MSR®
universal data loggers
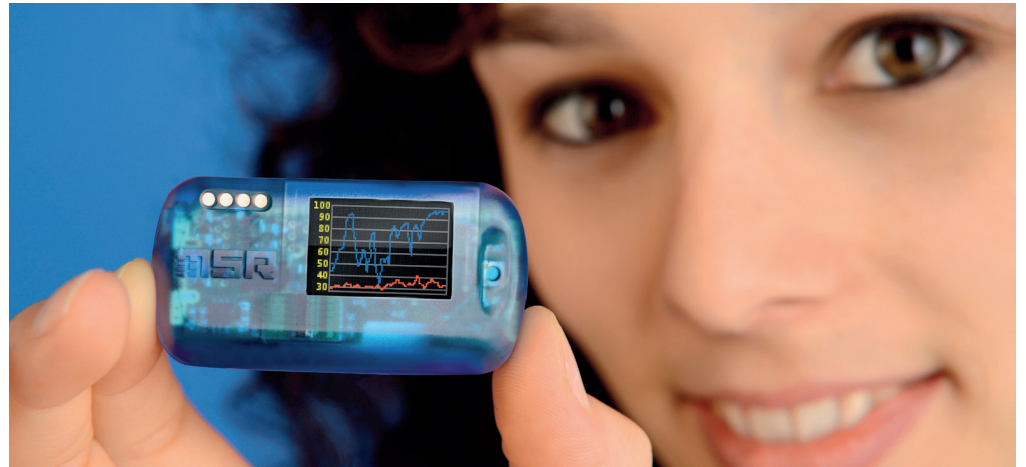**Swiss made**

Wireless Data Logger MSR 145WD with Bluetooth and FlexSensors

The MSR 145WD wireless data logger, equipped with Bluetooth function, has a memory capacity of one million measured values. The versatile mini-logger can be used to wirelessly monitor measurement data, quickly read measured values, and transfer the data to the MSR SmartCloud as needed.

The use of Bluetooth Low Energy (BLE) short-range radio technology is ideal when measurement data from hard-to-reach locations needs to be monitored over long periods of time. Measured values can be retrieved at any time using the MSR Data-Logger app on a smartphone. A base station allows you to quickly send data from multiple MSR 145WDs to the MSR SmartCloud via BLE/LAN. The MSR SmartCloud allows you to view, manage and store measurement values online and to use alarm actions.

Technical Data Bluetooth Low Energy

- Bluetooth Low Energy (Bluetooth 5 Smart) 2.4 GHz
- radio range: up to 50 m
- communication with multiple MSR 145WD loggers possible
- alarm function, transmission to MSR SmartCloud
- MSR DataLogger app (from Android 4.4+, iPhone 4S+, iPad 3+)
- base station (BLE receiver box) available as gateway

General Technical Data of the MSR 145WD Bluetooth Data Logger

Memory capacity:	Over 1 000 000 measured values.
Measurement/storage rate:	1/s to every 12 h
OLED display:	High-contrast, brilliant OLED colour display to show data and graphical charts, resolution 96 x 64 pixels.
Interface:	USB, Bluetooth Low Energy (BLE)
PC-software:	Free MSR Setup, Reader, Viewer and Online software.
Operating conditions:	Temperature: -20...+65 °C
Storage conditions: Temperature: Humidity:	+5...+45 °C (ideal storage condition for battery) 10...95 % relative humidity, non-condensing
Standards	The MSR 145WD complies with EU-Directives RoHS/WEEE.

Housing and Battery Selection

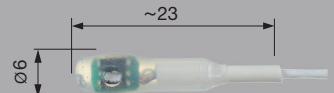| Housing	Sheat material	Battery	Size and weight (W x H x L)
Standard IP 60	PC, not encapsulated	230 mAh	35 x 17 x 57 mm, approx. 27 g
	PC, not encapsulated	900 mAh	35 x 25 x 57 mm, approx. 43 g
Waterproof IP 67	PC, encapsulated	230 mAh	35 x 17 x 57 mm, approx. 36 g
	PC, encapsulated	900 mAh	35 x 25 x 57 mm, approx. 62 g

Selection of Sensors and Connections

You can select various internal sensors as well as up to five external sensors or connectors. The intelligent **FlexConnector** plug connection for interchangeable **FlexSensors** guarantees you the greatest possible flexibility. Info: www.msr.ch/en/msr145wd

Measured parameters	Working range	Accuracy (max. deviation)
Temperature	ext.: -40...+125 °C	±0.2°C (-10...+50°C) ±1°C (-40...+125°C)
	int.: -20…+65 °C	±0.2°C (-10...+50°C)
Connector for thermal element of type K (without sensor)	-200...+1350 °C	
Humidity with integrated temperature	0…100 % rel. humidity ext. -40...+125 °C int. -20...+65 °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...2000 mbar abs. ext.: -40...+85 °C int.: -20...+65 °C	±2 mbar (750…1100 mbar absolute, +25 °C)
	0...14 bar absolute -20...+65 °C	±50 mbar (1...10 bar abs., +25 °C)
Fluid pressure with integrated temperature Material in contact with media: • Stainless Steel AISI 316L (DIN1.4404/1.4435) • O-Rings: Viton® 70° Shore	-1000..3000 mbar relative -20...+85 °C	±30 mbar (1 % FS)
	0...3000 mbar absolute -20...+85 °C	±30 mbar (1 % FS)
	0...30 bar absolute -20...+85 °C	±0.3 bar (1 % FS)
	0...400 bar absolute -20...+85 °C	±4 bar (1 % FS)
	0...1000 bar absolute -20...+85 °C	±10 bar (1 % FS
3-axis-acceleration (static)	-15...+15 g -20...+65 °C	±0.15 g (0...5 g, +25 °C)
Light	0…65'000 lx	max. sensitivity at 500 nm
Connection for strain gauges	full bridge • rated output 1mV/V • bridge voltage 3 V	
Analogue inputs Resolution: 12 bit	**4 or 8 analogue inputs** with freely selectable input configuration: 0…20 mA; 4…20 mA; 0…3.0 V; 0…5.0 V; 0…10.0 V; 0…12.0 V; 0…24.0V; 0…36,0 V; 0...48,0 V	
Control Terminal	alarm output • input for starting and stopping data recording • 3 V voltage output	
FlexConnector	Please find suitable FlexSensors on our website.	

Please contact us for prices and terms of delivery.
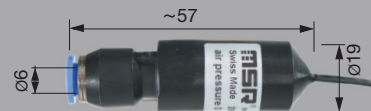

ext. temperature sensor
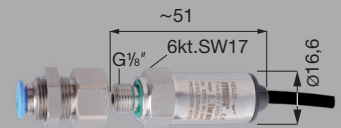

ext. humidity sensor

ext. light sensor

ext. air pressure sensor

ext. fluid pressure sensor

Distributor:

09.20