

**Float Switches are economic and efficient liquid level sensors, simple to install, offering trouble free operation over a long life.**

FLO101 contains a special low current microswitch, which when used with an ATEX/IECEX approved barrier, it is compatible with the voltage and current requirements of intrinsically safe systems, such as areas designated as hazardous-gas environments. Models in this range of float switches are available in cable lengths up to 40m.

### Applications

- Level control & regulation in a tank well or sump
- Pump, motor & actuator switching systems (indirect)
- Filling & emptying of tanks & chambers
- Level indication by telemetry systems
- Flow control in flow channels
- Level warning by initiation of high or low level alarms



## COMPLIANCE

### ATEX Compliance

T-T PUMPS Ltd  
Model FLO101  
IECEX TRC 13.0005X  
Ex ia IIC T6 Ga  
II 1 G 0891  
TRAC13ATEX0006X  
T amb = -20°C + 70°C



### Conformity of Standards

IEC 60079-0:2011  
IEC 60079-11:2011  
IEC 60079-26:2006  
EN 60079-0:2012  
EN 60079-11:2012  
EN 60079-26:2007

### Other Conformity

The equipment has met the substance restrictions according to article 4 of the RoHS Directive

### Safety Advice

Warning - wipe only with a damp or antistatic cloth

### ATEX/IECEX Certification details



## SPECIFICATION

**Contact rating:** 0.1A resistive @ 30V.DC/125AC  
**Maximum temperature:** 70°C  
**Maximum Pressure:** 5 bar  
**Cable:** 3-core x 0.75mm<sup>2</sup> H05 RNF synthetic rubber  
**Weight with cable:**  
10 metre: 1.05kg ±5%  
20 metre: 1.90kg ±5%  
30 metre: 2.75kg ±5%  
40 metre: 3.60kg ±5%

**Material:** Polypropylene body and over-mould  
**Options:**  
Part number for IS Barrier: CHN/9002/13-280-093-00  
Part number for IS Relay: CHN/91702012215

**Part numbers for suitable counterweights for this products:**  
LT/FLOCW-1  
LT/FLOCW-2

## PROPERTIES

### Dimensions

Dimensions of float switch:

179mm x 85mm excluding cable length

Dimensions of float switch packaging:

300mm x 300mm x 100mm up to 20m cable length

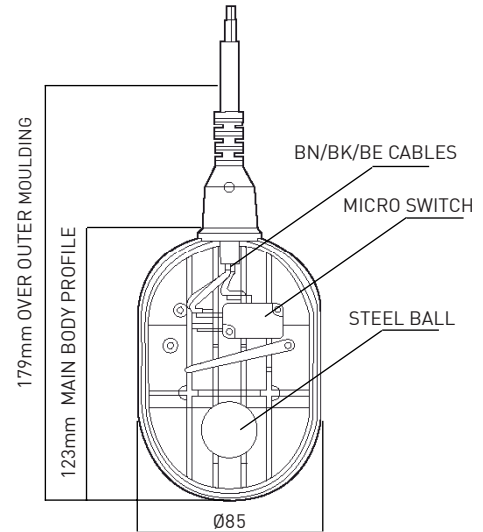
300mm x 300mm x 200mm up to 40m cable length

### Construction

The unit comprises of the following components:

- Polypropylene black RAL9004/4 shell with yellow RAL 1018/1028 polypropylene overmould providing suitability for a wide range of liquids
- Contained within the shell is a single pole double throw microswitch
- A three core rubber insulated cable is connected to the microswitch inside the float chamber. This cable is supplied in standard 10 metre lengths up to 40 metres

### Components



## OPERATION

### Method of operation

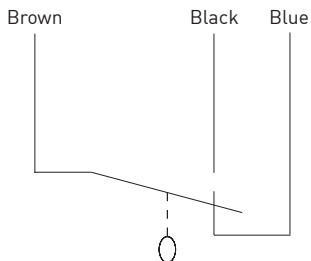
Switching is by internal ball-operated microswitch which changes contacts according to the attitude of the float.

- The float switch must be used with an intrinsically-safe system interface
- The float switch must only be powered by an ATEX/IECEX approved barrier that meets the following conditions;
  - $U_i = 28V$ ,  $I_i = 93mA$ ,  $P_i = 651mW$ ,
  - $C_i = 8nF$ ,  $L_i = 40\mu H$
- Part number for compatible IS Barrier: CHN/9002/13-280-093-00
- Part number for compatible IS Relay: CHN/91702012215

### Mounting and operational instructions

- Please refer to ATEX FL0101 operating instructions DATA967
- For further information and guidance regarding suitable applications please contact our sales office

### Cable colours and functions



### Connections (for a pumping application):

For emptying and for high level alarm use brown and black cable cores - the contact closes when up, opens when down.

For filling and for low level alarm - use brown and blue cable cores - the contact closes when down, opens when up.

### Please note:

- This product is not suitable for direct switching of motors
- It is essential to note that this switch is not inherently intrinsically-safe, and for hazardous areas must be installed as part of a complete purpose-designed intrinsically- safe system
- IS barrier available
- Counterweights available
- It is recommended that the float switch is connected to a low voltage power source
- Product should be installed by a competent and qualified person with suitable electrical protection.