

Monitoring Sensors

Efficient solution
for various
applications

Industrial Motors

Commercial &
Appliance Motors

Automation

Digital &
Systems

Energy

Transmission &
Distribution

Coatings



Driving efficiency and sustainability





Efficient monitoring solution

Monitoring sensors are increasingly present in different applications. With advances in technologies related to industrial networks and the Internet of Things (IoT), such devices have been essential for the evolution of systems. These sensors interact with machines or the environment and capture useful information to improve the efficiency of machines and processes.

They allow machine condition data or environmental condition data to be collected and integrated into control systems. These smart sensors allow variables to be monitored and controlled by PLCs or gateways. That ensures the proper functionality of machines and processes, in addition to preventing the occurrence of failures and accidents.

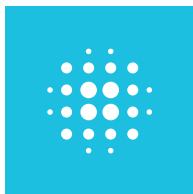


Efficient solution to monitor asset condition

The condition monitoring sensor is an intelligent solution for those looking to avoid unexpected downtime of machines and processes, reduce maintenance costs and improve machine operational efficiency. These sensors provide the automation system with real-time information about the operating variables of machines and equipment in general.

The CMSW line is developed with excellent quality and technology to improve machine performance. They are devices capable of continuously monitoring up to six different working condition variables of machines and equipment, such as vibration (x, y, z), contact temperature, humidity and atmospheric pressure. Available in versions with IO-Link or Modbus communication protocol.

Benefits



Compact



Robust - stainless steel version



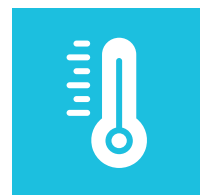
Reliable and accurate



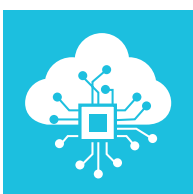
Easy installation



Vibration analysis of up to 6 kHz in all 3 axes



Temperature between -20 and 80 °C



Modbus or IO-Link communication



Real-time monitoring



Monitoring of up to 6 variables

Applications

The CMSW sensors, when integrated into a PLC or a gateway, form a condition monitoring system for industrial machines. They can be used temporarily or permanently in machines and industrial automation systems in order to:

- Provide measurement data for vibration, contact temperature, humidity and atmospheric pressure
- Communicate your data via IO-Link or Modbus
- Enable the sending of alerts in case of undesirable changes to operating variables
- Enable diagnostics and identification of faults before they occur
- Provide data that simplify the more accurate scheduling of preventive maintenance

The CMSW can be used to avoid problems such as: unbalance, misalignment, loose parts, unwanted impacts, gear and belt failures, among other things. In addition, they monitor contact temperature and, in the VATP version, include humidity and atmospheric pressure monitoring.

These sensors can be applied to turbines, pumps, gearboxes, homogenizers, separators, alternators, mixers, packaging machines, compressors, turbines, casting machines, machine tools, among other things.

Smart code

CMSW - IOL - V - M69K - C52M12 - IND

Sensor line name
Condition Monitoring Sensor WEG

Communication interface
IOL – IO-Link
MOD – Modbus

Measured variables
V – Vibration and contact temperature
VATP ¹⁾ – Vibration, contact temperature, humidity and atmospheric pressure

Housing type
M – Metal
P – Plastic

Model
IND – Industrial

Connection
M12 – Connector M12



Power supply
C51 – 20 to 30 Vdc
C52 – 10 to 30 Vdc

Protection rating
67 – IP67
69K – IP69K ²⁾

Notes: 1) Model only available in the stainless steel version.
2) Model only available in stainless steel version with measuring variable V.

