

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 Stainless 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.

Technical Specification

Operating pressure	See table overleaf
Operating temp.	32°F to 266°F (0°C to +130°C)
Ambient temp.	32°F to 140°F (0°C to +60°C)
Minimum S.G.	0.75
Differential	1" (25mm)
Length into tank	6" (153mm)
Float diameter	1.9" (48mm)
Max. float swing	4.4" (112mm)
Switching function	SPCO
Wet side material	316 Stainless steel
Body material	316 Stainless steel
End cover material	316 Stainless steel
Gasket:	
A flange	Non-Asbestos
D flange	Ethylene Prop.
Conduit entry	
A,D flange	M20
BSPT thread	M20
NPT thread	½" NPT

Typical Applications

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

Installation

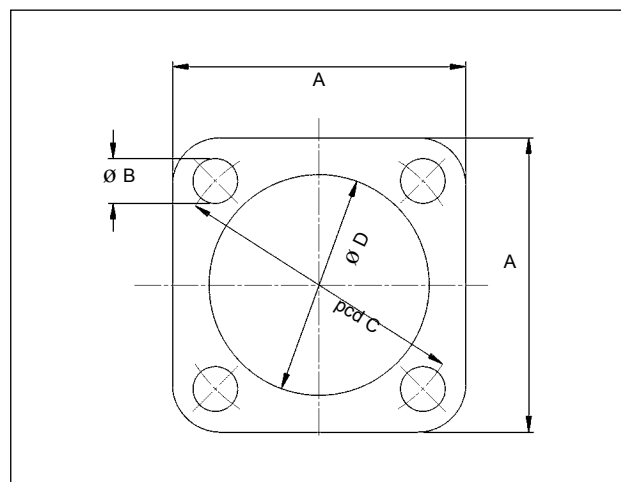
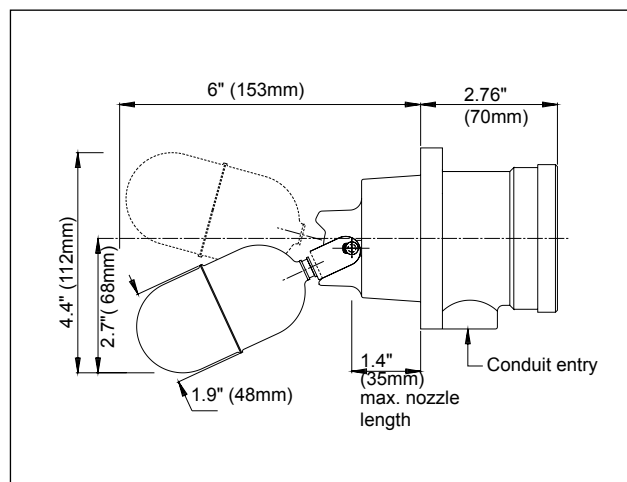
The M-Switch is designed for side mounting either direct into a vessel or in an external chamber. Choose a position where the effects of turbulence caused by agitators or inlets are minimized. The switch should be positioned so that the float may move freely over its full travel and not foul the sides, 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.

