Extended body horizontal electric level float switch

K-TEK Products

Introduction
The MS8F 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 MS8F 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 stainless steel float.

The standard unit is installed through a 1” NPT fitting and has a float constructed of 316 SS that will operate in specific gravities down to 0.4 and pressures to 600 psig at 300°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
- Stainless Steel Float for Low Pressure / High Temperature 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
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 302°F / -40 to 150°C
Maximum Pressure: 600 psig @ 300°F / 41 bar @ 150°C
Connections: 1” MNPT Process, 1/2” FNPT Conduit & AWG 20 Wiring Harness (18 inch);
MS8F Housing is 1 ¾” Hex for tightening into process connection.
Insertion Length: 10 in. / 254 mm Standard; Optional lengths to 24 in. / 610 mm available
Materials: 316 SS Wetted Parts
Specific Gravity: 0.4 Minimum (Clean Fluids)
Approvals: General Purpose Only

ORDERING INFORMATION:
Custom Models:
MS8F / 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    10 in. / 254 mm Standard
  E2    16 in. / 406 mm
  En    Custom Insertion Length; n = 10 to 24 inch / 254 to 610 mm

Note: Sizing Calculation for Through Nozzle Installation (Insertion Length - 10 inches = Maximum Nozzle Projection)
/d Approvals
  X     None Standard

Accessories:
PP10  Pumpak Controller; Two MS8F Switches Required; (i.e. Hi / Lo Control Configuration)
IR10  Interposing Relay; Only one MS8F Switch Required

<table>
<thead>
<tr>
<th>Flange Adapter</th>
<th>Welded Flange</th>
<th>Loose Flange</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/2”, 150#</td>
<td>SR151</td>
<td>SRL151</td>
</tr>
<tr>
<td>1-1/2”, 300#</td>
<td>SR153</td>
<td>SRL153</td>
</tr>
<tr>
<td>2”, 150#</td>
<td>SR21</td>
<td>SRL21</td>
</tr>
<tr>
<td>2”, 300#</td>
<td>SR23</td>
<td>SRL23</td>
</tr>
<tr>
<td>2-1/2”, 150#</td>
<td>SR251</td>
<td>SRL251</td>
</tr>
<tr>
<td>2-1/2”, 300#</td>
<td>SR253</td>
<td>SRL253</td>
</tr>
<tr>
<td>3”, 150#</td>
<td>SR31</td>
<td>SRL31</td>
</tr>
<tr>
<td>3”, 300#</td>
<td>SR33</td>
<td>SRL33</td>
</tr>
<tr>
<td>4”, 150#</td>
<td>SR41</td>
<td>SRL41</td>
</tr>
<tr>
<td>4”, 300#</td>
<td>SR43</td>
<td>SRL43</td>
</tr>
<tr>
<td>6”, 150#</td>
<td>SR61</td>
<td></td>
</tr>
<tr>
<td>6”, 300#</td>
<td>SR63</td>
<td></td>
</tr>
</tbody>
</table>

1All flanges are standard raised face.
Operation of Electrical Contacts

Typical Through Nozzle Installation

Typical Inside Nozzle Installation

Requires 1 1/2" Minimum Nozzle ID

Requires 4" Minimum Nozzle ID

Nameplate

Nameplate