

# Mobrey M-Switch

## Float operated liquid level switch

Data sheet  
IP116

### M - Switch

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

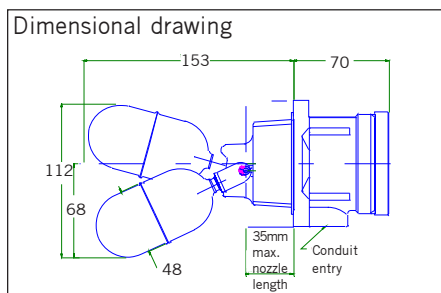
### Installation

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

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



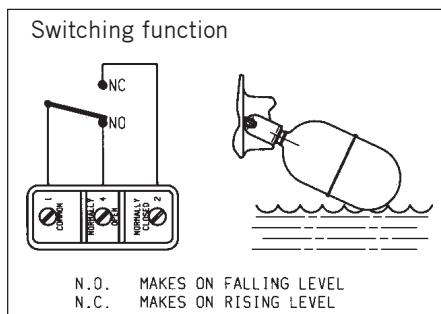


Dimensional drawing

	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  
 CENELEC: EExd IIC T6



## Weatherproof models

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		

Typical model number: **SM A 1**

## Flameproof models

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	33.8 bar
N	2" NPT Threaded	49.6 bar	33.8 bar
Code	Enclosure		
2	Flameproof EExdIIC T6 (IP66/ IP67)		

Typical model number: **SM B 2**

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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