



Flood Detection Mobrey 003 Switch

Ultrasonic Liquid Level Switches

Manufactured in Polyphenylene Sulphide (PPS) for corrosion resistance in most liquids, the 003 range of sensors can be mounted in any position in a tank using either a 1" or 3/4" thread available in BSPP, BSPT and NPT thread forms.

A thread is provided on each side of a hexagonal boss to allow either external or internal / pole mounting of the sensor. Comprising a one piece moulded body with an integral PCB, the 003 switch is factory sealed and supplied with a 3m flying lead for customer connection.

The Mobrey 003 switch is designed for high or low level alarm duties to give a voltage free contact or solid state transistor output for alarm signalling or as part of a pump control system.

The moulded body contains two piezoelectric crystals, one each side of a gap at the tip of the sensor. An ultrasonic signal is transmitted from one crystal into the gap, but if there is air or gas in the sensor gap then the signal is not received by the other crystal. However, if there is a liquid present, the signal will be transmitted across the gap and the integral electronics will switch the output circuitry to signal the presence of a liquid.

The 003 sensor can be mounted at any angle in the vessel, although care should be taken to ensure that the liquid is free to drain out of the sensor gap. Position the sensor away from entry or exit points to avoid areas of excessive turbulence or aeration, and avoid installation in the direct flow of liquid. Ensure a clearance of at least 25mm from all sensor surfaces to vessel wall to avoid forming air pockets or sludge traps.

A threaded boss is recommended for pressurised applications.

Features

- Self contained liquid level alarm
- No moving parts
- Relay or solid-state output
- Corrosion resistant PPS construction
- 1" or 3/4" threaded mounting
- Small in-tank dimensions
- 24V ac or dc powered
- Lightweight
- European Directive compliance

Typical Applications

- Low level alarms in header tanks
- Pump control duty in feeder tanks
- High and low alarms in storage tanks
- Level and pump control in storage tanks
- Small or thin wall tanks
- Bund level detection
- Steering gear oil

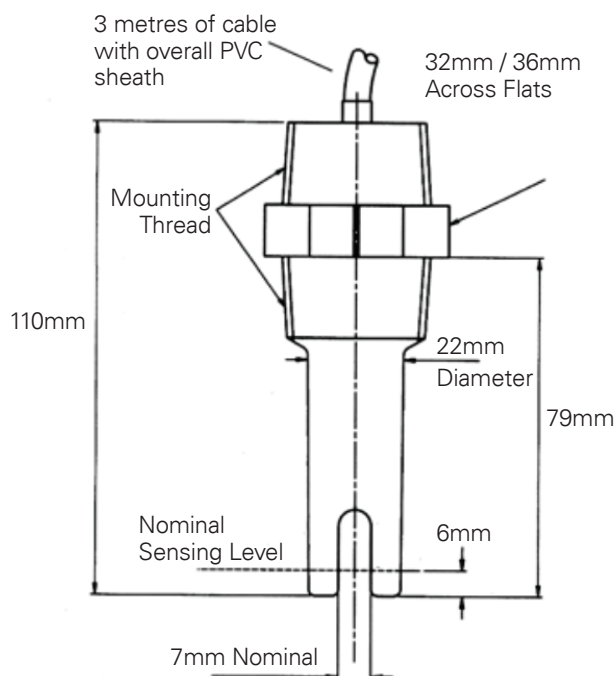
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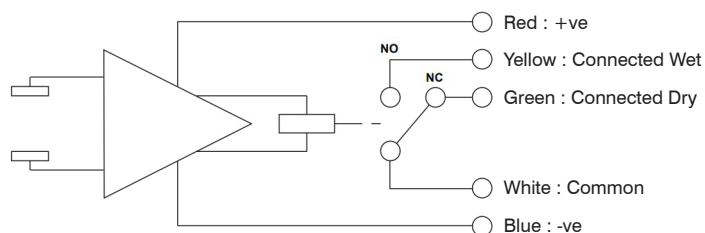
Technical Information

	003S* Models	003H* Models
Operating Pressure	20 bar	20 bar
Operating Temperature	-20°C to +70°C	-40°C to +105°C
Ambient Temperature	-20°C to +70°C	-40°C to +105°C
Minimum S.G.	0.50	0.50
Max Viscosity	5000cSt. at 20°C	5000cSt. at 20°C
Switching Response	50ms dry-wet 0.5s wet-dry	50ms dry-wet 0.5s wet-dry
Hysteresis	< 4mm	< 4mm
Repeatability	+/- 2mm	+/- 2mm
Overall length	110mm	110mm
Length into tank	79mm (External mount)	79mm (External mount)
Body diameter	22mm	22mm
Switching function	SPCO relay (energised wet)	2 x FET open drain (short circuit protected)
Maximum switched current	1A at 30v res. 0.25A at 30v ind.	100mA maximum
Maximum switched voltage	30v	30v
Power supply	18-30v dc or ac	18-30v dc or ac
Dry current drawn	10mA nominal	8mA nominal (4mA min)
Wet current drawn	25mA max	16mA nom (20mA max)
Cable length	3m: 5 core 7/0.2mm	3m: 4 core 7/0.2mm
Cable sheathing	PVC	PVC
IP rating of sensor	IP66/IP68 (3m)	IP66/IP68 (3m)
EMC	Devices meet the requirements of EMC European directive 89/336/EEC Light industrial EN50081-1 & EN50082-1/Industrial EN 50081-2 & EN50082-2	

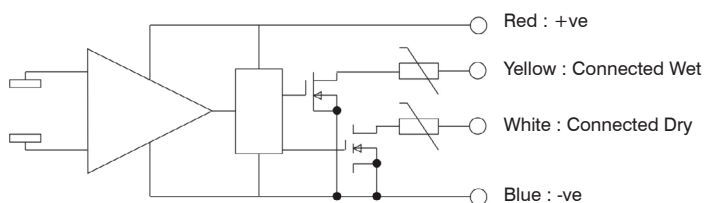
Please note that these devices are not suitable for use in intrinsically safe circuits or for the direct starting of large motors.



Schematic - 003S* Models



Schematic - 003H* Models



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All specifications and other information shown were current as of document revision date and are subject to change without notice.

PSF333JC Issue - 1 09/19

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