

Optical Level Switch

Operational principle

An optical level switch works by emitting a beam of infrared light within a prism and measuring the amount of light received. When the measured fluid reaches the sensor the amount of emitted light received drops thus triggering the contacts. As the sensor is detecting the state between material covering or not covering the prism it can be used to detect the presence or absence of fluid thus preventing damage to pumps.

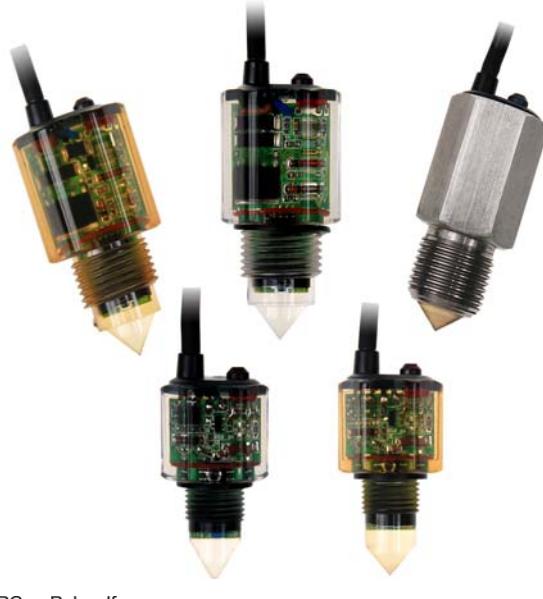
The compact unit houses the infrared transmitter, the prism, the receiver and the electronics, there is also an external LED indicator to show the condition of the switch. The sensor requires a power supply of between 10-28 Volts Dc. The benefit of the modern optical sensor is that there are no moving parts that can retain material and get clogged up or damaged, simply fit and forget.

Product Feature

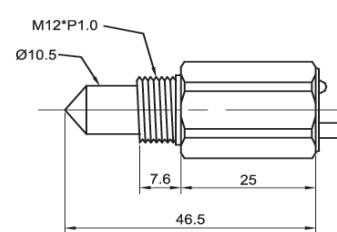
- * High quality sealed unit with 2m lead
- * NPN,PNP open collector output to energise relay or PLC.
- * Enclosure material of PC (Polycarbonate), PSU (Polysulfone), 304 or 316 Grade Stainless Steel for acidity and alkaline; applicable in waste water, Wine, Vinegar solutions, liquor, alcohol....etc.
- * Over current and reverse polarity protected
- * LED Status indication
- * Not recommended for use where fluids may leave residue.

Product Specification

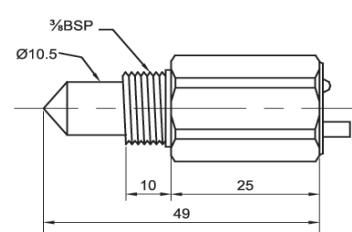
1. Ingress Protection: IP68
2. Operational temperature -10°C~ 125°C
3. Power Supply: 10~28 Volts DC
4. Ambient light: 5000 Lux (Visible light)
5. Load Current: Max Load 100mA
6. Overload Current Protection: 100mA
7. Connection Thread M12x1, 3/8" BSP or 3/8" NPT
8. Body Material: PC (Polycarbonate), PS (Polysulfone), 304 (A2) or 316 (A4) Grade Stainless Steel
9. Operational Pressure: Max 10Kg/cm² (Polycarbonate,Polysulfone)
Max 40Kg/cm² (304 S/S,316 S/S)
10. Ambient Temperature: -10°C~ 80°C
11. Lead Wire: 2m cable (dia 3.8) 3core PVC 22AWG, Custom made if over 2m.



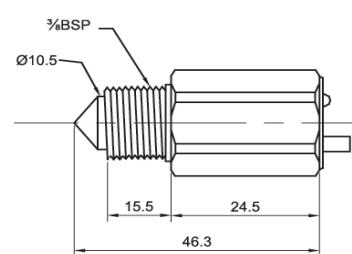
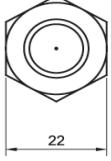
PC or Polysulfone



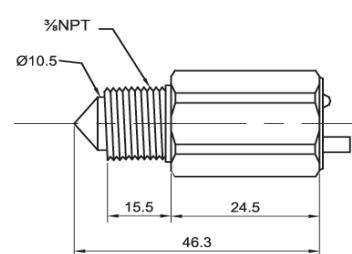
PC or Polysulfone



304 or 316 Grade
Stainless Steel



304 or 316 Grade
Stainless Steel



As part of the company policy of continued product improvement, specifications may change without notice. Our sales office will be pleased to help you with the latest information on this product range and the details of our full design and manufacturing service. All products are supplied to our standard conditions of sale unless otherwise agreed in writing.

