MSR 145
Revolutionary mini data logger
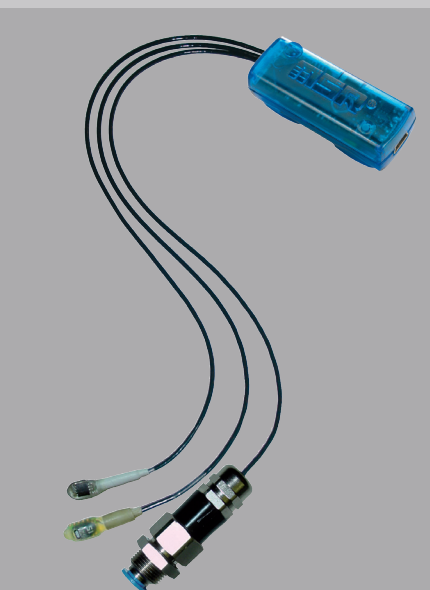
Modular Signal Recorder

Swiss made

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 measurement parameters 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 measurement parameters 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 on the MSR 145

Memory capacity:	Over 2 000 000 measurement parameters.
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. • One battery charge is sufficient for operation of the unit for up to two years, depending on the battery and the measurement rate.
Options:	Charging station (USB hub) for 7 MSR 145
Interface:	USB
PC software:	Free Setup, Reader, Viewer and Online software (Windows 98 / ME / 2000 / XP / Vista / 7) to record and evaluate data. All measurement parameters 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 °C to +65 °C • Temperature +5 °C to +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

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
	PC housing 900 mAh		39 x 23 x 72 mm approx. 56 g	
Waterproof IP 67	Silicon tube 260 mAh		18 x 14 x 62 mm approx. 18 g	Air, various liquids
	PC housing 260 mAh		20 x 15 x 61 mm approx. 23 g	
	PC housing 900 mAh		39 x 23 x 72 mm approx. 64 g	

Measurement parameters for the additional sensors (internal and external)

Two sensors are included in the basic unit. It is however possible to equip your MSR 145 with up to 5 different sensors. Depending upon your requirements, you can specify the corresponding external sensors (available with cable lengths of 0.15 m, 0.40 m, 1.00 m and 1.60 m) instead of the internal temperature, humidity, pressure and light sensors.

Measured parameters	Working range	Accuracy	Measurement/ storage range
Temperature	-10 °C to +58 °C	±0.1 °C (+5 °C to +45 °C) ±0.2 °C (-10 °C to +58 °C)	1 /s to every 12 h
with extern. sens.:	-55 °C to +125 °C	±2 °C (-55 °C to +125 °C)	
or 2 or 4 connectors for K-type thermo-couples (excluding sensor)	0 °C to +1024 °C		
Relative humidity with integrated temperature	0-100% rel. humidity -20 °C to +65 °C	±2% rel. humidity (10-85% rel. humidity, 0 °C to +40 °C) ±4% rel. humidity (85-95% rel. humidity, 0 °C to +40 °C) ±0.5 °C (0 °C to +65 °C)	1 /s to every 12 h
Air pressure absolute, with integrated temperature	0-2000 mbar absolute -20 °C to +65 °C	±2.5 mbar (750-1100 mbar absolute, +25 °C) ±0.5 °C (0 °C to +65 °C)	10 /s to every 12 h
	optional: 0-14 bar absolute -20 °C to +65 °C	±50 mbar (1-10 bar absolute, +25 °C) ±0.5 °C (0 °C to +65 °C)	
3-axis-accelera-tion (Position)	±15 g -20 °C to +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 output and input for starting and stopping data recording.	**2 or 4 analogue inputs**, 0 to 3.0 V, 12 Bit (including temperature, humidity, pressure, 3-axis acceleration – of which max. 2 external possible)

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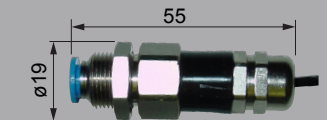
MSR®

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Options:

~23
Ø5
External temperature sensor

50
Ø13
Connectors for thermocouples

~23
Ø6
External humidity sensor

55
Ø19
External air pressure sensor

~23
Ø5
External light sensor

Distributor:

10.10