

Techtrol Magnetic Float Operated Pivoted Level Switch - FPS

It is an economical device used for high, low or intermediate point level switching and ideal for tanks with inaccessible tops or bottoms.

Salient Features :

- ☑ Safety of operation through glandless design
- ☑ Option of 'Extended Trim' for long nozzle length
- ☑ Option of 'Hermetically Sealed' switch casing
- ☑ Option of 'IBR Approved' switch, mounted in external chamber
- ☑ Option of Ex-P (CCOE) / ATEX Certification / Marine Class Approval

Construction & Operation :

Compact & rugged construction consisting 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 carried by the float arm and other by 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 resulting repulsion force ensures a changeover of contacts with snap action. The magnetic coupling is glandless to prevent leakage from vessel to switch housing.

Installation :

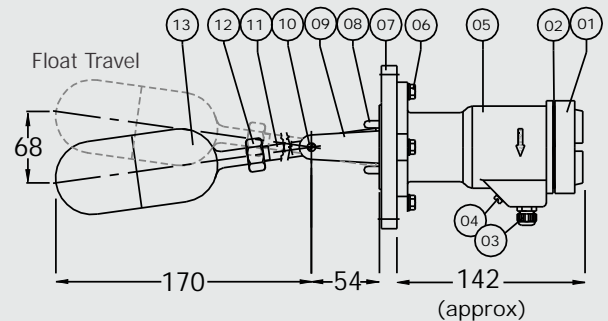
Mounted internally or externally through a chamber. External mounting is resorted to, where space is a limiting factor or mechanical devices like stirrers operate within the tank. Besides, in applications like boilers, reaction kettles etc., with external mounting, isolating is possible for regular servicing. 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.

Specifications :

Installation	: Normally side / top for special applications.
Enclosure x Cable Gland	: Cast Al WP IP65 x PG 11 (Polyamide) or Ex-p Gr IIB or IIC x 1/2" NPT (Brass)
Float	: SS304 / SS316 / PP / SS304 with PVDF coated.
Min. Sp. Gr.	: 0.6 depending upon float material and dimensions.
Process Conn.	: Flanged or Screwed.
Switch Type	: Micro switch (SPDT / DPDT, 150°C or 250°C) 5A,250V AC.
Switching Diff.	: Fixed (15±5mm). Adjust. between 40 & 300mm depending upon float, trim length & cam positioning.
Repeatability	: ±1mm.
Accuracy	: ±2mm.
Load/Insulation	: Resistive / 150 mega Ohm at 500 VDC.
Temp. Range	: -20 to 250°C and high temp. model upto 350°C.
Pressure Range	: Vacuum to 20 Kg/cm ² at ambient temp. (contact factory for pressure more than 20 Kg/cm ²)
Finish	: Regular / Sanitary.
Special Features	: 1) Adj. differential. 2) L/Z cranked trims. 3) High temp. construction with Radiating fins.

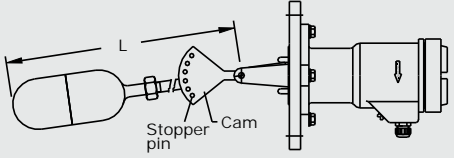
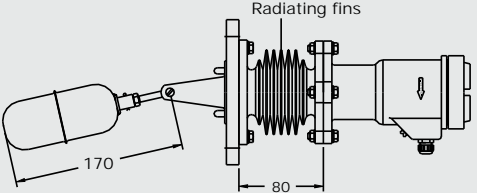
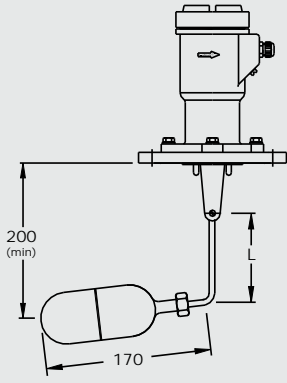
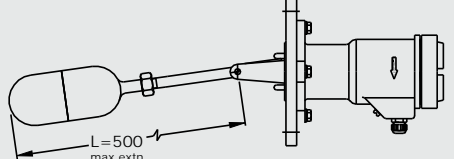
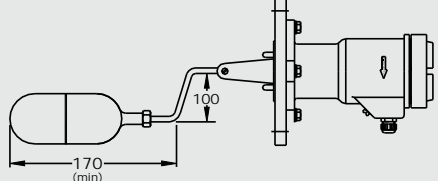


