

**TUNNELS**  
•  
**MINING**  
•  
**RESERVOIRS**  
•  
**PUMPING  
INDUSTRY**

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**INSTALLATION & OPERATING DATA**



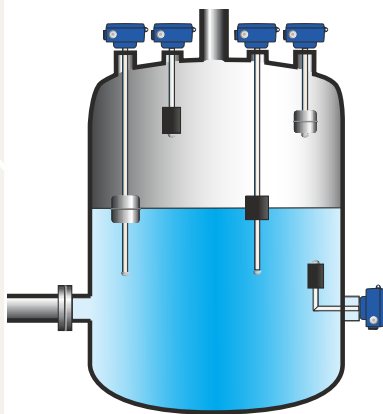
**1 APPLICATION**

General purpose level switching for alarm and control purposes. Suitable for insertion into tanks, vessels, sumps, storage containers and cooling systems.

The housing is provided with a threaded mounting bush or flange plate which can be fitted into a suitably prepared boss or standard flange aperture on the container being monitored.

Alternatively, a suitably prepared bracket can be positioned at the appropriate height over tanks and open vessels.

**2 PRINCIPLE OF OPERATION**



- The central tube of the Insertion Level Switch houses a series of magnetic reed switches. Up to five switches can be fitted, and these are progressively operated by a magnet inside the float as it rises and falls.
- Each float is restrained by a float stop and the reed contacts will be set for either a falling liquid level or a rising liquid level for the appropriate fail safe mode.
- Standard units have a terminal housing for cable connections, some versions have a multi-core connecting cable.
- The floats are available in phenolic foam or stainless steel. Stainless steel floats are used for high temperature applications.

**3 TECHNICAL DETAILS**

Temperature Limits: -10 to 80°C with phenolic foam float.  
 -10 to 150°C with stainless steel float.

Maximum Static Pressure: 5 bar with phenolic foam float.  
 20 bar with stainless steel float.

Switching Point Repeatability: ±5mm.

Mounting Attitude: Vertical ±30°.

Protection Classification: Dust and waterproof to IP66.

Body Material: Stainless steel 316.

Terminal Housing Material: Stainless steel filled Polyamide 6.

**INSTALLATION & OPERATING DATA**

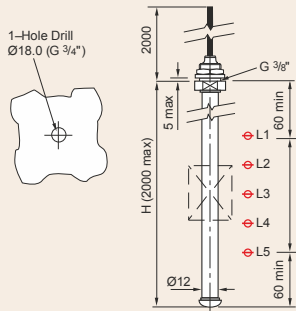
**4 DIMENSIONS**



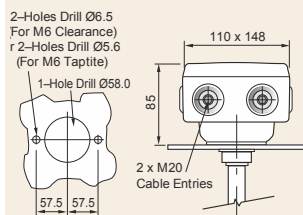
**TX5831**  
 G 3/8" BUSH MOUNTING  
 (Supplied with fixing nut)



**Flexible Cable**



**Terminal Housing**



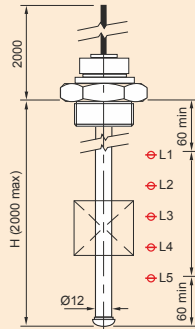
**Recommended Floats**

- 37mm Ø Phenolic Foam (32)
- 55mm Ø Stainless Steel (34)

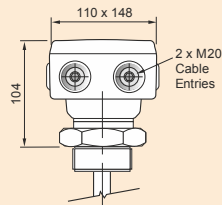
**TX5832**  
 G1 1/2" BUSH MOUNTING



**Flexible Cable**



**Terminal Housing**



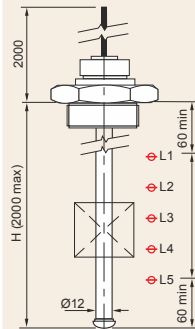
**Recommended Floats**

- 37mm Ø Phenolic Foam (32)

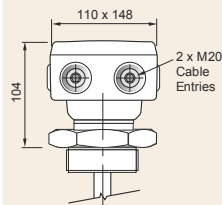
**TX5833**  
 G2" BUSH MOUNTING



**Flexible Cable**



**Terminal Housing**



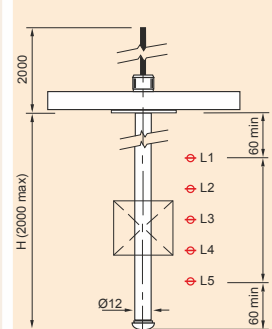
**Recommended Floats**

- 37mm Ø Phenolic Foam (32)
- 55mm Ø Stainless Steel (34)

