



FLOAT & DISPLACER TYPE LEVEL SWITCHES

5. HFS SERIES - HORIZONTAL MOUNTING MAGNETIC FLOAT LEVEL SWITCHES

HFS is an economical, maintenance free and reliable device used for high or low or intermediate point level switching. It is ideal for tanks with inaccessible tops or bottoms and where insertion depths of top mounted models are exceeded

5.1 CONSTRUCTION & OPERATION

The Horizontal mounting float switches uses Magnets and works on the principle of magnetic repulsion.

HFS consists of a free moving pivoted float assembly and a switch enclosure in non - magnetic material to achieve undisturbed magnetic flux. It employs dual magnets, one in the float arm and other in the contact carriers housed in the switch enclosure. A change in liquid level brings the like poles of dual magnets opposite to each other and the resulting repulsion force ensures a changeover of contacts with snap action. The magnetic transmission is glandless, leaving no scope for leakages from vessel into switch housing. These switches are manufactured in various materials, enclosures & special features to suit broad range of media / applications. They are designed to provide high repeatability and to minimize effects of shock, vibration & Pressure.

5.2 INSTALLATION OPTIONS

HFS can be mounted both internally & externally through a chamber if installation is required outside the main vessel. External mounting is resorted to, where space is a limiting factor or mechanical devices like stirrers operate within the tank. Besides, in applications like boilers, reaction kettles with external mounting, isolation is possible for regular servicing. The switch is normally side-mounted, however for applications like slurry, top installation is preferred. The switch can be wired directly "to make or break electrical circuits", of burners, heaters, motor pumps, alarms and other such electrically operated devices.

FEATURES

1. Approved by CMRI for Gr. I, IIA, IIB applications
2. Level switch also available in complete SS316 material
3. Customization on request
4. External chamber option available



Flame proof- SS Enclosure

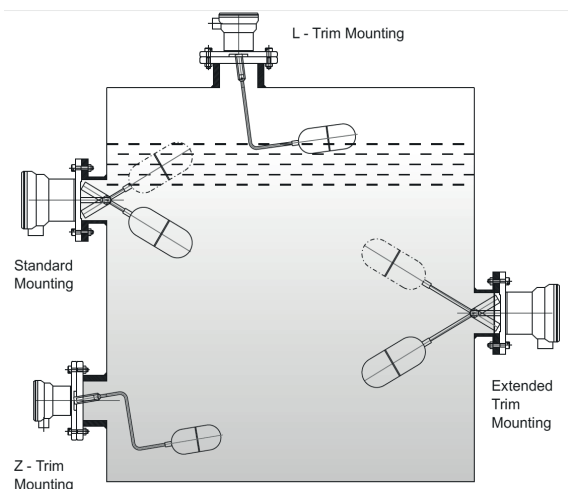


weather proof- Cast Aluminium Enclosure



Complete PP Construction

TYPICAL INSTALLATION IN A TANK



5.3 ORDERING INFORMATION FOR HORIZONTAL MOUNTING MAGNETIC FLOAT SWITCHES

SPECIFY PART NO. → HFS **1** **2** **3** **4** **5** **6** **7**

HFS

Example: HFS **W** **2** **1** **1** **2** **F3** **1**

1	ENCLOSURE
W	Weather Proof IP 65/ Aluminum
F	Flame Proof / SS304 for Gr. IIA, IIB
G	Flame Proof / SS304 for Gr. IIC
P	Polypropylene
O	Others

2	WETTED PARTS
1	SS304
2	SS316
3	SS316L
4	Polypropylene
5	Titanium
6	Hastelloy C276
7	PVDF
O	Others

3	PROCESS CONNECTION
1	Sq. 92 x 92 PCD, Casted Flange
2	Ø 120mm x 92 PCD
3	Ø 127mm x 98 PCD (1½" #150)
4	Ø 152mm x 121 PCD (2" #150)
5	Ø 152mm x 114 PCD (2" BS 10 - E)
6	Ø 190mm x 152.4 PCD (3" #150)
7	Ø 165mm x 127 PCD (2½" BS 10 - E)
8	Ø 178mm x 140 PCD (2½" #150)
9	Ø 230mm x 190 PCD (4" #150)
10	1.5" NPT (M)
11	2" NPT (M)
O	Others