Mobrey M-Switch

Product Data Sheet

IP116
Catalog 2008 - 2009

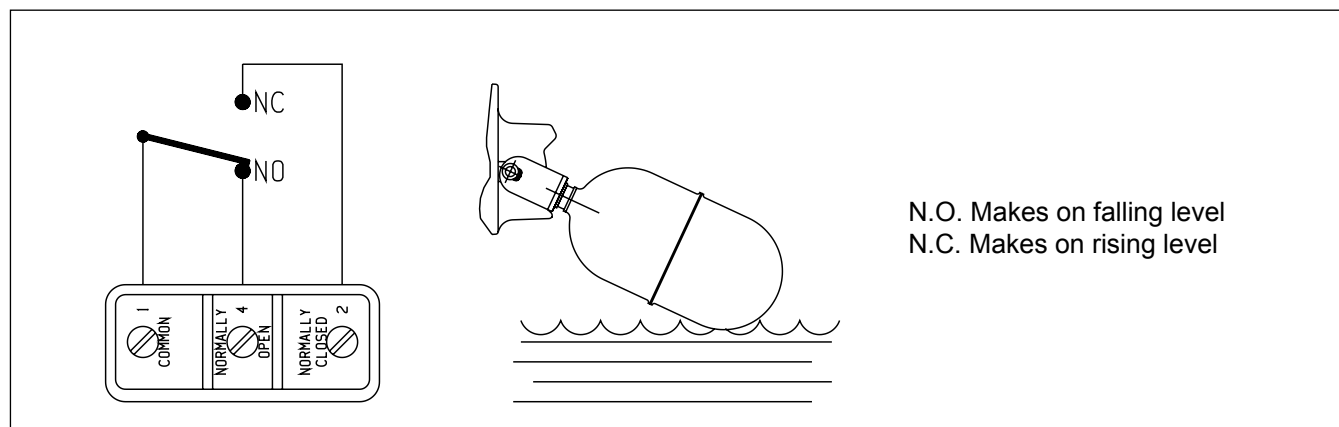
Dimensional Drawings



	A	B	C	D*
Mobrey A	3.6" 92mm	0.55" 14mm	3.6" 92mm	2.6" 66mm
Mobrey D	3.6" 92mm	0.35" 9mm	3.3" 83mm	2" 50mm

*Mounting hole Dia. D to be +/- 0.4" (1mm)

Switching Function



Approvals

Marine: Germanischer Lloyd

ATEX: II 1/2G EExd IIC T6 +32 - 122°F (0 to 50°C)

Product Data Sheet

IP116

Catalog 2008 - 2009

Mobrey M-Switch

Ordering Information

Weatherproof Models

Code Description			
SM	Mobrey M-Switch, 316 Stainless steel construction		
Code	Mounting arrangement	Maximum pressure	
		68°F (20°C)	266°F (130°C)
A	Mobrey 'A' Flange	275psi (19 bar)	223psi (15.4 bar)
D	Mobrey 'D' Flange	43psi (3 bar)	43psi (3 bar)
B	2" BSPT Threaded	275psi (19 bar)	223psi (15.4 bar)
N	2" NPT Threaded	275psi (19 bar)	223psi (15.4 bar)
	Code	Enclosure	
	1	Weatherproof NEMA 4 (IP66/67)	
SM	A	1	Typical model number

Flameproof Models

Code Description			
SM	Mobrey M-Switch, 316 Stainless steel construction		
Code	Mounting arrangement	Maximum pressure	
		68°F (20°C)	266°F (130°C)
A	Mobrey 'A' Flange	362psi (25.0 bar)	275psi (19 bar)
B	2" BSPT Threaded	719psi (49.6 bar)	638psi (44 bar)
N	2" NPT Threaded	719psi (49.6 bar)	638psi (44 bar)
	Code	Enclosure	
	2	Flameproof ATEX 11 1/2G EExd IIcT6 NEMA 4 (IP66/IP67)	
SM	B	2	Typical model number

Rating	AC		DC	DC
			(Res.)	(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.

Mobrey M-Switch

Standard Terms and Conditions of Sale can be found at www.rosemount.com/terms_of_sale

The Emerson logo is a trade mark and service mark of Emerson Electric Co.

Mobrey is a registered trademark of Mobrey Ltd.

All other marks are the property of their respective owners

We reserve the right to modify or improve the designs or specifications of product and services at any time without notice.

International:

Emerson Process Management

Mobrey Measurement Division

158 Edinburgh Avenue, Slough,

Berks UK SL1 4UE

T +44 (0)1753 756600

F +44 (0)1753 823589

www.mobrey.com

Americas:

Emerson Process Management

8200 Market Boulevard

Chanhassen, MN USA 55317

T (US) (800) 999-9307

T (International) 952) 906-8888

F (952) 949-7001



EMERSON
Process Management