



PULSAR

PULSARpoint

600 Series



600 Series
non invasive level switches

Description

The Pulsarpoint 600 series is a range of ultrasonic **non-invasive liquid and slurry level switches**. They provide easy to install reliable and non-intrusive point level indication. The Pulsarpoint 600 series is used on metal tanks containing liquids and slurries to provide indication of rising or falling liquid levels.

Application

The Pulsarpoint 600 is attached to the outer wall of the tank at a point coinciding with the level at which indication is required. Ultrasonic soundwaves are transmitted through the side wall of the tank to detect the absence or presence of the liquid by monitoring the characteristics of the reflected soundwaves. A change in condition is indicated once material reaches the required level. The output may be assigned to indicate a 'wet' or 'dry' condition.

Operation

The Pulsarpoint 600 series is non-intrusive by attaching the level measurement switch to the outside of the tank. There is no need to drill or cut the tank wall. There are no moving parts and therefore no cleaning or maintenance requirements. This highly reliable non-invasive technology can be applied to many different fluids and once installed is easily calibrated. Among many typical applications the Pulsarpoint 600 will provide over-fill protection, leak detection or low level alarm (to prevent, for instance, pump damage.)

Pulsarpoint 600 series operates within temperature ranges of -40 °F to +194 °F. The 600 version provides an output via a 1 amp volt free contact. The 610 & 611 versions provide 4-20mA point level indication. Simply install using the supplied mounting plate. The 600 series can be used in existing process control applications without the need for vessel modification. The **611 intrinsically safe version** is available for use in flammable atmospheres.

A rugged stainless steel enclosure provides a high degree of protection from bumps, shock and vibrations within a typical industrial environment.

The Pulsarpoint 600 series incorporates a unique self-check routine which can be initiated from time to time and which will automatically self-check both system and installation integrity.

Calibration is simple via a single button with two LED status indicators. Calibration and set-up instructions are illustrated within the unit.

A liquid level repeatability of ± 1 mm can be achieved through a tank wall thickness of .1 inch up to 1.6 inch on metal tanks providing there is no internal corrosion present.



Features

- Non-invasive point level detection
- Relay version (600)
- Two wire loop powered version (610)
- Intrinsically safe version (611)
- Microprocessor controlled
- Auto calibrate 'wet' or 'dry'
- Alarm 'wet' or 'dry'
- Single button setup
- Repeatability ± 1 mm
- Unique installation self-check routine.



Pulsarpoint 610 attached to vessel using optional self adhesive aluminum plate

Installation

Clean and sand the area to be used. Mount the self-adhesive aluminum or stainless steel mounting plate (-40°F to +194°F) to the vessel. Let cure for 48 hours. Apply the silicone grease acoustic coupler (Dow Corning DC-4 or equal) to the bottom of the sensor and vessel wall. Calibrate.

PULSAR, Inc.
P.O. Box 799
Shalimar, FL 32579

Telephone:
(850) 609-1777

Fax:
(850) 651-4777

E-mail:
info@pulsar-us.com

Web site:
http://www.pulsar-us.com

Specifying information and wiring diagrams are available on request from Pulsar

Technical Specification: 600 Series

Outputs	
Pulsarpoint 600	1 volt free contact, programmable 1A, 30V dc SPCO
Pulsarpoint 610	4 - 20mA (Loop Powered)
Pulsarpoint 611 (Intrinsically Safe EEx ia IIC T6)	4 - 20mA (Loop Powered)
Power requirements	
	18-36V dc
Operating temperatures	
	(-40°C to +90°C) -40°F to +194°F
Ingress protection rating	
	(IP68) Nema 6
Vessel specifications	
Vessel diameter	must be greater than (300mm) 11.8 inch diameter
Vessel wall thickness	within (2.5 to 40mm) 0.1 to 1.6 inch
Vessel material	Metal or glass
Maximum fluid viscosity	100 centipoise
Size / weight	
	(118mm L x 70mm H x 65mm) 4.65 x 2.76 x 2.56 inch
	(1kg) 2.2 lbs
Housing material	
	Type 316 stainless steel investment casting
CE / EMC Approval	
	Complies with BS EN 50081-1:1992 for emissions & BS EN 50082-2:1995 for immunity
Bump, shock & vibration	
	Complies with BS 60068
Flammable atmospheres approval	
	Intrinsically safe, Zone 'O' EEx ia IIC T6 (Pulsarpoint 611)
Installation	
Clean and sand the area to be used. Mount the self-adhesive aluminum or stainless steel mounting plate (-40°F to +194°F) to the vessel. Let cure for 48 hours. Apply the silicone grease acoustic coupler (Dow Corning DC-4 or equal) to the bottom of the sensor and vessel wall. Calibrate.	
Cable entry	M20 x 1.5mm for gland
Repeatability & response	
Repeatability	± 1.0mm
Minimum response time	1.0 second
Variable alarm hold off	1 to 255 seconds

Installation Recommendations

The Pulsar *point* units should be mounted in direct contact with the outside wall of the tank, which should be clean and free from any loose or flaking material. The sensor to tank contact area should be coated with non-melting waterproof silicone compound to provide a direct acoustic coupling.

Commissioning and set-up are simple and straight forward. The set-up consists of a one button calibration routine to enable setting the option of *wet* or *dry* indication.

Represented by

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

