

MSR145- Series

High-Quality Mini Long-Term Logger for Temperature, RH, Air Pressure, Light, Acceleration in Grammes

- for temperature, relative humidity with integrated temperature, pressure (e. g. altimeter, water column, barometer), light and 3-axes acceleration
- real-time clock with date / adjustable sampling rate / memory capacity for 2.000.000 values, optional micro SD card für 1 billion values
- evaluation software
- marker function or start / stop via internal key
- Li-Ion rechargeable battery, status indication via LEDs
- norm: EU directive RoHS / WEEE
- **external sensors available in our online shop**



TECHNICAL SPECIFICATIONS (INTEGR. SENSORS)

Temperature	
Meas. range	-20 ... +65 °C
Accuracy	±0.5 °C (at -10 ... +65 °C)
	±2 °C (at -55 ... +125 °C)
Sampling rate	1/s ... every 12 h
Relative hum. with integr. temperature -20 ... +65 °C	
Meas. range	0 ... 100 % RH
Accuracy	±2 % RH (10 ... 85 %, 0 ... +40 °C)
	±4 % RH (85 ... 95 %, 0 ... +40 °C)
Sampling rate	1/s ... 12 every h
Air pressure with integr. temperature -20 ... +65 °C	
Meas. range	0 ... 2.000 mbar absolute
	0 ... 14 bar absolute (external)
Accuracy	±2.5 mbar (at 750 ... 1.100 mbar abs., +25 °C)
	±50 mbar (at 1 ... 10 bar abs., +25 °C)
Sampling rate	10/s ... every 12 h
3-axes acceler. with integr. temp. -20 ... +65 °C	
Meas. range	±15 g (position)
Accuracy	±0.15 g (+25 °C)
Sampling rate	50/s ... every 12 h

Light	
Meas. range	0 ... 65.000 lx max. sensitivity of 500 nm
Sampling rate	1/s ... every 12 h
The following sensors are only available as ext.	
Thermocouple connection for K type (without sensor) not available with temperature sensor	
Meas. range	-250 ... +1.200 °C (1 or 4 times)
Sampling rate	1/s ... every 12 h
Liquid pressure with integr. temp. -20 ... +85 °C	
Meas. range	0 ... 3.000 mbar absolute
	0 ... 30 bar absolute
Accuracy	±30 mbar
	±300 mbar
Sampling rate	20/s ... every 12 h
Materials in contact with media:	
- stainless steel AISI 316L (DIN 1.4404 / 1.4435)	
- o-rings: Viton® 70° Sh	
Analoge inputs 2 or 4 inputs, 0 ... 3.0 V, 12 Bit resolution; further input config. available in our online shop	
Sampling rate	50/s ... every 12 h

GENERAL DATA

Memory	2.000.000 readings, with optional SD card, extendable to 1 billion
Interface	USB
Software	setup-/ reader-/ viewer-/ online software (Windows 2000 / XP / Vista / 7)
LEDs	blue: data recording, red: alarm, yellow: battery charging level indication
Protection cl.	standard IP 60 / waterproof IP 67
Power supply	lithium polymer rechargeable battery 260 mAh or 800 mAh
	-20 ... +65 °C / 10 ... 95 % RF
Dimensions	width: 52 ... 72 mm; height: 14 ... 23 mm; depth: 18 ... 39 mm (dep. on model)
Weight	approx. 18 ... 64 g (dep. on model)

INCLUDES

Data logger, software, USB cable, manual

ITEM NO. ITEM

different models can be configured in our online shop
www.pce-instruments.com/english

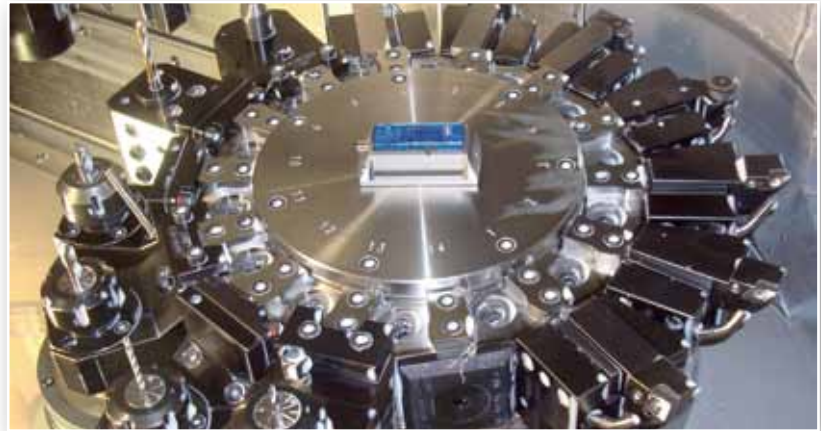
OPTIONAL ACCESSORIES

K-B47002 charging station for up to 7 loggers

MSR165 Series

3-Axis Acceleration Sensor for Long-Term Recording (Additional Sensors Optionally Available)

- 3-axis acceleration with lithium polymer rechargeable battery for extra-long life
- sensors for temperature, relative humidity, light and absolute pressure are available optionally
- marker function or start / stop via internal key
- USB interface for PC / software for data analysis via PC or laptop are included in the delivery content
- adjustable real-time clock with date / adjustable sampling rate
- norms: EU RoHS / WEEE
- **the datalogger can be configured in our online shop:**
www.pce-instruments.com/english



