Multi Physics Box
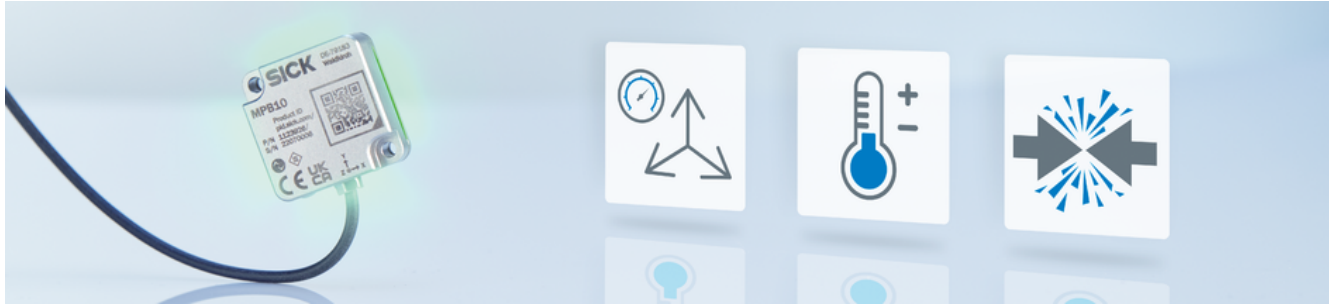
Condition Monitoring sensors for vibration, shock, and temperature monitoring

SICK
Sensor Intelligence.
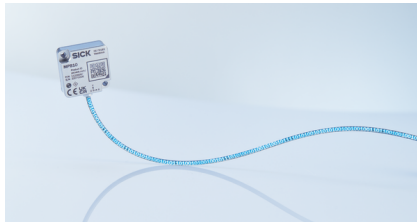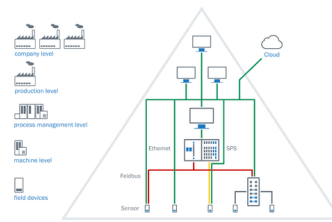
Multi Physics Box

Advantages

Greater transparency, less machine downtimes

Multi Physics Box allows Condition Monitoring Whether motor, pump, conveyor belt or fan – measured values for temperature, vibration behavior, and shock provide indications of defective processes that can lead to machine or system failures. Based on the sensor data, faults can be detected early and maintenance work planned independent of status. The result: Cost savings due to fewer unplanned downtimes.

Find out more

The combination of multiple measurands creates a reliable data foundation for Condition Monitoring.

Multi Physics Box can be integrated into existing systems as a standalone sensor, or used as a complete package including software environment with further sensors and Cloud Services.

The system status can be easily monitored via parameterizable thresholds, thus enabling maintenance work to be planned reliably.

Cost-efficient condition-based monitoring: The Multi Physics Box makes it really easy to increase machine running times, plan maintenance work independent of status, and thereby lower the overall costs.

Easy parameter evaluation with a high data quality

Multi Physics Box makes data interpretation easy. The sensor detects, for example, vibrations via a MEMS element and further processes them directly according to the configuration. The final data output delivers indicative values in the time and frequency domain that are significantly easier to interpret than the actual raw data. A multi-stage alert according to ISO 10816-3 can be implemented when monitoring vibration thresholds. An optional trigger ensures precisely reproducible measurements.

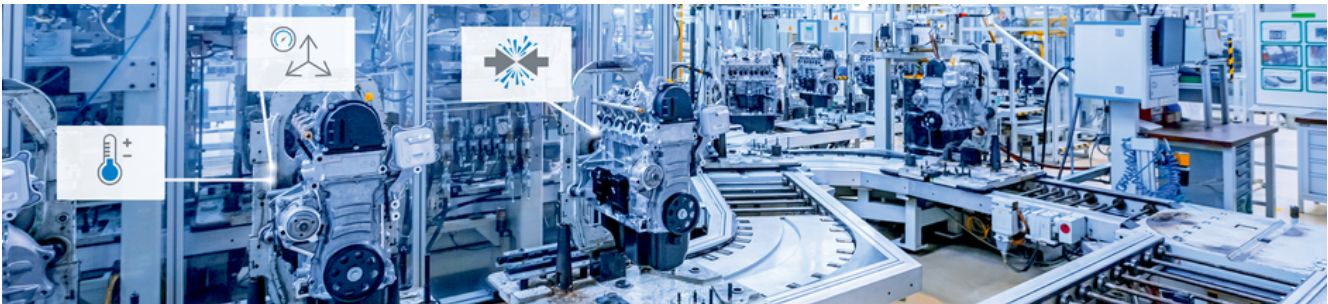Pre-processed interval data reduce the volume of data to be transferred.
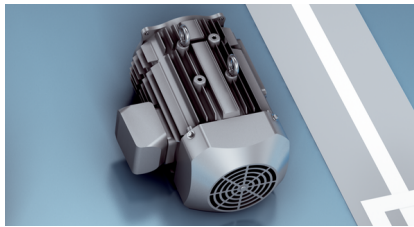
Multi-stage alert according to ISO 10816-3 for uncomplicated condition-based monitoring.

