

PULSARguard

2010 series



PULSAR
Process Measurement

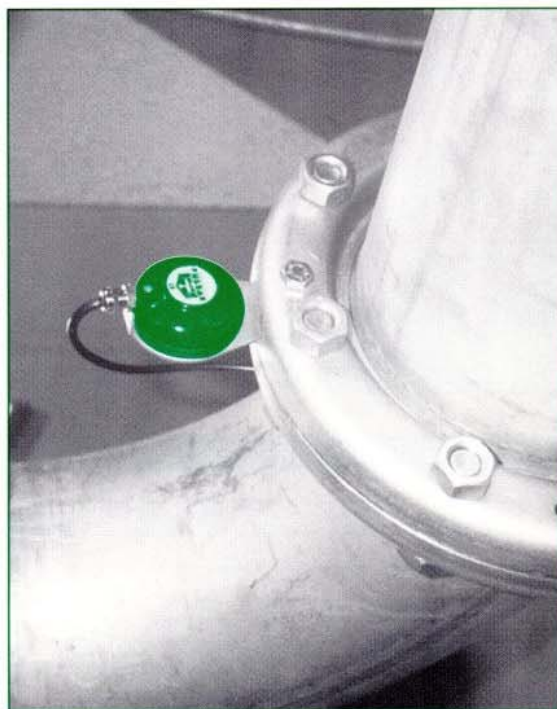
The Technology

The 2010 series of process protection units use patented state of art soundwave technology, to detect changes in structure borne acoustic emissions from equipment and materials in motion. The sensor listens to noise caused by impacts, cavitation and friction within structures, on a wide frequency band width of 100 to 600kHz, making it sensitive to the slightest changes in process conditions, but also being immune to audible noise or vibration caused by plant machinery.

Instant reaction to flow changes provides protection plant operation or other abnormal flow conditions in pipes, supply lines, chutes and feed mechanisms.

Easy To Use

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



Simple Installation

As the sensor is completely non-invasive there is no need to shut down the process to install the sensor. By using the 14mm bolt hole in the tab it may be installed in minutes. Their compact design means that it can be fitted in the tightest of positions or environments.

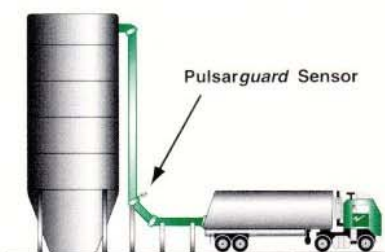
Features

- Non invasive
- Simple bolt on installation
- Low cost
- No moving parts
- IP 68 Stainless Steel housing
- Maintenance free
- Highly reliable in low or high temperatures
- Flammable atmosphere approved '2010' option

Typical Applications

- Burst filter bag detection
- Detects impending blockages
- Detects flow & no flow
- Detects pump cavitation
- Value leakage detection
- Detects Bridging or Ratholing in silos
- Material flow/route verification

Typical Installation



2010 Series
non invasive process protection units

Specifying information and wiring diagrams are available on request from Pulsar

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Technical Specification: Pulsarguard 2010 series

Non invasive process protection units

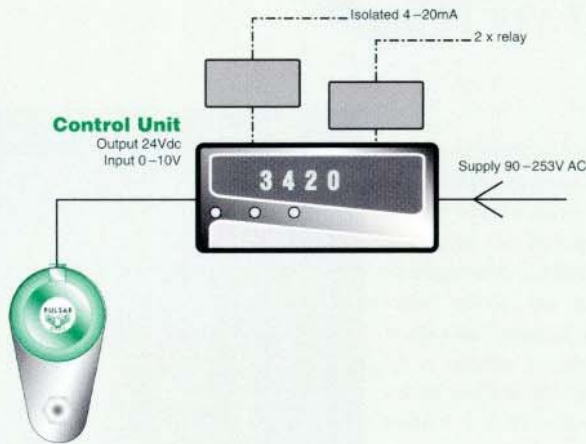
2020 Control Unit

Pulsarguard 2020 panel mounted

LED display AC supply (DC option)
excitation for sensor

Optional pods (max 2 pods per unit)

- ✓ 02: Dual alarm relay,
2 mains rated, user
definable relay setpoints
- ✓ 03: Isolated 4 – 20mA retransmission
- ✓ 05: Modus Communication



2010,2015,2011Z & 2011G Sensor

Detection frequency:	100 to 600 kHz
Power supply required:	23 to 30 Vdc (except 2011Z = 24V to 26 Vdc)
Analogue output:	0 to 10 Vdc
Cable:	4m of 4 core shielded 24 AWG
Operating temperatures	Standard version (2010 unit): -40° to +85°C High temperature version (2015 unit): -40° to +125°C
Ingress protection:	IP 68 (NEMA 4)
Sensor mounting:	Tab with 14mm bolt hole
Construction:	Cap & base housing in 316 stainless steel
Weight:	640 grams (includes cable)
Size:	120mm long
Electrical connection:	4 core screened cable is connected as follows for all Pulsarguard 2010 series Red = +V supply Black = 0Vsupply Brown = Signal 0V Green/Yellow = Cable Screen White = Signal out

(I.S.) 2011Z

Suitable for use with Zenner barriers only. This system requires connection to an intrinsically safe earth. Identified by "Z" stamped on mounting tab. Approval to EExia IIC T6 (+40°C), or EExia IIC T5 (+92°C.)

(I.S.) 2011G

Suitable for use with Galvanically isolating barriers only. This system does not require connection to an intrinsically safe earth. Identified by "G" stamped on mounting tab. Approvals as above.

Our policy is one of constant development and improvement. Pulsar reserve the right to amend details as necessary.

Represented by

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