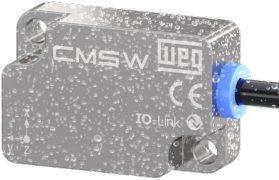

Technical characteristics

Models CMSW-IOL-V-P67-C51M12-IND and CMSW-MOD-V-P67-C52M12-IND

Product		
Model	CMSW-IOL-V-P67-C51M12-IND	CMSW-MOD-V-P67-C52M12-IND
Supply voltage	20 to 30 Vdc	10 to 30 Vdc
Connector	M12x1 male	
Protection rating	IP67	
Operating temperature	-20 to 80 °C	
Contact temperature (measurement)	-20 to 80 °C	
Service life	> 10 years	
Consumption current	< 7 mA	
Housing	Plastic	
Weight	50 g	
Mounting	2 M4x1 screws	
Cable	2 m (max. 20 m)	
Dimensions	33 x 26 x 13 mm	
Analog channel	Triaxial RMS speed, triaxial RMS acceleration, triaxial peak-to-peak acceleration and internal temperature	
Temperature resolution	0.01 °C	
Temperature accuracy	±0.5 °C	
Humidity resolution	-	
Humidity accuracy	-	
Pressure resolution	-	
Pressure accuracy	-	
Memory	200 kBytes raw data	
Acceleration	±2 g, ±4 g, ±8 g and ±16 g	
Sampling	26,667 Hz	
Raw data duration	< 5s (per axis)	
Frequency response	6 kHz	
Communication	IO-Link	Modbus
Baud rate	230.4 KBaud	Configurable
Minimum cycle time	10ms	10ms



Technical characteristics

Models CMSW-IOL-V-M69K-C51M12-IND and CMSW-MOD-V-M69K-C52M12-IND

Product		
Model	CMSW-IOL-V-M69K-C51M12-IND	CMSW-MOD-V-M69K-C52M12-IND
Supply voltage	20 to 30 Vdc	10 to 30 Vdc
Connector	M12x1 male	
Protection rating	IP69K	
Operating temperature	-20 to 80 °C	
Contact temperature (measurement)	-20 to 80 °C	
Service life	> 10 years	
Consumption current	< 7 mA	
Housing	Stainless steel	
Weight	< 100 g	
Mounting	2 M3x1 screws	
Cable	2 m (max. 20 m)	
Dimensions	30.5 x 20 x 10 mm	
Analog channel	Triaxial RMS speed, triaxial RMS acceleration, triaxial peak-to-peak acceleration and internal temperature	
Temperature resolution	0.01 °C	
Temperature accuracy	±0.5 °C	
Humidity resolution	-	
Humidity accuracy	-	
Pressure resolution	-	
Pressure accuracy	-	
Memory	200 kBytes raw data	
Acceleration	±2 g, ±4 g, ±8 g and ±16 g	
Sampling	26,667 Hz	
Raw data duration	< 5s (per axis)	
Frequency response	6 kHz	
Communication	IO-Link	Modbus
Baud rate	230.4 KBaud	Configurable
Minimum cycle time	10ms	10ms

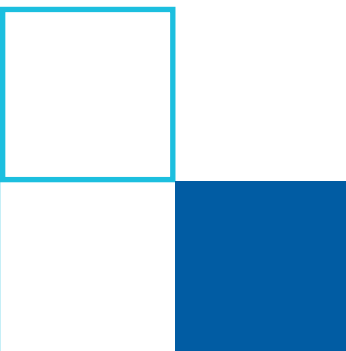
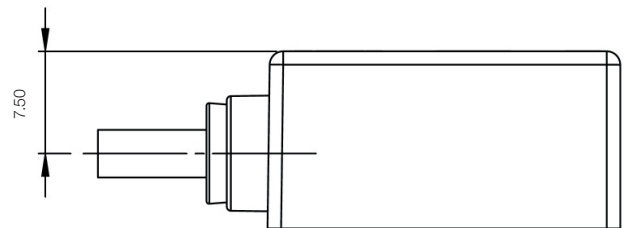
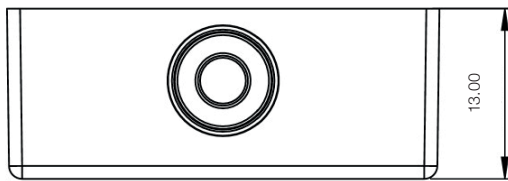
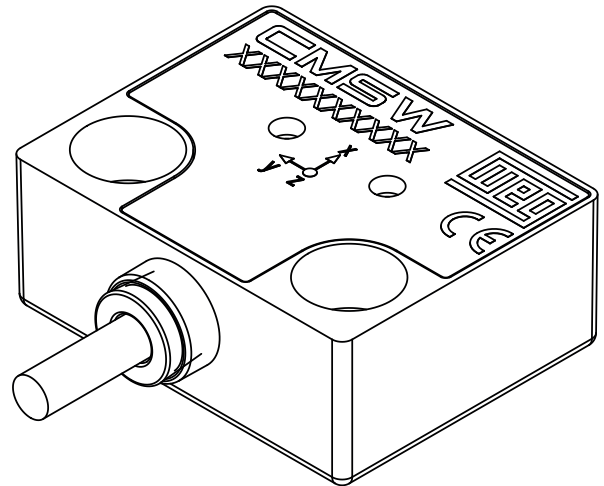
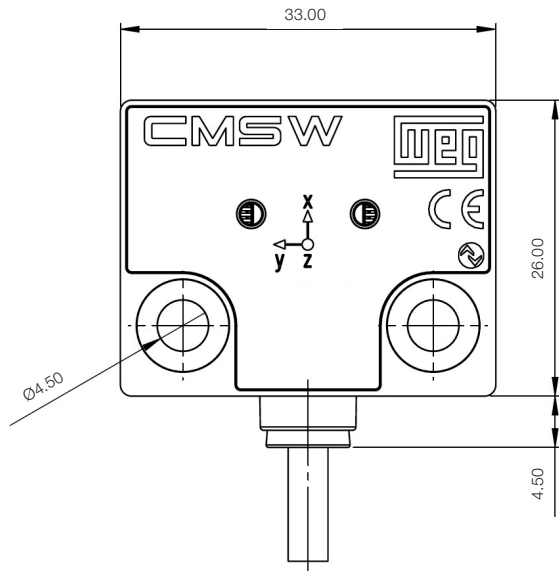
Technical characteristics

