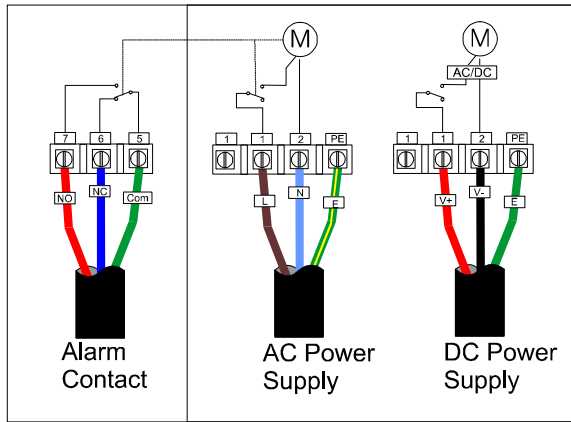
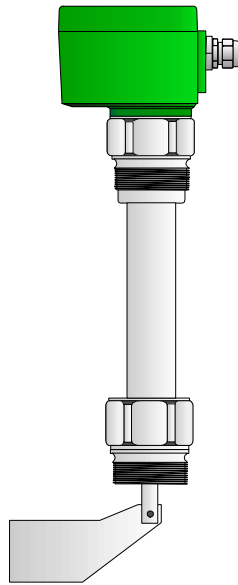
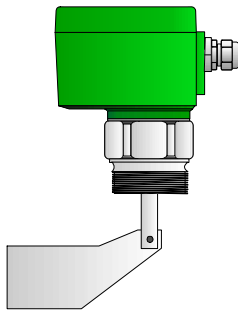


FIGURE 3 - Wiring Diagram

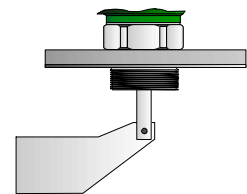


Standard Version
For vessel temperatures up to 80 °C.

High Temperature Version
For vessel temperatures up to 150 °C or 220 °C.



Flanged Version



PULSAR Process Measurement Limited

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SPECIFICATIONS

Housing	IP65 Die-cast aluminium
Process Connection	Aluminium, Galvanised Steel or Stainless Steel Threaded : 1.5 inch DIN, 1.25 inch DIN, or 1.5 inch NPT Flanged versions also available.
Vane Shaft	Stainless steel, dust-tight ball bearing, radial rotary shaft sealing to DIN 3760
Measuring Vane	Stainless Steel
Cable Gland	PG13.5
Pickup Delay	approx. 1.3 seconds
Sensitivity	Adjustable via the reset force of the spring or the geometry the measuring vane.
Vane Rotation Speed	1 rpm
Supply Voltages (Dependant upon model selected)	230 V AC 50/60 Hz (changeable to 115 V AC 50/60 Hz) 115 V AC 50/60 Hz (changeable to 230 V AC 50/60 Hz) 48 V AC 50/60 Hz (changeable to 24 V AC 50/60 Hz) 24 V AC 50/60 Hz (changeable to 48 V AC 50/60 Hz) 24 V DC All voltages +10% -15%
Installed Load	3VA (3W)
Signal Output Contacts	Floating Microswitch 250 V AC, 2 A, 500 W (cos φ=1) 300V DC, 2A, 60 W
Max. Vessel Pressure	0.8 bar, 80 kPa (versions available up to 10 bar)
Min. Product Density	20 kg/m ³ , 20 g/ltr (dependant upon vane type)
Max. Solid Particle Size	50 mm diameter
Temperature Range	-20 °C to +70 °C ambient -20 °C to +80 °C inside vessel Special versions available for internal vessel temperatures of up to +150 °C or 220 °C



PULSAR
Process Measurement

User Guide



Paddle Switch



APPLICATIONS

The PULSAR point 310 paddle switch is an electro-mechanical point level switch for use on bulk solids applications.

The PULSAR point 310 paddle switch can be used as a high level (full) alarm, a low level (empty) alarm or as a demand indicator.

The PULSAR point 310 paddle switch can be mounted at any angle.

The PULSAR point 310 paddle switch can be used on most bulk solids including powders, granular and dusty media.

