



universal data loggers



# MSR 175 Shock Transportation Data Logger: Protect your goods!



The MSR 175 stand-alone data logger uses high-resolution sensors to continuously record what happens to your goods during transportation. The logger data can then be analysed very accurately – be it in order to ascertain damage or to improve transport packaging – using the «MSR ShockViewer» software.

The two 3-axis acceleration sensors ( $\pm 15\text{ g}$  and  $\pm 100\text{ g}$ ) integrated in the MSR 175 record shocks at a measurement frequency of up to 5000/s. The installed memory of the logger is capable of storing over 2 million measured values, which is sufficient for more than 1,000 shocks. In addition, the MSR 175 measures and records temperature profiles from  $-20^\circ\text{C}$  to  $+65^\circ\text{C}$ . Additionally, a second type variant of this data logger is available with internal humidity, pressure and light sensors.

**Easy-to-use:** The measured data can be quickly transferred to a computer via the USB port. For the analysis and graphical representation of the data and to automatically create reports, the MSR ShockViewer analysis software, which is tailored to the requirements of transportation monitoring, is at your disposal.

## Technical Data

<b>Housing:</b>	Design housing PC, encapsulated, IP67
<b>Size and weight:</b>	47 x 16 x 54 mm (W x H x L), approx. 28g
<b>Medium:</b>	Air, various liquids
<b>Memory capacity:</b>	Over 2,000,000 measurement values
<b>Colour:</b>	Amber
<b>Key:</b>	Start measurement/retrieve status
<b>3-axis-acceleration sensors:</b>	2 internal 3-axis-acceleration sensors
<b>Working range:</b>	$\pm 15\text{ g}$ and $\pm 100\text{ g}$ ( $-20\dots+65^\circ\text{C}$ )
<b>Accuracy:</b>	15 g sensor: $\pm 0,15\text{ g}$ ( $+25^\circ\text{C}$ ) 100 g sensor: up to $15\text{ g} \pm 2\text{ g}$ , up to $100\text{ g} \pm 5\text{ g}$ (at $+25^\circ\text{C}$ )
<b>Measurement/storage rate:</b>	Up to 5,000/s ( $\pm 15\%$ )
<b>Power supply:</b>	LiPo-battery 230 mAh, charged via the USB connection, recording period up to 8 weeks
<b>PC software:</b>	<ul style="list-style-type: none"> <li>• free MSR ShockViewer <b>basic version</b></li> <li>• extensive MSR ShockViewer <b>pro version</b></li> </ul>
<b>Interface:</b>	USB
<b>Operating conditions:</b>	Temperature $-20\dots+65^\circ\text{C}$
<b>Storage conditions:</b>	<ul style="list-style-type: none"> <li>• <math>+5^\circ\text{C}\dots+45^\circ\text{C}</math> (ideal storage condition for the battery)</li> <li>• 10...95% relative humidity, non-condensing</li> </ul>
<b>Standards:</b>	The MSR 175 complies with EU-Directives RoHS/WEEE.

## MSR 175 Shock Transportation Data Logger: available in 2 variants

**Variante 1** of the MSR 175 includes two internal 3-axis acceleration sensors ( $\pm 15$  g and  $\pm 100$  g) as well as one internal temperature sensor. **Order code: MSR175B16T2AA5**

**Variante 2** of the MSR 175 includes two internal 3-axis acceleration sensors ( $\pm 15$  g and  $\pm 100$  g) as well as one internal temperature sensor, one internal humidity sensor, one pressure sensor and one light sensor. **Order code: MSR175B16T6H3P5AA5L2**

**Minimum order quantity per variant: 10 units**

Measured parameters	Working range	Accuracy	Measurement/Storage rate
Temperature	-20...+65 °C	$\pm 0.5$ °C (-10...+65 °C)	every 10 min.
Rel. humidity	0...100% rel. humidity -20...+65 °C	$\pm 2\%$ rel. humidity (10...85%, 0...+40 °C) $\pm 4\%$ rel. humidity (85...95%, 0...+40 °C)	every 10 min.
Air pressure	0...2000 mbar absolute -20...+65 °C	$\pm 2.5$ mbar (750...1100 mbar absolute, +25 °C)	every 10 min.
Light	0...65,000 lx	max. sensitivity at 500 nm	every 10 min.

## MSR ShockViewer software for analysing the measured data

The MSR ShockViewer analysis software, which specialises in analysing shock events and jolts, facilitates the graphical presentation and extensive data analysis of the values recorded by the MSR 175 data logger. The software is capable of quickly processing millions of data points (or values) relating to dynamic processes. It allows you to clearly present the extensive measured data, and to quickly analyse and conclusively document critical events.

The software is available as a **free basic version** and at an additional cost as an **extensive pro version**.

More information:

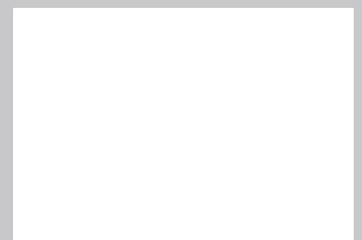
<https://www.msr.ch/en/support/datalogger-msr-shockviewer-software/>

MSR ShockViewer for MSR175	Features
	<ul style="list-style-type: none"> <li>• Automatic report generation</li> <li>• Detailed analysis of shock events</li> <li>• Clearly show and organise environmental data</li> </ul>

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