

# CE6xx and PV6xx general-purpose vibration sensors

## CE6xx and PV6xx: General-purpose vibration sensors for all applications

Meggitt's Vibro-Meter® product line includes a wide range of cost-effective sensors for the monitoring of balance of plant (BOP) equipment such as compressors, gearboxes, motors, pumps and fans, as well as large machinery such as hydro turbines.

Our complete solutions for general-purpose vibration sensing and monitoring include a comprehensive selection of CE6xx piezoelectric accelerometers with integrated electronics, PV6xx piezoelectric velocity sensors and associated EC6xx cable assemblies.

### Benefits

#### > Wider range of sensors

Most CE6xx and PV6xx vibration sensors are configurable for environment and sensitivity making it easier to find the perfect sensor for an application. They are available in standard or Ex versions and have voltage outputs ranging from 50 to 500 mV/g, and/or 4 to 20 mA current outputs proportional to 200 to 20 g RMS or 0 to 100 mm/s RMS.

#### > Cost-effective monitoring of auxiliary equipment

The CE6xx and PV6xx vibration sensors, and EC6xx cable assemblies are high-performance products, ideally suited to the monitoring of auxiliary balance of plant equipment in cost-sensitive applications.

#### > Enabling control system solutions

The CE687, PV685 and PV686 vibration sensors are 4 to 20 mA loop-powered vibration sensors that enable solutions for control system applications (DCS or PLC) where current outputs sensors are more prevalent.



CE620 and CE687 piezoelectric accelerometers  
and PV685 piezoelectric velocity sensor



#### > Trusted by the biggest names in the industry

Over 60 years of sensor and systems expertise means that our solutions are trusted by original equipment manufacturers (OEMs) globally and have become standard-fit components on machinery used in Power Generation, Oil & Gas and other industrial applications.

### Vibro-Meter® product line

#### Our product competencies and services:

Sensors | Machinery protection | Condition monitoring | Software | Systems

Document reference: 201811\_CH\_CE6xxPV6xx

# CE6xx and PV6xx vibration sensors

## Sensor comparison table

Sensor	Type	Output		Measurement range	Frequency response	Operating temperature
CE620	Piezoelectric accelerometer with integrated electronics	Voltage	100 or 500 mV/g $\pm 5\%$	$\pm 80$ or $\pm 16$ g	2 Hz to 10 kHz	-55 to 140 °C (-67 to 284 °F)
CE687		Current	4 to 20 mA proportional to measurement range $\pm 5\%$	0 to 1, 2, 5, 10 or 20 g RMS	2 Hz to 1 kHz	-25 to 90 °C (-13 to 194 °F)
PV660	Piezoelectric velocity sensor	Voltage	4 mV/mm/s $\pm 5\%$	---	5 Hz to 4 kHz	-25 to 140 °C (-13 to 284 °F)
PV685		Current	4 to 20 mA proportional to measurement range $\pm 5\%$	0 to 10, 20, 25, 50 or 100 mm/s RMS	2 Hz to 1 kHz	-25 to 90 °C (-13 to 194 °F)
PV686	Combined piezoelectric velocity sensor and accelerometer	Current and voltage	4 to 20 mA proportional to measurement range $\pm 5\%$ and 100 or 50 mV/g $\pm 5\%$	0 to 10, 20, 25, 50 or 100 mm/s RMS and $\pm 80$ or $\pm 160$ g	2 Hz to 1 kHz and 2 Hz to 10 kHz	-25 to 90 °C (-13 to 194 °F)

Notes: The CE6xx and PV6xx vibration sensors listed in the table above are available in standard versions and in Ex versions certified for use in hazardous areas (potentially explosive atmospheres), and all versions have an IP67 protection rating. These CE6xx and PV6xx vibration sensors are form, fit and functionally compatible replacements for earlier CExxx and PVxxx sensors. For example, the CE620 sensor replaces the CE110I and CE680 sensors, and the PV660 replaces the PV102.

## Cable assembly comparison table

Cable	Type	Recommended for
EC602	Version with a 2-pin MIL-C/DTL-5015 type connector and 2-wire cable	CE620, CE687, PV660 and PV685
EC612	Version with a 2-pin MIL-C/DTL-5015 type connector and 2-wire cable with metallic overbraid	
EC603	Version with a 3-pin M12 type connector and 3-wire cable	PV686
EC613	Version with a 3-pin M12 type connector and 3-wire cable with metallic overbraid	

Note: The EC602 and EC612 cable assemblies are compatible with the EC318 and EC319 cable assemblies, which can replace the EC6x2 cable assemblies in more demanding applications, such as environments characterised by the presence of water and/or contaminants.

## Applications

- > The CE620 and PV660 are industry standard IEPE (integrated electronics piezo electric) vibration sensors that provide a dynamic voltage output signal that is suitable for spectral analysis. These sensors are powered by a constant current power supply and the output is typically connected to a machinery monitoring system for protection and/or condition monitoring applications.
- > The CE687 and PV685 are industry standard 4 to 20 mA loop-powered vibration sensors, also known as vibration transmitters, that provide a quasi-static output signal which indicates "overall" vibration. These sensors are powered by the current loop and the current output is typically connected to a machinery monitoring system for protection applications and/or a control system such as a DCS or PLC for monitoring and/or control applications.
- > The PV686 is an innovative vibration sensor, combining IEPE and 4 to 20 mA loop-powered sensors, that provides both a quasi-static current output and a dynamic voltage output in order to support protection/monitoring and control applications with a single sensor.

## Contact

### Meggitt SA

Route de Moncor 4, PO Box 1616, 1701 Fribourg, Switzerland  
Tel: +41 26 407 11 11 | [energy@ch.meggitt.com](mailto:energy@ch.meggitt.com) | [www.meggittsensing.com/energy](http://www.meggittsensing.com/energy) | [www.meggitt.com](http://www.meggitt.com)

Copyright © 2018 Meggitt SA  
Vibro-Meter® is a registered trademark of Meggitt SA

**MEGGITT**  
smart engineering for  
extreme environments