Quick and easy to configure via SOPAS or IO-Link.

➕ Multi Physics Box delivers concise and easy to interpret data that serve as a reliable basis for Condition Monitoring and predictive maintenance.


Versatile thanks to rugged design and high level of flexibility

The range of applications for the Multi Physics Box is virtually unlimited. The sensor is well protected by a rugged stainless-steel housing. Even fine dust or water cannot harm the sensor thanks to the enclosure rating of up to IP68. The sensor delivers consistently reliable data at ambient temperatures between −40 °C and +80 °C. Thanks to the flexible parameterization options, the sensor can also be used in a wide variety of applications. In short: The Multi Physics Box is suitable for con-
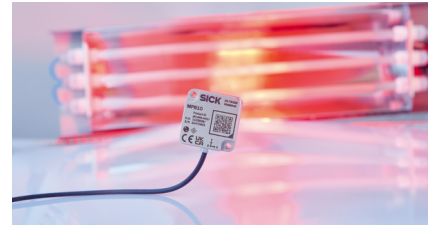
Multi Physics Box

tinuous condition-based monitoring in almost any industrial context and acts as a reliable supplier of data even under harsh ambient conditions.

Flexible mounting: Multi Physics Box can be attached to the system either by screwing, gluing or via an adapter plate.
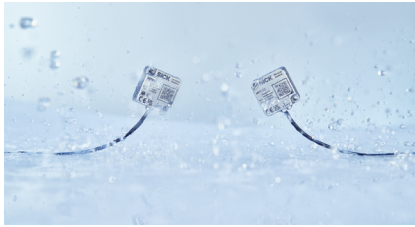
Enclosure rating up to IP68: Multi Physics Box is reliably protected against ingress of dust and water.

Heat resistance: Temperatures up to +80 °C are no problem for the sensor.

Thanks to the rugged housing and wide permissible temperature range, Multi Physics Box delivers precise and reliable condition data even in challenging ambient conditions.

Technical data overview

Condition monitoring	Vibration, shock, and temperature
Connection type	Cable with connector M12, with knurled nuts
Length of cable	0.3 m
Housing material	Stainless steel
Communication interface	IO-Link

Product description

The Multi Physics Box Condition Monitoring sensor allows for continuous condition-based monitoring of, for example, motors, pumps, conveyor systems or fans. It measures vibrations, shocks, and temperature, thereby providing indications of potential faults and machine failures. If the measured values exceed the individually configurable thresholds, an alert is output. For vibration values, the vibration monitoring thresholds for machines according to ISO 10816-3 can be implemented via a multi-stage alert. The sensor can be integrated into the machine or system via IO-Link or a simple alarm-based switching signal. Whether on-site or in conjunction with a Cloud Service: The Multi Physics Box creates a data foundation that can be used to avoid unplanned downtime and effectively lower costs.

At a glance

- 3-axis vibration (± 8 g) and shock detection (up to 200 g) via MEMS elements
- Contact temperature measurement −40 ... +80 °C
- Configurable thresholds
- Vibration monitoring in time and frequency domain
- Vibration limit values according to ISO 10816-3
- Compact stainless-steel housing up to IP68
- LED status display
- Switching output as alarm and IO-Link

Your benefits

- Reduce failures and operating costs using precise condition data
- Intuitive data interpretation thanks to pre-processed values even in the frequency domain
- Can be adapted by means of configurable threshold values for vibration, shock and temperature values
- Simple parameterization and visualization via SOPAS Engineering Tool
- Uncomplicated installation via magnetic plate or screw connection
- High operational safety due to rugged stainless-steel housing

Fields of application

- Detection of vibration, temperature, and shock on machines with rotating components
- Continuous monitoring of motors, fans, and pumps
- Detection of status changes on components

Multi Physics Box

Ordering information

Other models and accessories ➜ www.sick.com/Multi_Physics_Box

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Vibration, shock, and temperature	Cable with connector M12, with knurled nuts	0.3 m	Stainless steel	IO-Link	MPB10-VS00VSIQ00	1123926

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

WORLDWIDE PRESENCE:

Contacts and other locations –**www.sick.com**

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