Which MSR transport data logger is best suited to my application?

As data logger specialists with years of experience, we know exactly what is important in a transport data logger. Contact us, we will be happy to advise you! Tel. +41 52 316 25 55

Features	MSR165	MSR175	MSR175plus
Housing, rechargeable battery/battery, protection class	 IP67, LiPo battery 1000 mAh	 IP67, LiPo battery 230 mAh	 IP65, Li-Po battery 2400 mAh
	 IP67, Li-$SOCl_2$ - Batteries (3.6 2 x 7700 mAh)	 IP65, Li-$SOCl_2$ -battery 3.6 V., 7700 mAh	
Sensors	An internal or external 3-axis acceleration sensor, ±15 g **or** ±200 g. Additional optional temperature, relative humidity, air pressure, light, analogue inputs.	Two internal 3-axis acceleration sensors ±15 g **and** ±200 g and 1 internal temperature sensor. Optional humidity, pressure and light sensors.	Two **simultaneously measuring** internal 3-axis acceleration sensors ±15 g and ±200 g and one internal temperature, humidity, air pressure and light sensor each.
±15 g, measuring rates [1/s (Hz)]	Shock: 100…1600 Vibration: 25....1600	1600	1600
±200 g, measuring rates [1/s (Hz)]	Shock: 100…1600 Vibration: 25....1600	3200/6400	6400
Measurement/ storage rate of the climate sensors	1/s to every 12 h	Every 10 min.	Every 10 min.
Storage capacity [measured values]	≥2 million, with microSD card ≥1 billion	≥2 million	≥4 million
Possible number of shock events	≥ 10‘000 with microSD card ≥ 5 million	≥1,000 (230 mAh), ≥700 (Li-$SOCl_2$)	≥1’000
Approximate measurement duration	1000 mAh battery: Up to 6 months. Li-$SOCl_2$ battery: Up to 5 years.	230 mAh battery: Up to 8 weeks Li-$SOCl_2$ battery: Up to 2 years.	With GPS up to 55 days, without GPS up to 1.5 years.
Options	Customised production. Power supply, additional internal or external sensors, analogue inputs and memory expansion can be individually selected.	4 variants available	1 variant available
Software	MSR PC software, MSR165 Shock Viewer	MSR175 software package: Dashboard software, ReportGenerator, MSR ShockViewer	MSR175 software package: Dashboard software, ReportGenerator, MSR ShockViewer
Application	Fault diagnostics, load tests, transport monitoring: shocks, jolts, vibrations	Transport monitoring: shocks and environmental parameters	Transport monitoring: shocks and environmental parameters, GPS/GNSS

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MSR® UNIVERSAL DATA LOGGERS Swiss made

AIR CARGO APPROVED

SHOCK DATA LOGGERS FOR RELIABLE TRANSPORT MONITORING

Accurate Data to Prevent and Analyze Transport Damage

★ *„We get spectacular data from these data loggers.“*
M. Bain, ISS Cargo Integration and Operation Services, Orbital Sciences Corporation

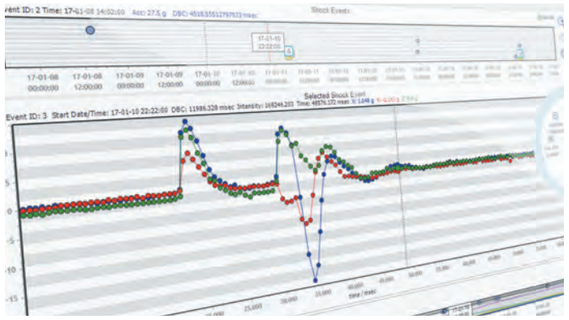
MSR data loggers protect your goods on the way to the customer

MSR data loggers record the most important physical effects on transported goods, such as **shock, vibration, temperature overshoot or undershoot, corrosion (moisture), air pressure and light**, and document them conclusively. Liability issues can be quickly clarified on the basis of the recorded data. They are also indispensable for optimising packaging and logistics.

Why data loggers from MSR? Put your trust in Swiss precision. You need measurement data you can rely on.

Most common cause of transport damage: mechanical shocks

Shocks (physical impacts) during transport can severely damage freight. The damage is often not visible from the outside. MSR data loggers with acceleration sensors record important data that quickly help with liability and quality issues.



How do I find the right data loggerf? Ask yourself the following questions:

1. Which parameters must be recorded?
2. How long does the transport take?
3. What kind of goods are transported (measurement sensitivity)?
4. With which means of transport is the transport carried out (load multiple less than ±15 g or max ±200 g)?
5. What is the minimum number of shock events that the data logger must be able to record and store?
6. What information do I get from the shock events?
7. Do I want to be able to record vibrations as well as shock events with the data logger?
8. What sampling rate do I need for my measuring task?
9. Do I need a GPS tracker?
10. Is the data logger approved for transport by air freight?

Which values are decisive for the assessment of shocks and vibrations?

The fact is: Not all damage is caused by the strongest shocks. Repeated shocks of lower intensity can also lead to damage. Recording all relevant shock events is important in order to correctly identify critical events. Depending on the type and configuration, MSR transport data loggers can record between 700 and 5 million shock events. The „MSR ShockViewer“ software is able to process millions of data quickly. This makes it quick and easy to identify relevant (shock) events.

When you purchase an MSR transport data logger, a comprehensive software package is supplied free of charge.

Meaningful measurement data helps to prevent costly transport damage

MSR data loggers are used in thousands of applications worldwide. With their high-precision sensors, exceptionally high storage capacity and rechargeable batteries, the compact MSR data loggers are ideal for optimising packaging and determining transport loads.

Optimise

Test packaging, avoid trouble

Using an MSR data logger to accompany the goods, the packaging can be tested in advance in shipping tests. Costly damage caused by inadequate packaging of the freight can thus be avoided.

Monitor

Heat, cold, corrosion, shock

Your valuable freight is exposed to high risks of damage during transport, unloading and reloading. Data loggers as travelling companions record critical events completely and conclusively.

Evaluate

Quickly gain an overview, quickly analyse critical events

You analyse the data after the transport and have the facts on the table. You find the culprit and know who is responsible for the damage.

„In the event of damage, the MSR shock data logger can be used to quickly obtain a comprehensive picture of the transport circumstances.“
M. Wegmüller, VRP, Wegmüller AG Attikon

MSR165: Shock and vibration measurements, with many options	MSR175: Cost-effective highspeed transport logger	MSR175plus: Cost-effective highspeed transport logger
		
✓ 1 acceleration sensor ±200 g or ±15 g, vibration possible	✓ 2 acceleration sensors ±200 g/±15 g	✓ 2 acceleration sensors ±200 g/±15 g (measure simultaneously)
✓ Temperature, humidity, pressure, light opt.	✓ Temperature, humidity, pressure, light	✓ Temperature, humidity, pressure, light
✓ Recording duration up to 5 years	✓ Recording duration approx. 8 weeks or up to 2 years	✓ Recording duration approx. 8 weeks, without GPS at least 1year
✓ Memory ≥2 million measured values, with micro SD card ≥1billion	✓ Memory ≥2 million measured values	✓ Memory ≥4 million measured values
✓ Shock events ≥ 10,000 / with microSD card ≥ 5 million	✓ Shock events ≥1,000 (230 mAh), ≥700 (Li-SOCl$_2$ battery)	✓ Shock events ≥ 1,000