

MSR255 Data Logger

Robust multi-talent with LCD screen



With up to five different sensors, four additional analogue inputs and an easy to read LCD screen the compact MSR255 offers maximum possible flexibility and user-friendliness.

The measuring tasks undertaken by the user define the way in which the MSR255 is configured: There is a choice of temperature, humidity, air pressure and light sensors (fitted internally within the case or externally on a cable) together with a sensor for measuring acceleration in all three co-ordinate axes. Acceleration values can be measured at 3200 Hz and saved at a frequency of approx. 50 Hz following digital filtration. In addition, the voltage of four further external analogue channels or sensors can also be recorded. The analogue inputs feature an alarm output, multiple output switching power supply and an input for starting and stopping data recording.

The memory capacity of the MSR255 is over 2 million measurement parameters. Thanks to its high-capacity lithium polymer battery the data logger is ideal for long-term data acquisition applications. The 4-row backlit LCD display has four individually configurable views. All acquired data can be quickly transferred to a PC or laptop via the USB interface.

Technical data

| | |
|-------------------------------|---|
| Housing: | Anodised aluminium industrial case (standard IP60, optional IP67 protection class), top-hat rail snapper (TS 35) |
| Size & weight: | 78 x 62 x 38 mm, approx. 222g |
| Memory capacity: | Over 2 000 000 measurement parameters. |
| Operation: | Two keys for selecting functions and controlling data recording |
| Display: | Four row LCD matrix display |
| LED: | 3 colour LED to indicate data recording, alarm and charge condition |
| Integrated sensors: | Selection of different sensors for temperature, relative humidity, pressure, light and 3-axis acceleration/position |
| Measurement rate (MR): | 1/s to every 12h (acceleration up to 3200/s) |
| Storage rate (SR): | 1/s to every 12h (acceleration up to 50/s) |
| Power supply: | Rechargeable lithium polymer battery 2300 mAh |
| PC software: | Free Setup, Reader, Viewer- & Online software (Windows XP / Vista / 7 / 8) |
| Interface: | USB (Mini-B) |
| Operating conditions: | • Temperature -20...+65 °C |
| Storage conditions: | • Temperatur +5...+45 °C (ideal storage condition for the battery) • 10...95% relative humidity, non-condensing |
| Standards: | The MSR255 complies with EU-Directives RoHS/WEEE |

Measurement parameters for the sensors (internal and external)

Your MSR255 data logger can be fitted with up to five different sensors. If required, you may select from the following external sensors in place of the corresponding internal ones: temperature, relative humidity, air pressure and light. The available cable lengths are: 0.15m, 0.4m, 1.0m and 1.6m.

| Measured parameters | Working range | Accuracy | Measurement/storage rate |
|---|---|--|---|
| Temperature | int.: -20...+65°C | ±0.5°C (-10...+65°C) | 1/s to every 12h |
| | ext.: -55...+125°C | ±0.5°C (-10...+65°C) ±2°C (-55...+125°C) | |
| Relative humidity with integrated temperature | 0...100% rel. humidity -20...+65°C | ±2% rel. humidity (10...85%, 0...+40°C) ±4% rel. humidity (85...95%, 0...+40°C) | 1/s to every 12h |
| Air pressure absolute, with integrated temperature | 0...2000 mbar absolute -20...+65°C | ±2.5 mbar (750...1100 mbar absolute, +25°C) | 1/s to every 12h |
| | optional: 0...14 bar absolute -20...+65°C | ±50 mbar (1...10 bar absolute, +25°C) | 1/s to every 12h |
| 3-axis-acceleration | ±15g | ±0.15g (+25°C) | Acceleration: 50/s (3,200/s) Position: 1/s up to every 12h |
| Light | 0...65 000 lx | max. sensitivity at 500 nm | 1/s to every 12h |

Additional analogue inputs for connecting third-party sensors

It is possible to expand the range of possible applications for which your MSR255 can be used by specifying four analogue inputs. These additional inputs allow external sensors for a wide range of measuring tasks to be connected. If required, these third-party sensors can be powered by the logger's internal battery. The power can be automatically turned on before measurements take place with a pre-settable lead time. This allows any necessary warm-up periods for the sensors to be taken into consideration.

| Analogue Inputs | Technical data |
|--|--|
| Including an alarm output, multiple output switching power supply and an input for starting and stopping data recording.  | 4 analogue inputs with freely selectable input configuration: 0...20 mA; 4...20 mA; 0...3.0V; 0.5...4.5V; 0...5.0V; 1.0...6.0V; 0...10.0V; 0...12.0V; 0...24.0V Resolution: 12 Bit Measurement/storage rate: 1/s to every 12h |

Its flexibility makes the autonomous MSR255 data logger ideally suited for the most diverse documentation and monitoring applications in industry and science.

Options:

External temperature sensor

External humidity sensor

External air pressure sensor

External light sensor