

MS8D

Displacer Level Switch

Extended body horizontal electric level displacer switch K-TEK Products



Introduction

The MS8D is a single-pole, double-throw electric switch capable of sensing high or low liquid level inside a process vessel. This switch has a stainless steel housing and is hermetically sealed and requires no maintenance. The MS8D can provide either a normally open or normally closed dry contact to activate external devices such as alarms or solenoids. Variations in process fluid specific gravity have minimal effect on the level measured because of the small size of the integral polypropylene displacer.

The standard unit is installed through a 1" NPT fitting and has a displacer constructed of Polypropylene that will operate in specific gravities down to 0.6 and pressures to 2500 psig at 180° F. Due to the length of the float, this switch must have 4" of vertical clearance for the unit to operate. This switch is available with various mounting options and insertion lengths to 24 inches/610mm.

Features

- Electrical Contacts are Magnetically Isolated from Process
- Polypropylene Displacer for High Pressure Applications
- Mounting Via 1" NPT Process Connection
- Optional Flange Mounting Adapters Available
- Hermetically Sealed SPDT Switch (NO / NC Contact)
- Vibration Resistant
- Switch is Totally Enclosed within Stainless Steel Housing (Flying Leads)
- Hex Shaped Housing & SPDT Contacts Allow for Easy Installation
- Designed & Constructed to FM, UL, NEMA & ANSI/ISA Guidelines
- Two Standard QuikShip Models with Various Custom Designs Available

SPECIFICATIONS:

Switch Type	Magnetically actuated, hermetically sealed bistable switch, SPDT, Form C
Contact Material	Rhodium Alloy
Switch Action	Break before make
Contact Ratings	AC Ratings: 100 VAC, 1 Amp, 100 VA, resistive DC Rating: 100 VDC, 1 Amp, 100 W, resistive (if higher contact ratings are required, see IR10 & PP10 Data Sheets)
Process Temperature	-40 to 180°F / -40 to 82°C
Maximum Pressure	2500 psig @ 180°F / 172 bar @ 82°C
Connections	1" MNPT Process, 1/2" FNPT Conduit & AWG 20 Wiring Harness (18 inch); MS8D Housing is 1 3/4" Hex for tightening into process connection.
Insertion Length	9 in. / 229 mm Standard; Optional lengths to 24 in. / 610 mm available
Materials	Polypropylene Displacer; Other Wetted Parts 316 SS
Specific Gravity	0.6 Minimum (Clean Fluids)
Approvals	General Purpose Only

ORDERING INFORMATION:**Custom Models:****MS8D / a / b / c / d:****/a Process Connection**

10	1" MNPT Standard
WPx	Welded Flange (use suffix option from Table 1)
FLx	Loose Flange (use suffix option from Table 1)

/b Markings

X	Standard Marking
NP	Standard Marking with 316 SS Nameplate (includes Customer Specified Tag Number)

/c Insertion Length

E1	9 in. / 229 mm Standard
E2	15 in. / 381 mm
En	Custom Insertion Length; n = 9 to 24 inch / 229 to 610 mm
Note: Sizing Calculation for Through Nozzle Installation (Insertion Length - 9 inches = Maximum Nozzle Projection)	

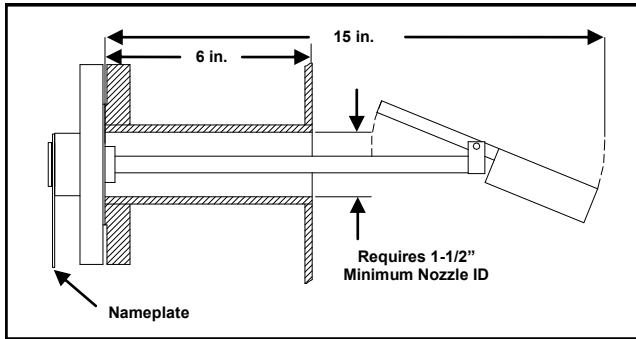
/d Approvals

X	None Standard
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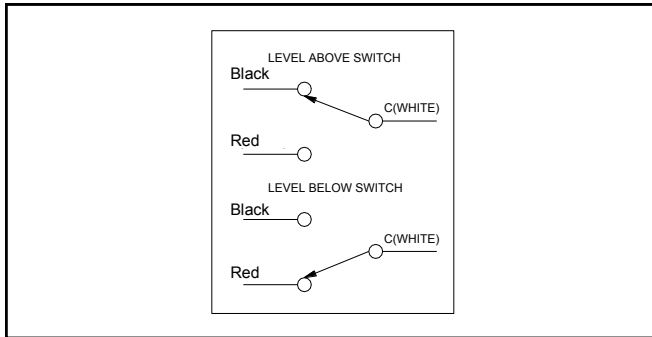
Accessories:

PP10	Pumpak Controller; Two MS8D Switches Required; (i.e. Hi / Lo Control Configuration)
IR10	Interposing Relay; Only one MS8D Switch Required

Typical Through Nozzle Installation



Operation of Electrical Contacts



Typical Inside Nozzle Installation

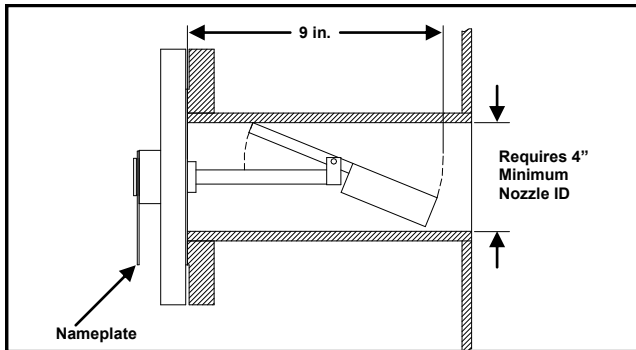


Table 1
Process Connection
Options

Flange Adapter ¹	Welded Flange Option (/a)	Loose Flange Option (/a)
1-1/2", 150#	SR151	SRL151
1-1/2", 300#	SR153	SRL153
1-1/2", 600#	SR156	_____
1-1/2", 900#	SR159	_____
1-1/2", 1500#	SR1515	_____
2", 150#	SR21	SRL21
2", 300#	SR23	SRL23
2", 600#	SR26	_____
2", 900#	SR29	_____
2", 1500#	SR215	_____
2-1/2", 150#	SR251	SRL251
2-1/2", 300#	SR253	SRL253
2-1/2", 600#	SR256	_____
2-1/2", 900#	SR259	_____
3", 150#	SR31	SRL31
3", 300#	SR33	SRL33
3", 600#	SR36	_____
3", 900#	SR39	_____
4", 150#	SR41	SRL41
4", 300#	SR43	SRL43
4", 600#	SR46	_____
6", 150#	SR61	_____
6", 300#	SR63	_____

¹All flanges are standard raised face.

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