4	SWITCH TYPE
1	250V AC / 5A 1SPDT (Micro Switch)
2	250V AC / 5A 2SPDT (Micro Switch)
3	Hermetically Sealed Micro Switch - 250V AC / 5A (1 SPDT)
4	Hermetically Sealed Micro Switch - 250V AC / 5A (1 DPDT) *

5	PRESSURE & TEMPERATURE RATING
1	Ambient pressure & temperature
2	10 kg/cm ² , 150°C
3	10 kg/cm ² , 180°C
4	20 kg/cm ² , 180°C
5	40 kg/cm ² , 200°C
6	100 kg/cm ² , 150°C
O	Others

6	FLOAT	
Type	Material	Float Dia
F1	SS304	50mm
F2	SS304	57mm
F3	SS316	57mm
F4	PP	60mm
F5	PP	53mm
F6	SS316L	46mm
F7	SS316L	50mm
F8	SS316	50mm
F0	Others	Others

7	ACCESSORIES
N	Not Applicable
1	Counter Flange
2	Counter Flange with Test Lever
3	Counter Flange Stub
4	Chamber
O	Others

* Consult Factory

5.4 HORIZONTAL FLOAT LEVEL SWITCH INSTALLED IN A CHAMBER

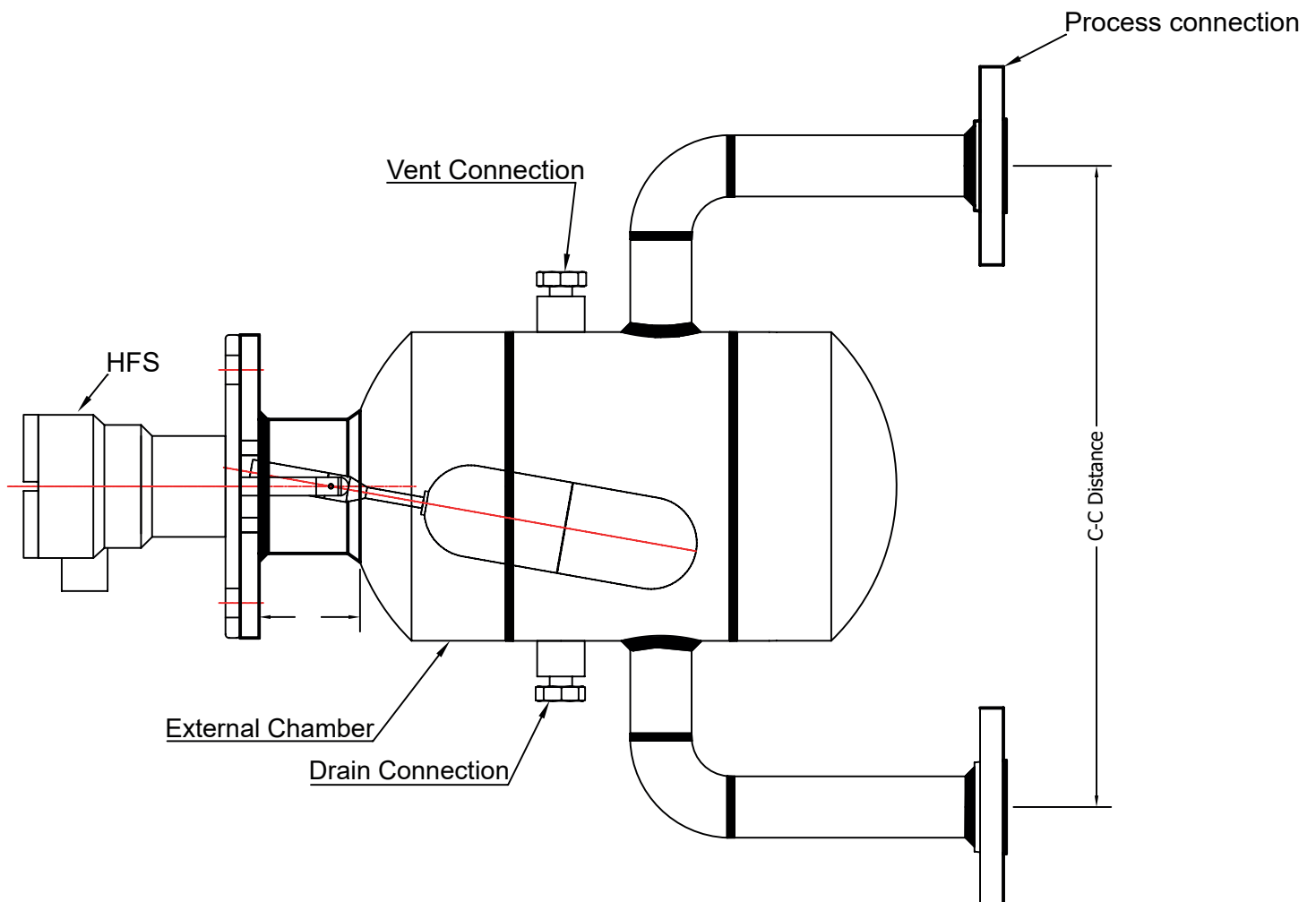
Wherever it is not possible or desirable to install Horizontal Float switches directly onto the vessel, switches can be installed in an External Chamber. This arrangement gives smooth level control irrespective of turbulence in the process vessel and prevents accidental damages to the switch during shutdown or maintenance of the vessel. Chambers are used in applications which require isolations of process, High Pressure / High Temperature applications, Corrosive applications, Onshore / Offshore installations.

