MSR®
Modular Signal Recorder

Swiss made

MSR 145
Revolutionary mini data logger

The prize-winning MSR 145 is the world's first miniaturised datalogger to have integrated temperature, humidity, pressure, light and 3-axis acceleration sensors. An additional two or four analogue inputs are provided for connecting external sensors. This tiny multitalent stores up to 2 000 000 measured values and is also available as a sealed watertight version. Freely selectable measurement rates of up to 50 values per second guarantee uninterrupted documentation of rapid processes. For long-term measurements, the MSR 145 datalogger has been fitted with a 900 mAh lithium polymer battery allowing you to easily record measured values over a period of up to two years.

The housing, the battery and measurement parameters, together with the type and number of sensors (internal and external) can be configured individually – you pay only for what you really need!

General technical data

Memory capacity:	Over 2 000 000 measured values – expandable to over 1bn measured values with optional microSD card.
Push-button:	Set bookmark or start and stop recording.
LED:	blue: Record indicator red: Alarm indicator yellow: Battery change indicator
Power supply:	• Lithium-polymer battery, 260 mAh or 900 mAh. • The battery is charged via the USB connection.
Options:	Charging station (USB hub) for 7 MSR 145
Interface:	USB
PC software:	Free Setup, Reader, Viewer and Online software (Windows 2000 / XP / Vista / 7 / 8) to record and evaluate data. All measured values can be rapidly transferred to a PC via USB connection both during the measurement operation and once the measurement task has been completed. Thanks to the integrated clock (RTC), data from as many MSR 145 units as required can be synchronised and merged into a single data record.
Operating conditions: **Storage conditions:**	• Temperature -20…+65 °C • Temperature +5…+45° C (ideal storage conditions for the battery) • 10…95% relative humidity, non-condensing
Standards:	The MSR 145 complies with EU-Directives RoHS / WEEE.

MSR 145 with external sensors

MSR 145 with microSD card

Housing and battery selection

Housing	Sheat material battery capacity	Picture	Size & weight	Medium
Standard IP 60	PC housing 260 mAh		20 x 15 x 52 mm approx. 16 g	Air
Standard IP 60	PC housing 900 mAh		39 x 23 x 72 mm approx. 56 g	Air
Waterproof IP 67	Silicon tube 260 mAh	MSR 145	18 x 14 x 62 mm approx. 18 g	Air, various liquids
Waterproof IP 67	PC housing 260 mAh		20 x 15 x 61 mm approx. 23 g	Air, various liquids
Waterproof IP 67	PC housing 900 mAh		39 x 23 x 72 mm approx. 64 g	Air, various liquids

Selection of Sensors

Make an individual assembly of your MSR145 data logger and select the requested internal and external sensors (cable length 0.20 m, 1.0 m, 1.6 m).

Measured parameters	Working range	Accuracy	Measurement/ storage rate
Temperatur	ext.: -10…+58 °C	±0.1 °C (+5…+45 °C) ±0.2 °C (-10…+58 °C)	1/s to every 12 h
	ext.: -55...+125 °C	±0.5 °C (-10…+65 °C) ±2 °C (-55…+125 °C)	
	int.: -20…+65 °C	±0.5 °C (-10…+65 °C) ±2 °C (-55…+125 °C)	
	ext.: 1 or 4 connectors for K-type thermo-couples (excluding sensor) -250…+1200 °C		
Relative humidity with integrated temperature	0…100% rel. humidity ext. -20…+85 °C int. -20…+65 °C	±2% rel. humidity (10…85%, 0…+40 °C) ±4% rel. humidity (85…95%, 0…+40 °C)	1/s to every 12 h
Air pressure absolute, with integrated temperature	0…2000 mbar absolute ext. -20…+85 °C int. -20…+65 °C	±2.5 mbar (750…1100 mbar absolute, +25 °C)	10/s to every 12 h
	0…14 bar absolute -20…+65 °C	±50 mbar (1…10 bar absolute, +25 °C)	
Fluid pressure (external sensor) Material in contact with media: • Stainless Steel AISI 316L (DIN1.4404/1.4435) • O-Rings: Viton® 70° Shore	0…3000 mbar absolute -20…+85 °C	±30 mbar	20/s to every 12 h
	0...30 bar absolute -20...+85 °C	±300 mbar	
3-axis-accelera-tion (Position)	±15 g -20…+65 °C	±0.15 g (+25 °C)	50/s to every 12 h
Light	0…65'000 lx	max. sensitivity at 500 nm	1/s to every 12 h

Additional analogue inputs for connecting third-party sensors

MSR 145 Analogue	Technical data
Including alarm out-put and input for starting and stopping data recording.	**2 or 4 analogue inputs** with freely selectable input configuration: 0…20 mA; 4…20 mA; 0…3.0 V; 0.5…4.5 V; 0…5.0 V; 1.0…6.0 V; 0…10.0 V; 0…12.0 V; 0…24.0 V **Resolution:** 12 Bit

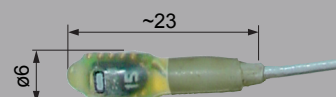**Please contact us for prices and terms of delivery.**
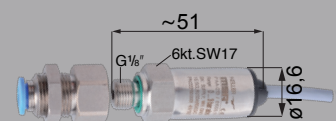
MSR ®

Modular Signal Recorder

External temperature sensor

Connector for thermocouples

External humidity sensor

External fluid pressure sensor

External light sensor

Distributor:

49.12