

1. Basic specification and technical data for the **MSR165**

Type and battery



MSR165 Datalogger with anodised aluminium case, PC, encapsulated, IP 67, rechargeable lithium polymer battery 900 mAh

Technical data

| | | |
|----------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Size & weight: | 39 x 23 x 72 mm, approx. 69 g | Item no. 165B8A EUR 880.00 |
| Medium: | Air, various liquids | |
| Memory capacity: | Over 2000000 measurement parameters, expandable to over 1bn measurement parameters with optional microSD card. | |
| Colour: | Blue, anthracite | |
| Key: | Set bookmark or start and stop recording. | |
| Integrated sensor: | 3-axis digital accelerometer (13 Bit resolution) | |
| Working range: | ±15 g, -20...+65 °C | |
| Accuracy: | ±0.15 g (+25 °C) | |
| Measurement/storage rate: | up to 1600/s (±15 %) | |
| PC software: | Setup, Reader, Viewer and Online software (Windows 2000/XP/Vista/7) | |
| Interface: | USB | |
| Operating conditions: | Temperature -20...+65 °C | |
| Storage conditions: | Temperature +5...+45 °C (ideal storage condition for the battery) 10...95 % relative humidity, non-condensing | |
| Standards: | The MSR165 complies with EU-Directives RoHS / WEEE. | |

2. Select the measurement parameters for the additional sensors (internal and external).

If you require further sensors in addition to the 3-axis acceleration sensor, the following price supplements apply:

| Number of sensors | Additional cost net | Number of sensors | Additional cost net |
|----------------------|---------------------|----------------------|---------------------|
| 1 additional sensor | EUR 58.00 | 3 additional sensors | EUR 173.00 |
| 2 additional sensors | EUR 115.00 | 4 additional sensors | EUR 231.00 |

Select your desired measurement parameters here:

| Measured parameters | Working range | Accuracy | Measurement/storage rate | Item no. |
|----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------|
| Temperature | internal: -20...+65 °C external: -55...+125 °C | ±0.5 °C (-10...+65 °C) ±2 °C (-55...+125 °C) | 1/s up to one sample every 12 h | T |
| Relative humidity with integrated temperature | 0...100 % rel. humidity -20...+65 °C | ±2 % rel. humidity (10...85 % rel. humidity, 0...+40 °C) ±4 % rel. humidity (85...95 % rel. humidity, 0...+40 °C) | 1/s up to one sample every 12 h | H |
| Pressure absolute, with integrated temperature | 0...2000 mbar absolute -20...+65 °C | ±2.5 mbar (750...1100 mbar absolute, +25 °C) | 1/s up to one sample every 12 h | P |
| | optional: 0...14 bar absolute -20...+65 °C | ±50 mbar (1...10 bar absolute, +25 °C) | | P2 |
| Light | 0...65000 lx | max. sensitivity at 500 nm | 1/s up to one sample every 12 h | L |


3. Do you require external sensors instead of internal ones?

Instead of the internal temperature, humidity, pressure, 3-axis-acceleration and light sensors you may optionally select the corresponding external sensors for the MSR165 datalogger.

| External sensor | Working range | Cable length | | | |
|---------------------|-------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| | | 0.15 m | 0.40 m | 1.00 m | 1.60 m |
| Temperature | -55...+125 °C | Item no. FT2/015 EUR 72.00 | Item no. FT2/040 EUR 80.00 | Item no. FT2/100 EUR 88.00 | Item no. FT2/160 EUR 95.00 |
| | | Item no. FH/015 EUR 50.00 | Item no. FH/040 EUR 58.00 | Item no. FH/100 EUR 65.00 | Item no. FH/160 EUR 73.00 |
| Humidity | 0...100 % rel. humidity | Item no. FP/015 EUR 91.00 | Item no. FP/040 EUR 98.00 | Item no. FP/100 EUR 106.00 | Item no. FP/160 EUR 114.00 |
| | | Item no. FP2/015 EUR 106.00 | Item no. FP2/040 EUR 114.00 | Item no. FP2/100 EUR 122.00 | Item no. FP2/160 EUR 129.00 |
| Air pressure | 2.0 bar | Item no. FA/015 EUR 72.00 | Item no. FA/040 EUR 80.00 | Item no. FA/100 EUR 88.00 | Item no. FA/160 EUR 95.00 |
| | 14 bar | Item no. FL/015 EUR 50.00 | Item no. FL/040 EUR 58.00 | Item no. FL/100 EUR 65.00 | Item no. FL/160 EUR 73.00 |
| 3-axis-acceleration | ±15 g | | | | |
| Light | 0...65000 lx | | | | |

4. Do you require an additional 4 analogue inputs for connecting third-party sensors?

Should you wish to connect additional external third-party sensors to your MSR165 datalogger then please select the required input configuration.

| Analogue inputs | Inputs | Input configuration | Item no. |
|-------------------------------------------------------------------------------------|--------------------------------------------------|---------------------------------------------------------------------|----------------------------|
|  | 4 analogue inputs (resolution: 12 Bit) | 0...3.0 V - standard | E3333 EUR 185.00 |
| | 4 analogue inputs (resolution: 12 Bit) | Select the number of inputs for the respective input configuration: | Exxxx EUR 219.00 |

Including alarm output and input for starting and stopping data recording.

Measurement/storage rate: 1/s (or 1000/s if the acceleration measurement rate is less than 1/s) up to every 12h. Max. 2 external sensors possible, light sensor not available.

- (1) 0...20 mA
- (2) 4...20 mA
- (3) 0...3.0 V
- (4) 0.5...4.5 V / 0...5.0 V
- (5) 0...10.0 V / 1.0...6.0 V
- (6) 0...12.0 V
- (7) 0...24.0 V

5. Would you like to expand the memory capacity of your MSR165 datalogger with an SD memory card?

Please order the expansion slot for plugging-in a standard microSD card here.

Item no.

Expansion slot for microSD card (includes one formatted and ready for use ≥4GB microSD card).

N10006

Please note that this expansion slot with plugged-in microSD-card only meets the protection category IP60. EUR 296.00