Main function of these chambers are:

- Level Measurement
- Interface Measurement between two liquids.

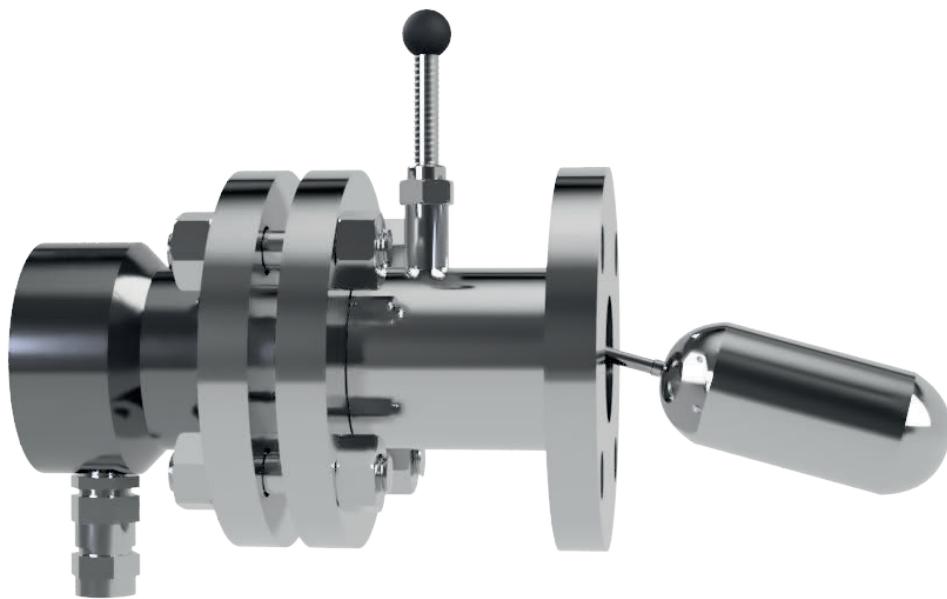
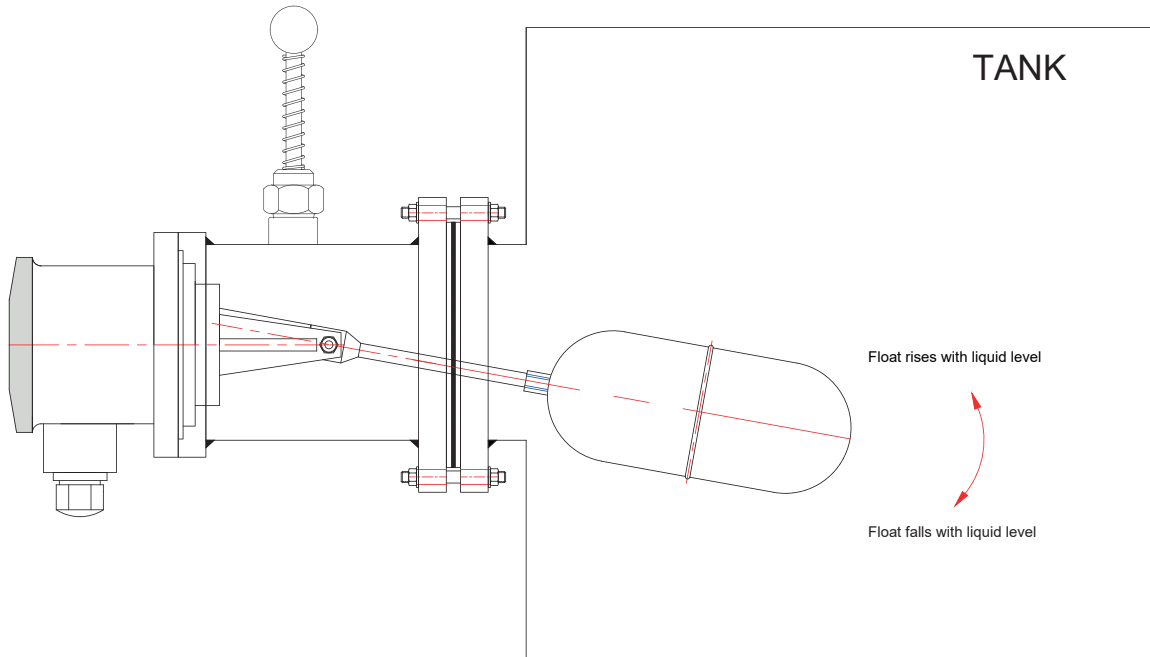
FEATURES

- Available for Low Pressure and High Pressure applications.
- Wide range of material of construction to suit different environmental conditions.
- Wide range of end connection types / sizes to choose from.
- A variety of chamber mounting arrangements provided to suit existing nozzles.



• For ordering Information of External Chamber refer External Chambers Catalog.

HORIZONTAL FLOAT LEVEL SWITCH WITH TEST LEVER / COUNTER FLANGE





Head office and Manufacturing - 1

SHRIDHAN Automation Pvt. Ltd.
#B-54, KSSIDC Industrial Estate,
Kumbalgodu, Mysore Road,
Bangalore-560074. India.
+91-80-28437847, +91 80 - 28437848
info@shridhan.com

Manufacturing - 2

SHRIDHAN Automation Pvt. Ltd.
#D-13 KIADB Industrial Area,
Kumbalgodu, Mysore Road,
Bangalore-560074. India.
+91-80-28437847, +91 80 - 28437848
info@shridhan.com

Middle East

ORBIT Automation FZE
#R4-40 A, PO Box - 122828,
SAIF Zone, Sharjah, UAE.

A 100% Subsidiary of
SHRIDHAN Automation Pvt. Ltd., India.
Ph: +97155 - 9347963, +97155 - 1883375
me@shridhan.com