Finish (Regular) :



- | | | |
|--------------------|------------------|--------------------|
| 01) Terminal cap | 05) Enclosure | 09) Bracket |
| 02) Gasket | 06) Bolts | 10) Pivot pin |
| 03) Conduit conn | 07) Process conn | 11) Trim |
| 04) Earthing screw | 08) Stopper | 12) Float lock nut |
| | | 13) Float |

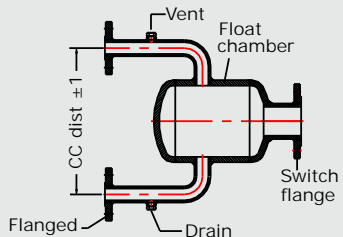
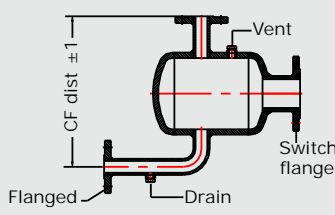
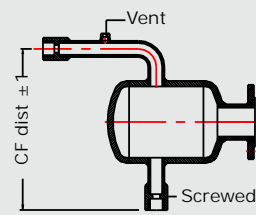
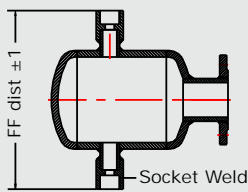
Special Features :

 <p>A- Adjustable differential Adjustable differential by locating float trim at various fixed angles with the help of cam & stopper pin</p>	 <p>R- High-temp construction High-temp. construction with radiating fins</p>	 <p>L- Cranked trim with top mtg. `L' cranked trim for slurry application</p>
 <p>X- Extended trim with side mtg</p>	 <p>Z- Cranked trim with side mtg. `Z' cranked trim for slurry applications.</p>	

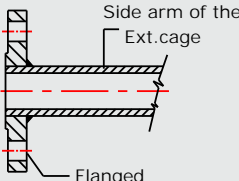
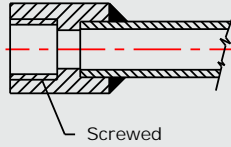
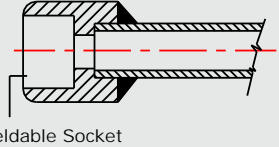
Accessories :

External Chamber - C : A wide range of external cages are available in various MOC's (CS,SS304,SS316), Mountings and Process connections for use in tanks where,
1) Space is a limiting factor.
2) Mechanical devices like stirrer operate within it.

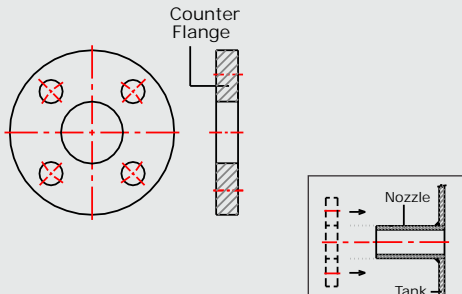
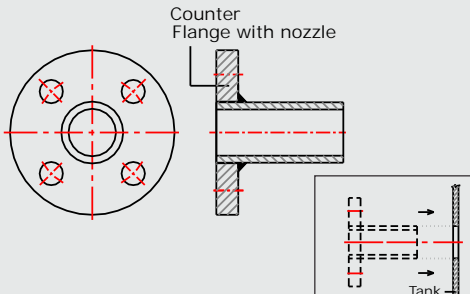
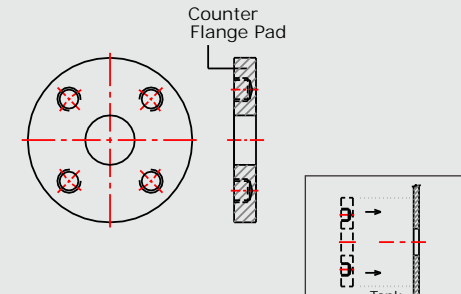
Mounting Types :

