




MSR385WD: Universal Data Logger with wireless sensors for operating temperatures up to +125 °C



Permanently record temperature, humidity and pressure values using miniature transmitter modules over long periods of time, at operating temperatures from -20 °C to +125 °C, even in inaccessible locations: The MSR385WD wireless data logger, which operates in the 868 MHz ISM band, offers these options.

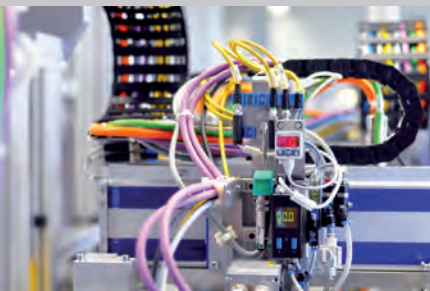
Due to the high levels of thermal resistance of its transmitter modules (MSR385SM), the new wireless data logger facilitates metrological applications even at high operating temperatures of up to 125 °C. The measured values are transmitted by means of transmitter modules equipped with temperature, humidity and pressure sensors, in the unlicensed frequency band at 868 MHz, across long distances of up to 500 m. The optimised power management ensures that – depending on the frequency of measurements and radio transmissions – the power supply to the miniature transmitter modules is warranted for up to five years. The measured data of the transmitter modules recorded by the data logger can be read out via a USB interface and processed further using the MSR PC software for data analysis purposes. The MSR385WD has a colour OLED display, is capable of storing over one million measured values and can be equipped with up to ten transmitter modules.

Temperature range and housing selection of the MSR385SM transmitter module

Temperature range	Housing and battery	Picture	Size & weight	Medium
-20...+125 °C	Silicone hose, replaceable 800 mAh Li-SOCl ₂ battery, not encapsulated, IP 60		35x55x25 mm approx. 25 g	Air
	Silicone hose, replaceable 800 mAh Li-SOCl ₂ battery, encapsulated, waterproof IP 67		35x55x25 mm approx. 40 g	Air, various liquids
-20...+65 °C	ABS housing, rechargeable 260 mAh LiPo battery, not encapsulated, IP 60		38x15x78 mm approx. 45 g	Air

Technical data MSR385SM transmitter module

Frequency band:	Unlicensed frequency range at 868 MHz (EU version).
Range:	Up to 500 m (outdoors).
LED	Red, status acknowledgement when button is pushed, on/off, measurement interval setting.
Power supply:	Rechargeable 260 mAh LiPo battery or replaceable 800 mAh Li-SOCl ₂ battery. The LiPo battery is charged via the USB connection. Energy-efficient through optimised power management.
Operating conditions:	-20...+125 °C, in ABS housing -20...+65 °C.
Storage conditions:	+5 °C...+45 °C (ideal storage conditions for battery). 10...95 % relative humidity, non-condensing.



Selection of sensors for the MSR385SM transmitter module

For the time being, the transmitter module can be equipped with up to three different internal and/or external sensors; however, we are continuously expanding our product range. To configure your desired combination online, visit the MSR385WD product configurator at www.omniinstruments.co.uk.

Sensor	Working range of the sensor	Accuracy	Measurement/storage rate
Temperature	-40...+125 °C	±0.2 °C (-10...+50 °C) ±1 °C (-40...+125 °C)	1 s, 10 s, 1 min, 15 min, 1 h
Relative humidity with integrated temperature	0...100 % rel. humidity -40...+125 °C	±1.8 % rel. humidity (10...85 %, 0...+40 °C) ±4 % rel. humidity (85...95 %, 0...+40 °C)	
Air pressure absolute, with integrated temperature	10...1100 mbar absolute -40...+125 °C	±2.5 mbar (750...1100 mbar absolute, 0...+85 °C)	
	10...2000 mbar absolute -40...+85 °C	±2 mbar (750...1100 mbar absolute, +25 °C)	
	0...14 bar absolute -20...+85 °C	±40 mbar (1...10 bar absolute, 0...+40 °C)	

General technical information on the MSR385WD Wireless Data Logger



The multi-channel data logger, which features an integrated ISM band receiver module, receives and stores the measured data of up to ten transmitter modules (MSR385SM). Flash memory for data security in the event of a power failure. Brilliant, high-contrast OLED (organic light-emitting diode) colour display.

Dimensions: Housing without aerial: 120x75x25 mm
Aerial length: 85 mm

Memory capacity: Over 1 000 000 measured values.

Power supply: Via USB connection (2 days' autonomous operation possible with integrated 2400 mAh LiPo battery).

LED:

- Blue: Data recording indicator
- Red: Alarm indicator
- Yellow: Charge level indicator

Key button: To operate the menu functions of the OLED display.

Interface: USB, GSM module planned.

PC software: Free Setup, Reader, Viewer & Online software for recording and analysing the data (Windows XP/Vista/7/8).

Operating conditions: Temperature -20 °C to +65 °C
Storage conditions:

- +5 °C...+45 °C (ideal storage conditions for battery).
- 10...95 % relative humidity, non-condensing.

Standards: The MSR385WD complies with the EU Directive RoHS / WEEE.



Options:



External temperature sensor



External humidity sensor



External air pressure sensor

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