Float Operated Magnetic Level Switches

**Features:**

- Magnetic Transmission: Switch entirely glandless. Switch housing non-rotatable (rotatability not desired in case of horizontal mounting).
- Suitable for horizontal mounting.
- Adjustable Differential Attachment for higher differential.
- Float with extension Rod for Longer nozzles.
- Level switch with extended Tail-Piece & Counterbalance Weight for high pressure applications.
- Fulcrum Guard with Neoprene Bellows in case of liquids having suspended matters (max temp. 70°C).
- External Chamber for installation of Level Switch outside main vessel with 1” NPT(F) or 1”SW (or flanged) vessel connections at top & bottom or at sides (thru' bent pipes). Chamber is normally 6”NB (can also be 4”NB) – fabricated.
- Miniature Model complete with 2M Cable.
- Snap acting/Air Break type contacts or Microswitches.
- IBR/ LLOYDS Certification (if required).
- CIMFR Certification CCOE approval, BIS licence for Flame-proof Level Switches under Gas Gr. IIA, IIB & IIC (IS2148:2004).

**Applications:**

Level Alarms & Controls for Storage Tanks, Steam Drums etc. in Power Plants, Petrochemical Plants & Refineries, Chemical Plants, Paper Mills, Sugar Mills etc.

**Principle of Operation:**

With the rise of liquid level, the float moves up thereby lowering the tailpiece (and Vice versa). The tailpiece magnet, by principle of repulsion pushes a magnet inside Level Switch Body. The Magnet makes or breaks contacts (Air-break type) or operates one or two Microswitches. Switches operated by snap action due to principle of repulsion.
**Specifications:**

**Materials of Construction**

- **Body:** SS 304/ SS 316/ Gun Metal/ Ebonite/ Teflon/ PVC/PP.
- **Float:** SS 304/ SS 316/ Ebonite/ Teflon/ PVC/PP; ECTFE/ FEP Coated if required.
- **Chamber:** Carbon Steel / SS 304 / SS 316 / PVC/PP; ECTFE/ FEP Coated/ Lined, Rubber lined if required.
- **Cover:** Aluminium / Stainless Steel / Ebonite.

**Enclosure Class**

- Weatherproof to IP66 or weatherproof & flameproof (to Gas Groups I, IIA, IIB or IIC as per IS 2148 : 2004).

**Vessel Connections**

- Levcon Standard Flanges (120.5 mm dia round X 11 mm thick having 4 nos. 14 mm dia bolt holes at 92 mm PCD in case of pressure upto 10kg/cm². 140 mm dia X 22.7 mm thick having 4 nos 17.5 mm dia bolt holes at 105 mm PCD in case of Ebonite/Teflon/PVC/PP type. 82.5 mm Sq. X 9.5 mm thick having 4 nos 9.5 mm dia bolt holes at 82.5 mm PCD in case of Miniature type) or as per IS/BS/ANSI/DIN Standard (min. 65 NB).
- Flanged / Screwed/ Sw in case of External Chambers.

**Pressure Rating**

- 110 Kg/Cm² max. Please refer to us in case of higher pressure. Max. 0.4 Kg/Cm² in case of Ebonite, 0.6 Kg/Cm² in case of Teflon / PVC/ PP and 5 Kg/Cm² in case of Miniature Model.

**Temperature Rating**

- 500°C max. or higher and -200°C min. with Intermediate Chamber (max. 250°C for standard models), Max. 55°C in case of Ebonite, 60°C in case of Teflon / PVC/PP & 150°C in case of Miniature Model.

**Specific Gravity**

- 0.75 - 1.2. Special Floats for other Specific Gravities and Interface Applications.

**Differential**

- 12 mm ± 2 mm (higher where extension rod provided). 17 ± 2 mm When Fulcrum Guard with Neoprene Bellows provided.

**Contact Type**

- Air Break Type (1NO+1NC) or Microswitch (1 SPDT or 2 SPDT)(Standard or Hermetically sealed Microswitch having Silver/ Gold contacts).

**Contact Rating**

- Air Break Type : 2A at 250 V AC / 2A at 24 V DC.

**Micro Switch (standard type)** : 5A at 230V AC/4A at 24V DC (please refer to us in case of special or Hermetically sealed microswitches).

**Cable Entry**

- ½", ¾" NPT as standard, other types when required (upto 2 Cable Entries in case of non-flameproof enclosures).

**Vent/ Drain Connection**

- As required (where External Chamber provided).
### MODEL NUMBER OF FLOAT OPERATED MAGNETIC LEVEL SWITCHES

<table>
<thead>
<tr>
<th>Type of Switch Box.</th>
<th>Type of Design</th>
<th>Pressure Class</th>
<th>Material of Body</th>
<th>Type of Switch</th>
<th>Material of Float Assy.</th>
<th>Type of Float Assy.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.Weatherproof.</td>
<td>2.Std. with Extended Tail Piece.</td>
<td>4.10/15 kg/cm²</td>
<td>6.SS 316 °2</td>
<td>2.Microswitch (2-SPDT)</td>
<td>6. SS 316</td>
<td>Ebonite</td>
</tr>
<tr>
<td></td>
<td>5.Int. Chamber Type (Low Temp.)</td>
<td>7.80/110 kg/cm²</td>
<td></td>
<td>*1.Non-Wetted parts normally in Aluminium in case of Min. type/Teflon.</td>
<td></td>
<td>6. Miniature Type</td>
</tr>
</tbody>
</table>

**N.B** : 1. Pressure Class 4,5,6,7 are basically 150/300/600/900 ANSI rated & hence max. pressure may be higher than indicated.

2. All Combinations not possible. Please contact us in case of doubt.

---

Since improvements are made from time to time, the specifications are liable to change without notice.

**Head Office Address** : “RajKamal” Bldg, 6th Floor, 13, Camac Street, Kolkata – 700017, Tel : 033)2283-2766/3022-5767/3022-9368 Fax : (033)2283-2719/2280-9645.E-mail : info@levcongroup.com, levconh@vsnl.net, levcon@ricmail.com.

**Mumbai Branch Address** : 301, Proprima Chambers, 1 Suren Road, Andheri East, Mumbai-400093, Tel : (022)2683-2127/ 2683-3015, Fax : (022)2683-3015. E-mail : levconm@airtelmail.in

LI/LS/01 (Dt. 23.05.2009).