

# Mobrey M-Switch

## Float operated liquid level switch

### M - Switch

- Small in-tank dimensions
- Simple liquid level alarm
- Traditional high reliability switching
- European Directive compliance
- ATEX Flameproof models EExd

### Features

- Tough industrial build quality
- 316 St. Steel construction
- Flanged or threaded mounting

### Description

Manufactured in 316 stainless steel throughout, the M-Switch is available for side mounting with either a flange or 2" thread.

Comprising a small float on the wet side and a body containing a high current micro-switch on the dry side, the Mobrey M-Switch will reliably detect liquid level to give a voltage free contact operation for alarm signalling or as part of a pump control system.

### Operation

One permanent magnet forms part of a float assembly which rises and falls with changing liquid level. A second permanent magnet is positioned within the switch so that the adjacent poles of the two magnets repel each other through the non-magnetic wall of the switch body.

A change of liquid level which moves the float through its permissible travel will cause the float magnet to move and repel the switch magnet to give snap-action operation of the micro-switch contacts.

### Typical Applications

- Low level alarms in lubricating oils & fuel oils
- Pump control duty in header tanks
- High and low alarms in condensate tanks
- Level and pump control in storage tanks

### Installation

The M-Switch is designed for side mounting either direct into a vessel or in an external chamber. Choose a position where the effects of turbulence caused by agitators or inlets are minimised. The switch should be positioned so that the float may move freely over its full travel and not foul the sides, bottom or top of the tank. A flange or threaded boss is recommended for pressurised applications, designed such that the float is free to move over its full travel. Refer to Installation leaflet for full details.

### Technical Specification

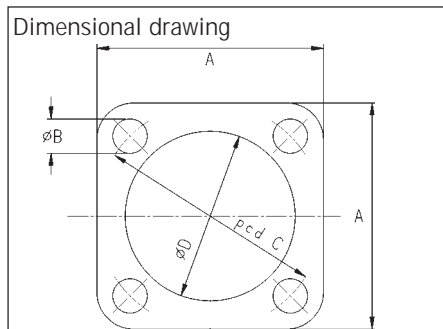
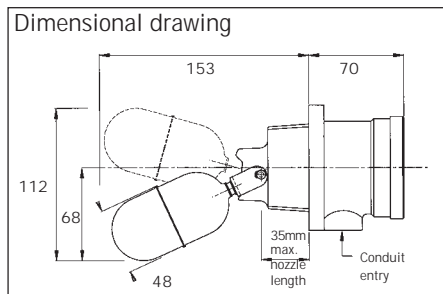
Operating pressure	See table overleaf
Operating temp.	0°C to +130°C
Ambient temp.	0°C to +60°C
Minimum S. G. Differential	0.75
Length into tank	25mm
Float diameter	153mm
Max. float swing	48mm
Switching function	112mm
Wetside material	SPCO
Body material	316 St. Steel
End cover matl.	316 St. Steel
Gasket:	
A flange	Non-Asbestos
D flange	Ethylene Prop.
Conduit entry	
A,D flange	M20
BSPT thread	M20
NPT thread	½" NPT



ATEX   

**mobrey**

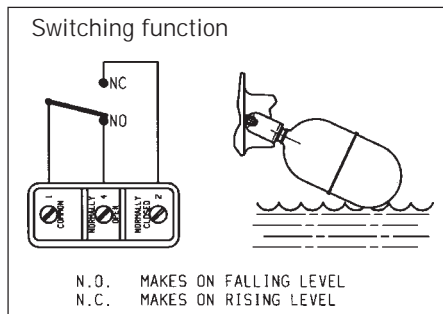
  
**EMERSON**  
Process Management



	A	B	C	D*
Mobrey A	92	14	92	66
Mobrey D	92	9	83	50

\*Mounting hole Dia. D to be +/-1mm

**Approvals**  
 Marine: Germanischer Lloyd  
 ATEX: 11 1/2G EExd IIC T6  
 0 to 50°C



### Weatherproof models

Code	Description		
SM	Mobrey M-Switch, 316 St.Steel construction		
Code	Mounting arrangement	Max. pressure	
		20°C	130°C
A	Mobrey "A" Flange	19 bar	15.4 bar
D	Mobrey "D" Flange	3 bar	3 bar
B	2" BSPT Threaded	19 bar	15.4 bar
N	2" NPT Threaded	19 bar	15.4 bar
Code	Enclosure		
1	Weatherproof IP66 / IP67		

SM A 1 Typical model number

### Flameproof models

Code	Description		
SM	Mobrey M-Switch, 316 St. Steel construction		
Code	Mounting arrangement	Max. pressure	
		20°C	130°C
A	Mobrey "A" Flange	25.0 bar	19 bar
B	2" BSPT Threaded	49.6 bar	44 bar
N	2" NPT Threaded	49.6 bar	44 bar
Code	Enclosure		
2	Flameproof ATEX 11 1/2G EExd IIC T6 (IP66/ IP67)		

SM B 2 Typical model number

Rating	AC	DC (Res.)	DC (Ind.)
Max. voltage V	250	250	250
Max. current A	15	0.25	15mA

The microswitch contacts are gold plated and are suitable for use in low power circuits.  
 Note :- Switching high power circuits will permanently damage the gold plating.  
 Not suitable for the direct starting of large motors

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