<p>S-Side-side</p> 	<p>T-Side-top</p> 	<p>B-Side-Bottom</p> 	<p>V-Top-bottom</p> 
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Process Connection Types :

<p>A-Flanged</p> 	<p>C-Screwed Socket</p> 	<p>B-Welded Socket</p> 
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Counter Flange Type - F :

<p>C-Counter Flange w/o Nozzle (weld flange on tank nozzle)</p> 	<p>W-Counter Flange with Nozzle (weld nozzle to tank)</p> 	<p>P-Counter Flange Pad (weld flange to tank)</p> 
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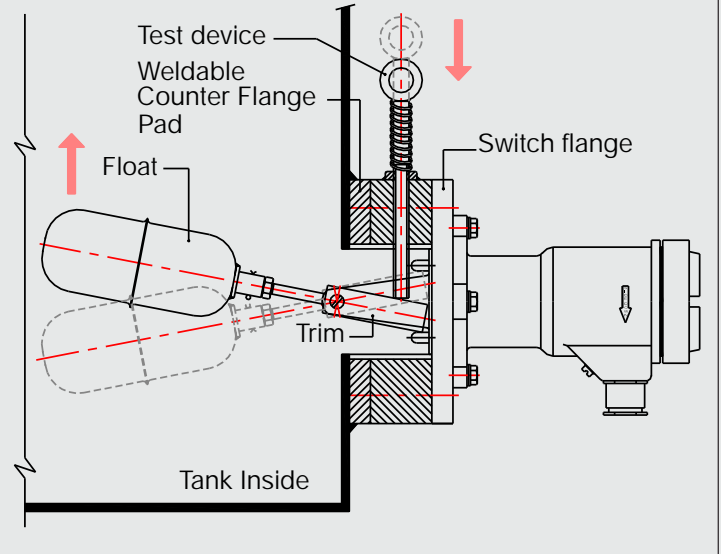
Model identification No:

FPS- _____

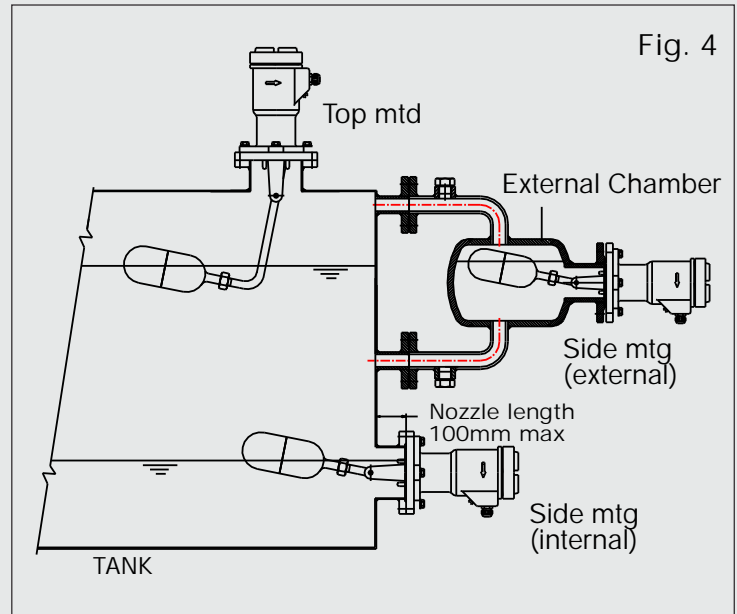
Enclosure									
Cast Al WP as per IP-66	J								
Cast Al Ex-P for Gr. IIB	E								
Cast Al Ex-P for Gr. IIC	F								
Others	O								
MOC (Float / Process Connection)									
SS304		N							
SS316		S							
PP (with Ø50 float)		P							
SS304 PVDF coated		P							
Others		O							
Float x Process Connection Combine									
Ø50mm x 120 OD.x 92 PCD flange			1						
Ø60mm x 120 OD.x 92 PCD flange			2						
Ø50mm x 2" NB, ANSI 150# flange			3						
Ø60mm x 2-1/2" NB, ANSI 150# flange			4						
Ø75mm x 3" NB, ANSI 150# flange			5						
Others			O						
Switch Type									
Micro (SPDT)- 150°C				1					
Micro (DPDT)- 150°C				2					
Micro (SPDT)- 250°C (350°C For High temp const)				3					
Micro (DPDT)- 250°C (350°C For High temp const)				4					
Others				O					
Finish									
Regular					R				
Sanitary					S				
Sp. Features									
Adjustable differential (for regular finish only)						A			
Cranked trim with top mtg.						L			
Extended trim with side mtg.						X			
Cranked trim with side mtg.						Z			
High-temp construction with radiating fins						R			
Non-std						O			
None						W			
Accessories									
None									
External Chamber								W	
Counter flange with nuts / bolts & gasket								C	
In-situ test device								F	
Non-std								T	
External Cage MOC								O	
CS						M			
CS (A106)						C			
SS304						N			
SS316						S			
Others						O			
Process Conn									
25NB Flanged								1	
40NB Flanged								2	
1" BSP (F) Screwed Socket								3	
1" Weldable Socket								4	
Others								O	
Mounting									
Side X Side									S
Side X Top									T
Side X Bottom									B
Top X Bottom									V
Others									O
Vent & Drain									
1/2" Plugs									1
1/2" Plug X 1/2" Valve									2
1/2" Valve X 1/2" Valve									3
Others									O
Counter Flange MOC									
CS									M
SS304									N
SS316									S
Others									O
Counter Flange Type									
Counter Flange w/o Nozzle (weld flange on tank nozzle)									C
Counter Flange with Nozzle (weld nozzle on tank)									W
Counter flange Pad (weld flange to tank)									P

