









More flexibility when choosing your sensors:

# Wireless Data Logger MSR145W2D with WiFi, Display and MSR SmartCloud



Wireless data logger (WiFi) for monitoring temperature, humidity, fluid pressure, air pressure, light, acceleration, strain gauges and more.

The MSR145W2D stores over one million measured values. By integration with a WLAN/WiFi network, the data logger can be used to flexibly implement practically any kind of measurement applications.



- integration either into an existing WiFi or via an access point, by means of mobile network access where required, into a separate wireless network
- WiFi range can be extended with a commercially available repeater
- data storage is guaranteed even if the transmitter fails
- MSR SmartCloud: retrieve, analyse and export measured data online
- alarm message if limit value is exceeded
- MSR WLAN software for graphical visualization, components for LabVIEW available
- Flex-Connector for customer-specific adaptation of the desired sensors.

## General technical data of the MSR 145W2D WiFi Data Logger

| Memory capacity:                           | Over 1 000 000 measured values.  |  |
|--|--|--|
| Measurement/Stora-<br>ge rate:             | 1/s up to every 12 h   |  |
| OLED display:                              | High-contrast, brilliant OLED colour display to show data and graphical charts, resolution 96 x 64 pixels. |  |
| Interface:                                 | USB, WiFi  |  |
| PC software:                               | MSR Setup, Reader, Viewer and Online software MSR WLAN Dashboard and Viewer                                |  |
| Operating conditions:                      | Temperature: -20+65°C  |  |
| Storage conditions: Temperature: Humidity: | +5+45°C (ideal storage conditions for the battery) 1095% relative humidity, non-condensing                 |  |
| Standards:                                 | MSR145W2D complies with EU-DirectivesRoHS/WEEE.  |  |

## Housing and battery selection

| Housing    | Sheat material       | Battery | Size & Weight (W x H x L)     |
|------------|----------------------|---------|-------------------------------|
| Standard   | PC, not encapsulated | 260 mAh | 35 x 17 x 57 mm, approx. 27 g |
| IP 60      | PC, not encapsulated | 900 mAh | 35 x 25 x 57 mm, approx. 43 g |
| Waterproof | PC, encapsulated     | 260 mAh | 35 x 17 x 57 mm, approx. 36 g |
| IP 67      | PC, encapsulated     | 900 mAh | 35 x 25 x 57 mm, approx. 62 g |

#### Selection of sensors and connections

You can select various internal sensors and up to five external sensors or connections.

| Measured parameters   | Working range  | Accuracy<br>(max. deviation)   |
|---|--|--|
| Temperature   | ext.: -40+125°C  | 0.2°C (-10+50°C)<br>±1°C (-40+125°C)   |
|   | int.: -20+65°C   | 0.2°C (-10+50°C)   |
| Connector for thermal element of Type K (without sensor)  | -200+1350°C  |  |
| Relative humidity<br>with integrated<br>temperature   | 0100% rel. humidity<br>ext40+125°C<br>int20+65°C         | ±1.8% rel. humidity<br>(1085%, 0+40°C)<br>±4% rel. humidity<br>(8595%, 0+40°C) |
| Air pressure<br>absolute, with<br>integrated<br>temperature   | 102000 mbar absolute ext.: -40+85°C int.: -20+65°C       | ±2 mbar<br>(7501100 mbar<br>absolute, +25°C)                                   |
|   | 014 bar absolute<br>-20+65°C                             | ±50 mbar<br>(110 bar abs., +25°C)  |
| Fluid pressure with integrated temperature Material in contact with media: • Stainless Steel AISI 316L (DIN1.4404/1.4435) • O-Rings: Viton® 70° Shore | 03000 mbar absolute -20+85 °C                            | max. ±30 mbar  |
|   | 030 bar absolute<br>-20+85°C                             | max. ±0.3 bar  |
|   | 0400 bar absolute<br>-20+85 °C                           | max. ±4 bar  |
| 3-axis-acceleration (static)  | -15+15g  | ±0.15 g<br>(05 g, +25 °C)<br>±0.25 g   |
| 3-axis-acceleration<br>with fast peak<br>(800 Hz)   | -20+65 °C  | (510g, +25°C)<br>±0.45g<br>(1015g, +25°C)                                      |
| Light   | 065 000 lx   | max. sensitivity at 500 nm   |
| Connection for strain gauges  | full bridge<br>rated output 1 mV/V<br>bridge voltage 3 V |  |
| Flex-Connector  | for customer-specific adaptation of the desired sensors  |  |

# Additional analogue inputs for connecting third-party sensors

| Analogue inputs                           |
|---|
| ANA NA ANA NA ANA NA ANA NA ANA NA ANA NA |

# Technical data

**4 or 8 analogue inputs** with freely selectable input configuration: 0...20 mA; 4...20 mA, 0...3.0 V; 0...5.0 V; 0...10.0 V; 0...12.0 V; 0...24.0 V; 0...36.0 V; 0...48.0 V

Resolution: 12 bit

Measurement/storage rate: 1/s up to every 12 h

universal data loggers



ext. temperature sensor



ext. humidity sensor



ext. light sensor



ext. air pressure sensor



ext. fluid pressure sensor

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