Typical products for monitoring include:

- | | |
|-----------------------|-------------------|
| ⇒ plaster | ⇒ cereals |
| ⇒ cement | ⇒ cocoa |
| ⇒ chalk | ⇒ sugar |
| ⇒ lime | ⇒ animal feeds |
| ⇒ granulated products | ⇒ washing powders |
| ⇒ wood chips | ⇒ plastic powders |

OPTIONS

- ⇒ Versions for vessel temperatures up to +80 °C, +150 °C or +220 °C
- ⇒ Versions for vessel pressures up to 0.8 bar, 5 bar or 10 bar
- ⇒ 230 V AC 50/60 Hz, 115 V AC 50/60 Hz, 48 V AC 50/60 Hz, 24 V AC 50/60 Hz or 24 V DC Power supply options.
- ⇒ 1.5 inch DIN, 1.25 inch DIN, or 1.5 inch NPT Threaded process connections in aluminium, galvanised steel or stainless steel.
- ⇒ 150 x 150 mm square flange, DN32 PN6, DN100 PN6 or DN100 PN16 flange connections in aluminium, galvanised steel or stainless steel.
- ⇒ Various vane shaft lengths (100 mm to 300 mm).
- ⇒ Various vane types.
- ⇒ Weather protection cover
- ⇒ Protective Roof
- ⇒ Hex Locking Nut in aluminium, galvanised steel or stainless steel
- ⇒ Rotation control (only on 24 V DC version)
- ⇒ Housing heating (2.5 Watts)
- ⇒ Second cable gland
- ⇒ Signal lamp (green 2 Watts)
- ⇒ 2 m Stainless Steel Rope extension kit

PULSAR point 310 Paddle Switch

Rotating Paddle Switch for bulk solids applications.

MODE OF OPERATION

A low rpm synchronous induction gearing motor drives a rotating measuring vane which is mounted inside the vessel.

When the material level reaches the measuring vane it prevents the vane from rotating. The reaction torque is used to operate a microswitch which provides the alarm output and cuts the power to the motor.

When the vane becomes free again, as the material level decreases a spring allows the motor to resume its operating position and the microswitch restores power to the motor and removes the alarm signal

INSTALLATION

Remove the vane from the shaft, screw the paddle switch into the process connection from the outside of the vessel. Tighten clockwise using a spanner on the hexagonal section.

The unit should be installed with the cable gland at the bottom to prevent water ingress, see Figure 1.

The paddle switch can be secured using a locknut fitted from the inside of the vessel if an unthreaded process connection is used, see Figure 2.

Remove the lid and connect the power supply and relay contacts as shown in Figure 3. The power supply and signal output should be fused (4 A max.). The paddle switch must be powered via an isolating switch.

Ensure that the power supply voltage is correct for the paddle switch before wiring the unit up.

The installation is now complete.

FIGURE 1 - Installation

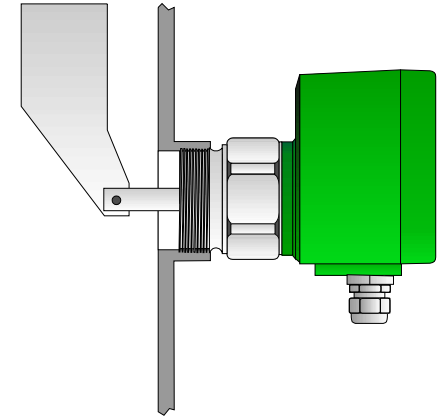
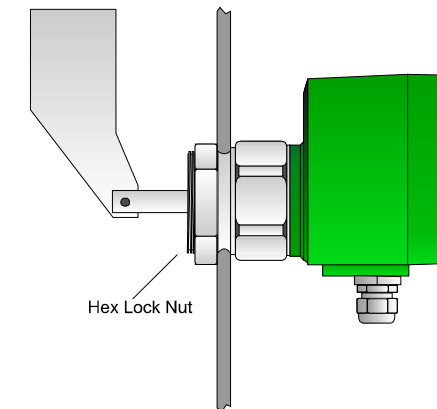


FIGURE 2 - Installation with a locknut



! WARNING !

- ⇒ **ELECTRICAL SHOCK HAZARD** Disconnect power before removing the lid.
- ⇒ Do not use this product as a mains isolating switch.
- ⇒ This product is **not** approved for use in Hazardous Areas
- ⇒ Failure to follow these precautions could result in serious injury or death.
- ⇒ Keep these instructions in a safe place after installation.