Models CMSW-IOL-VATP-M67-C51M12-IND and CMSW-MOD-VATP-M67-C52M12-IND

Product		
Model	CMSW-IOL-VATP-M67-C51M12-IND	CMSW-MOD-VATP-M67-C52M12-IND
Supply voltage	20 to 30 Vdc	10 to 30 Vdc
Connector	M12x1 male	
Protection rating	IP67	
Operating temperature	-20 to 80 °C	
Contact temperature (measurement)	-20 to 80 °C	
Service life	> 10 years	
Consumption current	< 7 mA	
Housing	Stainless steel	
Weight	< 100 g	
Mounting	2 M3x1 screws	
Cable	2 m (max. 20 m)	
Dimensions	30.5 x 20 x 10 mm	
Analog channel	Triaxial RMS speed, triaxial RMS acceleration, triaxial peak-to-peak acceleration, internal temperature, contact temperature, ambient humidity and ambient pressure	
Temperature resolution	0.01 °C	
Temperature accuracy	±0.5 °C	
Humidity resolution	0.01%	
Humidity accuracy	±0.2% (20 to 60 °C)	
Pressure resolution	0.1 hPa	
Pressure accuracy	±100 hPa (0 to 65 °C)	
Memory	200 kBytes raw data	
Acceleration	±2 g, ±4 g, ±8 g and ±16 g	
Sampling	26,667 Hz	
Raw data duration	< 5s (per axis)	
Frequency response	6 kHz	
Communication	IO-Link	Modbus
Baud rate	230.4 KBaud	Configurable
Minimum cycle time	10ms	10ms