TECHNICAL SPECIFICATIONS (INTEGR. SENSORS)

3-axis acceleration (13 bit resolution)

With integr. temp. -20 ... +65 °C

Meas. range ±15 g

Accuracy ±0.15 g (at +25 °C)

Sampling rate up to 1600 /s (±15 %)

Temperature

Meas. range -20 ... +65 °C

Accuracy ±0.5 °C (at -10 ... +65 °C)

±2 °C (at -55 ... +125 °C)

Sampling rate 1/s ... every 12 h

Relative humidity

With integr. temp. -20 ... +65 °C

Meas. range 0 ... 100 % RH

Accuracy ±2 % RH (at 10 ... 85 %, 0 ... +40 °C)

±4 % RH (at 85 ... 95 %, 0 ... +40 °C)

Sampling rate 1/s ... every 12 h

Air pressure

With integr. temp. -20 ... +65 °C

Meas. range 0 ... 2000 mbar absolute

0 ... 14 bar absolute

Accuracy ±2.5 mbar (at 750 ... 1100 mbar abs, +25 °C)

±50 mbar (1 ... 10 bar abs., +25 °C)

Sampling rate 10/s ... every 12 h

Light

Meas. range 0 ... 65000

Max. sensitivity 500 nm

Sampling rate 1/s ... every 12 h

Analogue inputs

4 inputs, 0 ... 3.0 V, 12 bit resolution; other input

configurations available in online shop;

light sensor not available, max. 2 ext. sensors possible

Interval 50/s ... every 12 h

General details

Memory 2,000,000 values, with optional
SD card increase to 1,000,000,000

Switch markings and start / stop of
measurement

Interface USB

Software setup / reader / viewer / online
software (Windows 2000/XP/Vista/7)

LEDs blue: data logging; red: alarm;
yellow: battery level indication

Power supply lith. poly. rechargeable batt. 800 mAh

Operating cond. -20 ... +65 °C / 10 ... 95 % RH

Dimens. / weight 39 x 23 x 72 mm / approx. 69 g

Protection class waterproof IP 67

INCLUDES

3-axis acceleration data logger, software, interface
cable, instruction manual

ITEM NO. ITEM

different models can be configured in online shop

www.pce-instruments.com/english

⚠ Note: the optional accessories must be specified
when ordering the 3-axis data logger as the device must
be configured according to your requirements directly
at the factory.



MSR145WD- Series

Wireless Data Logger with BLE, Display and MSR SmartCloud

- Bluetooth Low Energy (Bluetooth 4.0 Smart) 2.4 GHz
- radio range: approx. 10 m
- communication with various MSR145WD data loggers possible
- alarm function, transmission to MSR SmartCloud
- free app for smartphones (min. iPhone 4S, iPad 3, in process for Android)
- can be used with PC with Windows or Linux (Bluetooth dongle available)
- resilient BLE receiver box available as gateway
- **external sensors available in our online shop**



MSR



TECHNICAL SPECIFICATIONS WITH INT. SENSORS

Temperature

Meas. range -20 ... +65 °C
Accuracy ±0.2 °C (-10 ... +50 °C)

Relative humidity

Meas. range 0 ... 100 % RH;
Accuracy ±1.8 % RH (10 ... 85 %, 0 ... +40 °C),
±4 % RH (85 ... 95 %, 0 ... +40 °C)
-20 ... +65 °C (integrated temperature)

Air pressure

Meas. range 10 ... 2000 mbar absolute;
Accuracy ±2 mbar (750 ... 1.100 mbar abs., +25 °C)
-20 ... +65 °C (integrated temperature)

3-axis acceleration

Meas. range ±15 g
Accuracy ±0.15 g (+25 °C)
-20 ... +65 °C (integrated temperature)

Light

Meas. range 0 ... 65000 lx
Accuracy max. sensitivity at 500 nm

General details

Memory more than 1,000,000 values
Switch the switch is used to make markings or to start and stop the measurement

Interface Software

USB, Bluetooth
free setup, reader, viewer and online (Windows XP/Vista/7/8) software; values can be transferred to a PC during or after measurement; displays data of several loggers with chronological synchronism by means of integrated clock

Display

high-contrast OLED, (organic light emitting diode) - colour display for data and charts; resolution: 96 x 64 pixels, size: 22.14 (W) x 15.42 mm (H); response time: <10 µs; angle of vision >160°

LEDs

blue: recording data;
red: alarm display;
yellow: battery level indication

Protection cl.

IP60 (standard) / IP65 (waterproof)

Regulations

EU directive RoHS / WEEE

Power supply

lithium polymer recharge. batt. 260 mAh or 800 mAh; charging via USB

Oper. cond.

-20 ... +65 °C / 10 ... 95 % RH

Dimensions

57 x 35 x 17 / 25 mm (dep. on model)

Weight

approx. 27 ... 62 g (dep. on model)

INCLUDES

Data logger, software, USB cable, instruction manual

ITEM NO. ITEM

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OPTIONAL ACCESSORIES

K-B47002 charging station for up to 7 loggers

Note: the optional accessories must be specified when ordering the 3-axis data logger as the device must be configured at the factory according to your requirements.

