A Versatile and Proven Liquid Level Control Solution

FLOAT SWITCH
Cat No. FS5
### Instruction

The PDL precision snap action Float Switch is designed for operation in magnetically operated motor starting control circuits, or alternatively may be connected directly in the main active switching circuit of single phase motors up to 2hp 250V AC.

The PDL float switch provides accurate and dependable control of high and low liquid levels. It is designed primarily for operation in fresh or saltwater, alkaline solutions, oils or weak acids, having a specific gravity between 0.9 and 1.1 and a maximum temperature of 38°C.

### Construction

The unit incorporates a 20 Amp replaceable Micro-Switch contained in a compact, robust powder coated alloy case, fitted with a rubber gasket cover and neoprene seal on the operating spindle. This permits the units to be installed in locations requiring Dust Tight or Weatherproof enclosure. The non ferrous operation spindle is carried in self lubricating bushings and all working parts are corrosion proofed.

### Feature

- Fully sealed alloy enclosure
- Automatic operation
- Easy wiring
- Replaceable micro-switch
- Submersible components are impervious to saltwater, alkaline solutions, oils and weak acids.

### Uses

Liquid level control in tanks, reservoirs, pits, dams, etc.

### Operating Parts

Terminals are located in a convenient position for easy wiring and M20 screwed conduit entry is provided.

The float has no metal parts and is completely constructed of Poly-Vinyl Chloride (PVC) on a nylon suspension line provided with adjustable nylon upper and lower operating stops.

The line weight is powder coated and is adjustable to any position on the suspension line.

Switches are provided with 2.7m of suspension line, but this length may be increased using nylon line of approx. 1.0mm diameter.

The powder coated alloy operating arm is balanced to match the line weight (when suspended in fluid with a specific gravity of 0.9 to 1.1).

The design provides positive operating effort to the snap action switch mechanism at extremely slow speeds of the float, this ensures positive contact opening and closing eliminating contact chatter.

### Rating

<table>
<thead>
<tr>
<th>AC:</th>
<th>20A; 125, 250 or 480V</th>
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<tbody>
<tr>
<td>Motor Starting:</td>
<td>1hp – 125V AC, 2hp – 250V AC</td>
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<tr>
<td>DC:</td>
<td>0.5A – 125V, 0.25A – 250V</td>
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**Float Switch FS5 and Spare Parts**

<table>
<thead>
<tr>
<th>Cat No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>FS5</td>
<td>20A Single Pole Double Throw Float Switch, complete with 2.7m of float suspension line, line weight, operating stops and float ball</td>
<td>1</td>
</tr>
<tr>
<td>FS5/1</td>
<td>FS5 Less Line, Float, Weight</td>
<td>1</td>
</tr>
<tr>
<td>FS5/2</td>
<td>FS5 Operating Arm Assembly</td>
<td>1</td>
</tr>
<tr>
<td>FS5/3</td>
<td>FS5 Float Ball Only</td>
<td>1</td>
</tr>
<tr>
<td>FS5/4</td>
<td>FS5 Suspension Line, Operating Stops and Line Weight</td>
<td>1</td>
</tr>
<tr>
<td>FS5/6</td>
<td>FS5 Micro-Switch Assembly</td>
<td>1</td>
</tr>
</tbody>
</table>

**Float Switch Operation Diagram**

- **Operating Arm**
- **Nylon Line**
- **Upper operating Stop**
- **Float**
- **Ballast**
- **Lower operating Stop**
- **LINE WEIGHT** must be clear of the bottom in the lowest position.

**SETTING FLUID LEVELS**

Fluid levels are determined by the positions of the upper and lower operating stops—levels are limited only by the length of the nylon line.

**HIGH FLUID LEVEL**

The float buoyancy raises the line weight and the switch is actuated by the operating arm.

**High Fluid Level**

Contact configuration after switch operation at high fluid level:

**LOW FLUID LEVEL**

The weight of the float, including ballast comes to rest on the lower operating stop and operates the switch.

**Low Fluid Level**

Contact configuration after switch operation at low fluid level:
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NOTE:
ALL DIMENSIONS SUBJECT TO ALTERATION WITHOUT NOTICE.

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* As standards, specifications and prices change from time to time, please ask for confirmation of the information given in this publication.