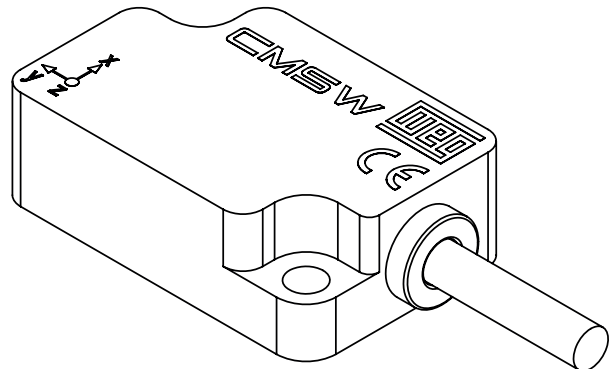
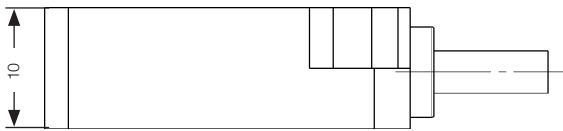
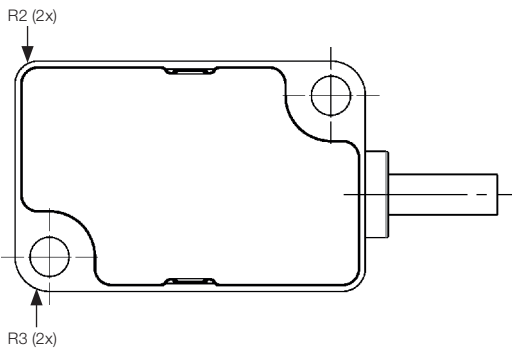
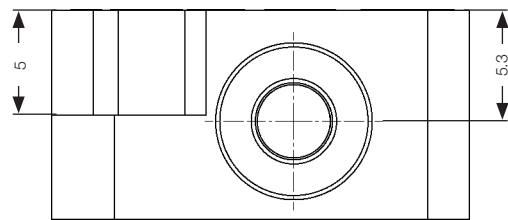
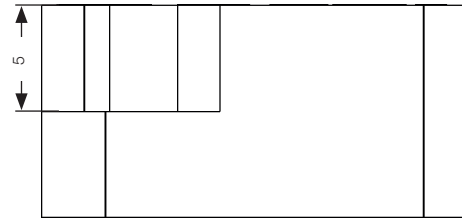
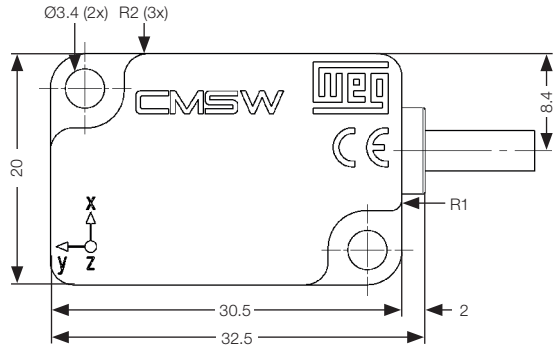
Dimensions