ISO 9001:2008
Certificate No. FM21080

Phone : +44 (0)1255 862236

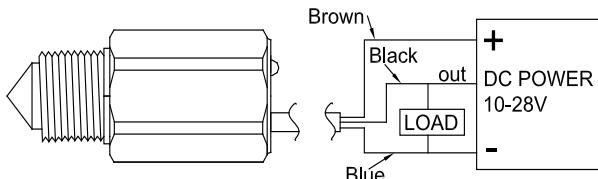
www.comuseurope.co.uk

Fax: +44 (0)1255 862014

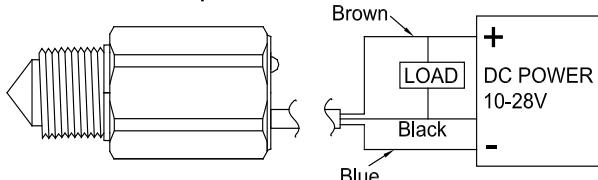
©2013 Copyright Comus Europe Ltd, Unit 7, Rice Bridge Industrial Estate, Thorpe - Le - Soken, Essex, CO16 0HL, ENGLAND.
USA: + 1 973 777 6900 - Belgium: + 32 (0)12 390400

Wiring

PNP Output



NPN Output



Order Information

Example: OPT-PC-AR-I

OPT- - - -

Housing Material

PC= Polycarbonate (Standard)

PS= Polysulfone

A2= 304 Grade Stainless Steel

A4= 316 Grade Stainless Steel

Connection Thread

AR= G 3/8" (BSP)

AU= 3/8 NPT (SS304 & SS316 only)

M2= M12 x 1.0 (Polycarbonate & Polysulfone only)

Output

1= PNP NC

2= PNP NO

3= NPN NC

4= NPN NO

*NO: Wet, In liquid NC: Dry, out of liquid

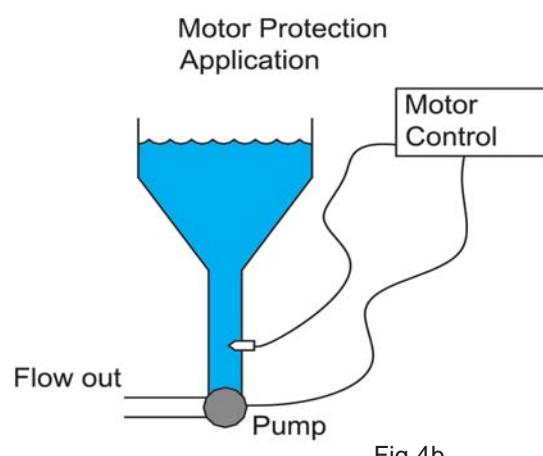
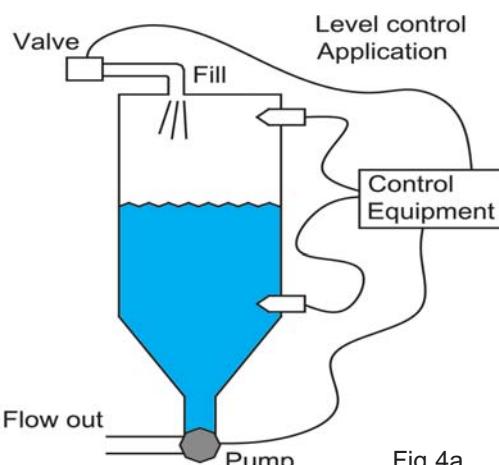
Liquid Level Control

In fig 4a two optical switches are installed individually in the upper and lower level of the tank.

When liquid rises to cover the upper optical switch it will trigger the solenoid valve to close. When the liquid level drops to the lower level the optical switch reopens the solenoid to refill the tank

Motor protection

In Fig 4b an optical switch is installed in the lower level of the tank which will cut the power to the pump thus protecting it from damage



Special Customisation

Please contact our sales office if you require specific wiring or connectors fitted.



ISO 9001:2008
Certificate No. FM21080

As part of the company policy of continued product improvement, specifications may change without notice. Our sales office will be pleased to help you with the latest information on this product range and the details of our full design and manufacturing service. All products are supplied to our standard conditions of sale unless otherwise agreed in writing.

Phone : +44 (0)1255 862236

www.comuseurope.co.uk

Fax: +44 (0)1255 862014

©2013 Copyright Comus Europe Ltd, Unit 7, Rice Bridge Industrial Estate, Thorpe - Le - Soken, Essex, CO16 0HL, ENGLAND.
USA: + 1 973 777 6900 - Belgium: + 32 (0)12 390400