

Mobrey Magnetic Vertical Level Switches

For Critical Area Applications or General Purpose Control



- Rugged, robust, and trusted all over the world
- Ideal for tough process control duties
- Operates in almost any liquid at high pressures and temperatures
- Multiple switch points
- Unique three-magnet, snap action, and latching switch mechanism
- Unique hermetically-sealed switching mechanism option
- Unique treble-seal pressure tube and union
- Wide range of mounting options
- External chamber options

Overview of Mobrey Vertical Level Switches



Mobrey side-and-side chamber with a float level switch fitted



Direct mounted level switch with 3-in. float

Introduction

Whether you require a switch for critical area applications or just general purpose control, the extensive range of Mobrey switches ensures that we will always have a solution to your particular problem.

A choice of displacer-type or float-type operated level switch is available to order for direct vertical mounting (no chamber included). See [Table 1 on page 4](#) or [Table 2 on page 6](#) for ordering information.

These level switches can be optionally supplied mounted vertically in chambers, in a sealed or removable form. A range of carbon steel chambers are available, and for more vigorous applications there are stainless steel chambers. See [Table 3 on page 8](#) for ordering information.

There are a variety of instrument and process connection options available to make installation simple and economic. This gives you the choice to meet your application in keeping with your budget.

Quality and reliability

Mobrey vertical magnetic level switches for industrial and process control use have been available for over 20 years and have gained a reputation for quality and reliability.

Choice of switching mechanisms

There are two switching functions available: 2 x SPST (SPCO) or DPDT (DPCO) switching, and each comes in four variants:

- **General purpose** with silver cadmium oxide contacts for long life
- **Low power circuit** with gold-plated contacts for use in low current and voltage applications such as Intrinsically Safe (IS) circuits
- **High power circuits** giving up to 10 Amps switching capability
- **Hermetically-sealed** for the ultimate in reliability – *sealed for life*

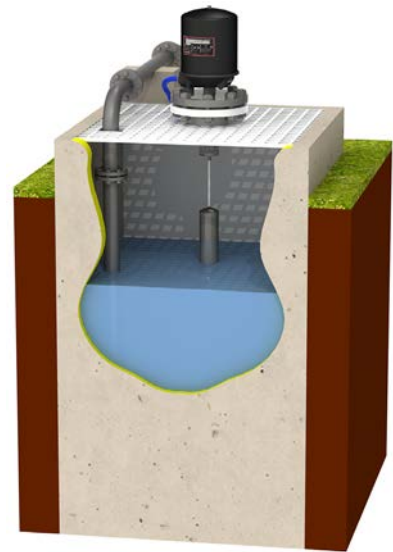
Based on the industry-standard boiler water level controls, these controls use the same three-magnet switch mechanism for snap-action latching and switching. The design of this unique switch mechanism overcomes all the inherent problems of mercury tubes and micro switches. Even under severe vibration conditions, there are no springs to cause contact bounce, hover, or even failure. The snap-action magnets give a positive and stable latching, time after time after time.

Operation in extreme conditions

When controls are required to operate in extreme conditions, the unique Mobrey hermetically-sealed switch provides dependable life-long operation that you can rely on. With all its moving parts and contacts completely enclosed, this genuine hermetically-sealed switch is suitable for use in corrosive atmospheres and low temperature environments.

Features

- Unique switching mechanism – *totally reliable*
- No springs in switch mechanism – *positive snap action switching*
- Vibration resistant – *eliminates spurious trips*
- Multiple switch point options – *cost effective control*
- Genuine hermetically-sealed switch option – *totally safe and secure*
- Extensive range of chambers – *suitable for most applications*
- Relevant chambers are supplied CE marked and fully compliant with the Pressure Equipment Directive (97/23/EC)
- Designed to ASME B31.3
- Weld procedures approved to EN ISO 15614-1 and ASME IX
- Welders approved to EN 287-1
- Material certification to EN 10204, 3.1
- Materials to ASTM and British Standards (BS)



Sump application with direct mounted displacer-type level switch

Approvals

- CSA approval:
Explosion-proof for Class 1, Div 1, Groups B, C, and D
- Factory Mutual (FM) approval:
Explosion-proof for Class I, Div 1, Groups B, C, and D
Class II, Div 1, Groups E, F, and G
General Area, Weatherproof type NEMA 4
- Flameproof ATEX II 1/2G Ex d IIC T6 Ga/Gb ($-50^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$)
- Flameproof IECEx Ex d IIC T6 Ga/Gb ($-50^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$)
- Technical Regulation Customs Union (EAC) Flameproof 1Exd IIC T6X
(see certificate RU C-GB.1B06.B.00078 for T_a range) and Ordinary Location Mark

Intrinsically Safe Use

For intrinsically safe circuits, gold-plated switch contacts are recommended. Users are reminded that it is their responsibility to obtain the necessary system approval and licences for such circuits.

BS EN ISO 9001: 2008

Delta Mobrey has been assessed and approved by Lloyds Register Quality Assurance against BS EN ISO 9001: 2008 for the design, development, assembly and re-calibration of precision instruments and systems for the measurement and indication of electrical signals, gas and liquid density, viscosity, pressure, level, flow and water/steam systems.

Quality assurance

With over 20 years worldwide experience in the major power, nuclear and petro-chemical industries, we are able to accommodate testing, surveying and documentation requirements as specified at the time of order. Inspection by customers or nominated inspection agencies can be arranged.



Direct mounted level switch with displacer type 11D