval	32 seconds
Radio transmission interval	32 seconds

Sensors

Temperature -20 °C to +60 °C
 Precision typically +/- 0.3 °C
 Response time 30 seconds (max.)
 Long term stability < 0.04 °C / year (typ.)
 (according to sensor manufacturer)



Air humidity 10 %RH to 95 %RH
 Precision typically +/- 2 %RH
 Response time 8 seconds (typ.)
 Long term stability < 0.5 %RH / year (typ.)
 (according to sensor manufacturer)



Barometric pressure 10 mBar to 1200 mBar
 Precision typically +/- 1.5 mBar
 Response time 10 ms (max.)
 Long term stability -1 mBar / year (typ.)
 (according to sensor manufacturer)

Others

Power supply	Lithium battery (long life)
Battery life time	> 10 years
Operating conditions	-20 °C to +60 °C 10 % to 95 % relative humidity
Storage conditions	-20 °C to +60 °C 10 % to 95 % relative humidity
Housing protection index	IP20 (only for interior installation)
Housing dimensions	125 x 65 x 50 mm (approximately)
Weight	200 g (approximately)

Wireless M-Bus Telegram

Manuf.	Address	Device type	Signal [%]	Value 1	Unit 1	Value 2	Unit 2	Value 3	Unit 3	Value 4	Unit 4	Value 5
RAC	18250531	Home Automation Sensor	95	9,760	°C	48,000	%RH	981,000	mbar	3638,000	d	30,000

Value 1:	Temperature [0.01 °C]
Value 2:	Air humidity [%RH]
Value 3:	Barometric pressure [mBar]
Value 4:	Remaining battery life time [days]
Value 5:	Firmware version [1/1000], e.g. version 0.03

Telegram (OMS mode 5, deciphered)

3E	length byte
44	C field
2348	manufacturer (RAC)
92052518	serial number (18250592)
10	version
1B	device type according to M-Bus (home automation sensor)
7A	CI field
BE	access counter
00	status
3025	configuration word
2F2F	cipher verification

Value 1

04	4 bytes integer
65	external temperature [0.01 °C]
53040000	0x453 = 1107 (11.07 °C)

Value 2

04	4 bytes integer
FB1B	relative humidity [%]
2A000000	0x2A = 42 (42 %RH)

Value 3

04	4 bytes integer
68	pressure [mBar]
C3030000	0x03C3 = 963 (963 mBar)

Value 4

04	4 bytes integer
FD74	Remaining battery life time [days]
410E0000	0xE41 = 3649 (3649 days remaining)

Value 5

0A	2 bytes BCD
FD0E	firmware version
2000	0020 = 0.020

2F2F2F2F2F2F2F2F2F2F2F2F2F2F2F2F
filling bytes

Telegram (MBWGPRS converter)

22/01/2015 12:15:51;70;
 RAC;18183260;15.430;°C;33.000;%RH;964.000;mbar;3649.000;d;20.000;;

RAC;	manufacturer
18183260;	serial number
15.430;°C;	ambient temperature [°C]
33.000;%RH;	air humidity [%RH]
964.000;mbar;	barometric pressure [mBar]
3649.000;d;	remaining battery life time [days]
20.000;;	firmware version [1/1000] = 0.020

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- The price indications do not include VAT or other additional costs like, e.g., custom duties if applicable.
- The price indications for different volumes must be taken as sales volume during a period of 12 months.
- In every case, the validity of the price indications expires on 2015-12-31.

MBWSENS amb		A0803927849	
Min. volume / 12 months		Price	
1		100.00 €	
5		95.00 €	
10		91.00 €	

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