pulsar MEASUREMENT

PULSARGUARD 2010 SERIES

Non-invasive solids flow monitor.

Solids Flow Indication with Zero Interruptions to the Process.

The PulsarGuard 2010 sensor detects structure-borne acoustic signals caused by the movement of material. This movement causes impacts and frictional contact with a containing face - for instance, the inside of a pipe.

The sensor is fastened to the outside of a structure, and its high-frequency detection picks up these signals, which are often undetectable to the human ear.

The high-frequency detection allows it to be used in environments where there is a high degree of machinery or process noise, without interference. PulsarGuard's non-invasive nature allows an easy fit to most pipes, chutes, or feed mechanisms without stopping the process.

The Technology

The 2010 series of process protection units use proprietary soundwave technology to detect changes in structure-borne acoustic emissions from equipment and materials in motion.

The sensor listens to noise caused by impacts, and friction within structures, on a wide frequency bandwidth of 100 to 600 kHz, making it sensitive to the slightest changes in process conditions but also immune to audible noise or vibration caused by plant machinery.

Instant reaction to flow changes provides protection to plant operation from abnormal flow conditions in pipes, supply lines, chutes, and feed machines. Fine powder in flight, in minute quantities, can generate a large acoustic signal enabling flow or no-flow alarms.

THE RIGHT SENSOR FOR

- Burst Filter Bag Detection
- Blockage Detection
- Pump Cavitation
- Valve Leakage Detection
- Bearing Failures
- Bridging or Rat-holing In Silos

Easy to Use

The 2010 sensor series is designed with the operator in mind. Powered with 23 to 30 V DC the sensor provides a 0 to 10 V output, this signal may be fed directly to a PLC, or the optional 2020 control unit.

Simple Installation

As the sensor is completely non-invasive, there is no need to shut down the process for installation. Installation takes minutes, and the compact design means that it can be fitted in the tightest of positions or environments.

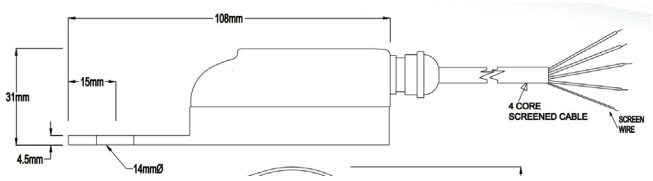
Technical Specifications

PULSARGUARD 2010 ACOUSTIC SENSOR SERIES

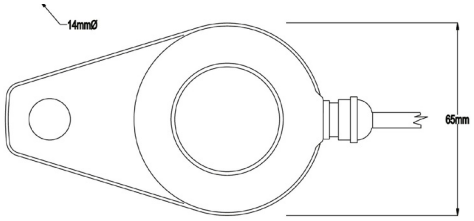
Model:	Use:	Operating Temperature:	Power Supply:
2010:	Standard	-40 °C to +85 °C (-40 °F to +185 °F)	23-30 V DC
2015:	High-temperature environments	-40 °C to +125 °C (-40 °F to +257 °F)	23-30 V DC
2011G	Galvanically isolating barriers only. Intrinsically safe earth is not required. Identified by "G" stamped on the mounting tab	-40 °C (-40 °F) to +40 °C/+104 °F (EEx ia IIC T6) / to +92 °C/+197.6 °F (E Ex ia IIC T4)	23-30 V DC
2011Z	Zener barriers only. Intrinsically safe earth connection required. Identified by "Z" stamped on the mounting tab	-40 °C (-40 °F) to +40 °C/+104 °F (EEx ia IIC T6) OR to +92 °C/+197.6 °F (EEx ia IIC T4)	24-26 V DC

PULSARGUARD ACOUSTIC SENSOR SERIES

Detection Frequency:	100 to 600 kHz
Analog Output:	0-10 V DC
Cable:	4 m of 4 core shielded 24 AWG
Ingress Protection:	IP68 (NEMA 4)
Sensor Mounting:	Tab with 14 mm hole (0.55 in)
Construction:	Cap and base housing in 316 stainless steel
Weight:	640 g (1.41 lb) (includes cable)
Size:	125 mm long (4.92 in)
Electrical Connection:	4 core screened value
CE Approval:	See EC Declaration of Conformity in the manual



PulsarGuard 2010 side drawing



PulsarGuard 2010 top drawing

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Rev 4.0