Models CMSW-IOL-V-P67-C51M12-IND and CMSW-MOD-V-P67-C52M12-IND



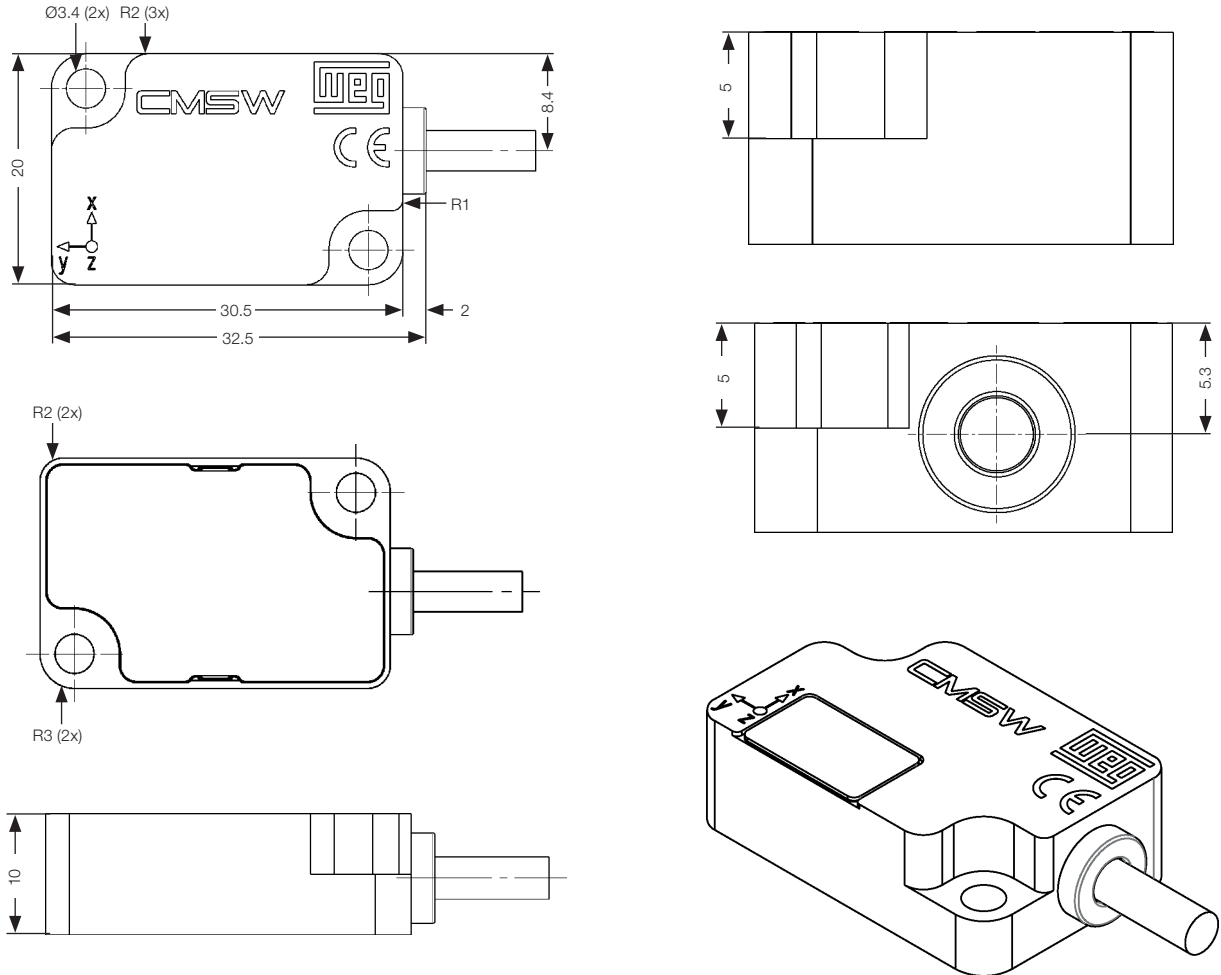
Dimensions

Models CMSW-IOL-V-M69K-C51M12-IND and CMSW-MOD-V-M69K-C52M12-IND



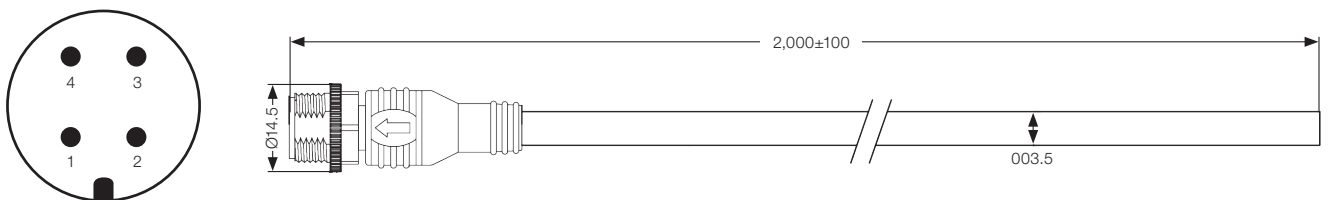
Dimensions

Models CMSW-IOL-VATP-M67-C51M12-IND and CMSW-MOD-VATP-M67-C52M12-IND



Connection

M12



Pin	Wire color	IO-Link version signal	Modbus version signal
1	Brown	20 to 30 V (power supply)	10 to 30 V (power supply)
2	White	NC	(-) RS485
3	Blue	GND (-)	GND (-)
4	Black	C/Q (IO-Link)	(+) RS485

Global presence

is essential, as much as understanding your needs.



Global Presence

With more than 40,000 employees worldwide, WEG is one of the largest electric motors, electronic equipments and systems manufacturers. We are constantly expanding our portfolio of products and services with expertise and market knowledge. We create integrated and customized solutions ranging from innovative products to complete after-sales service.

WEG's know-how guarantees our **Monitoring Sensors** are the right choice for your application and business, assuring safety, efficiency and reliability.



Availability is to have a global support network



Partnership is to create solutions that suits your needs



Competitive edge is to unite technology and innovation



Know More

High performance and reliable products to improve your production process.



Excellence is to provide a whole solution in industrial automation that improves our customers productivity.

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The values shown are subject to change without prior notice.
The information contained is reference values.