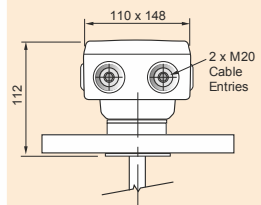
**TX5834**  
 BS4504 FLANGE MOUNTING  
 (Other Flange Formats Available)



**Flexible Cable**



**Terminal Housing**



**Recommended Floats**

- 37mm Ø Phenolic Foam (32)
- 55mm Ø Stainless Steel (34)

**THE SWITCHING LEVELS L1 TO L5 ARE REFERRED TO THE MOUNTING BUSH OR FLANGE**

ALL DIMENSIONS IN MM

**INSTALLATION & OPERATING DATA**

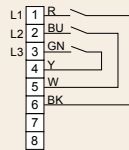
**5 ELECTRICAL DETAILS**

Magnetic Reed Contacts: 240V ac, 1Amp, 25 Watts.

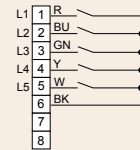
- N.B.** Contact protection is recommended to ensure that these instantaneous ratings are not exceeded during peak in-rush or surge conditions. Our Technical Applications Department will be pleased to assist with circuit applications.
- The in-rush current to an incandescent lamp can be as high as seven times its nominal current and this can cause the contact to weld.
  - Highly inductive loads such as solenoids and contactors can generate high voltage transients which will severely damage its reed contacts.
  - Do not use bells, buzzers or incandescent lamps to check the contact operation.

**6 CONNECTIONS**

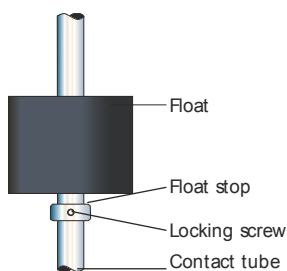
Arrangement for 3 switches or less.



Arrangement for 4 switches or more.


**6 MAINTENANCE**

- 6.1** No regular maintenance is necessary but the contact tube floats should be inspected regularly for evidence of any build-up of material. Cleaning can be carried out using a pressure spray or a soft brush.



- 6.2** The floats can be moved along the tube during the cleaning process by releasing the locking screws in the float stops.

**ENSURE THAT THE FLOAT STOPS ARE RETURNED TO EXACTLY THE SAME POSITION AFTER CLEANING.**

**INSTALLATION & OPERATING DATA**



**PROTECTING THE ENVIRONMENT**

**Many of our products are often used to monitor the quality of environmental conditions consequently Trolex is also particularly aware of the need to protect human health and the environment in which we live.**

The Company has instituted a radical environment protection policy to ensure that all aspects of our manufacturing programme have the minimum possible detrimental impact on the environment. This covers all stages beginning with sustainable product design supported by careful selection of the materials used in their production, through to managed recovery and disposal at the end of the useful life of a product.

This policy also incorporates the principles of the Waste Electrical and Electronics Equipment (WEEE) directive, and the associated Restriction of Hazardous Substances (RoHS) directive, to be implemented in EU countries.

Progress is already well advanced on the introduction of a completely new range of products that maximise the central principle of sustainable design with the intention of reducing the end-of-life cost to the end user.

All Trolex products are manufactured to exacting standards in accordance with our stringent quality control ethos. Having chosen to use one of our products will, in itself, guarantee extended durability and a long operating life, endorsed by our commitment to recycling and recovery.

- All packaging materials are carefully selected to be bio-degradable or re-cyclable where possible.
- All plastic materials are identified for recycling purposes and re-cycled materials are used where it is possible to do so.

- Printing paper and material are sourced from suppliers that have a declared environmental management system.
- Product design centred around high quality and long term durability. Modular architecture both in construction and software design suitable for future upgrades and adaptability to alternative duty.
- Ease of product disassembly, minimisation of fixing devices, and clear separation of functional parts to benefit re-use and re-cycling.
- Control and monitoring of suppliers of components and sub-assemblies. Deal only with suppliers that have a defined commitment to environmental monitoring principles.
- Control the use of restricted substances within the design process. Deal only with suppliers that have a defined commitment to the control of restricted substances.
- Provide an efficient high speed service within Trolex for repair, refurbishing and conversion of products for alternative duty.
- Provision of an end-of-life product Take-back service for recovery, re-use, and recycling of electrical and electronic components. Retain the packaging of a new product and re-use it to return the device to us at the end of its working life. Trolex will guarantee to recover all materials and components, where practicable and arrange for them to be re-cycled in an appropriate and in a safe manner.