In situ Test Device - T :

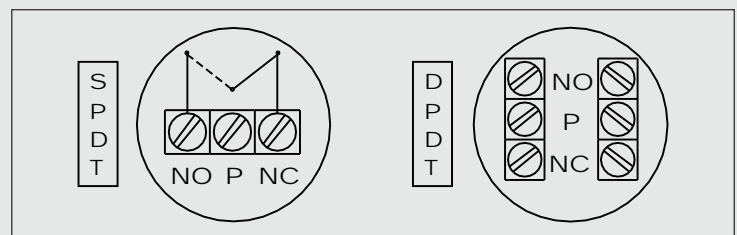
It is supplied as an accessory to Magnetic Switch (FPS) to facilitate mechanical testing of electrical circuit. As such operations are checked without carrying out the emptying/filling cycle.



Installation :



Termination for SPDT or DPDT Switch :



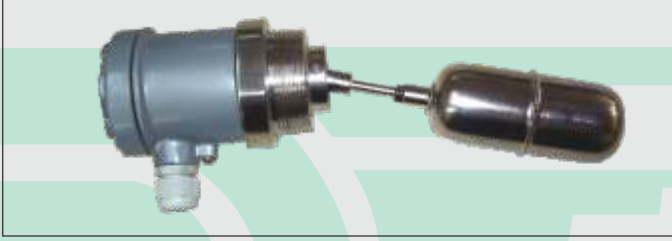
Ordering Information :

Specify Liquid, SpGr., Viscosity and Optg.Temp. & Pressure.

For Sp. features: Specify " L " for extended trim (max 500 mm)

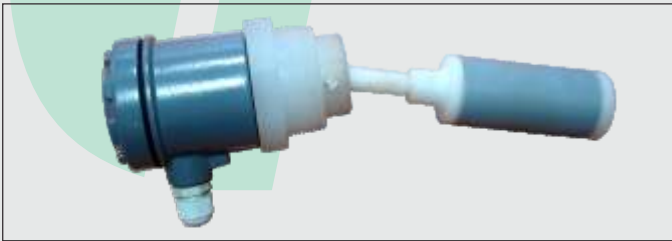
OTHER STANDARD MODELS

Screwed Float Pivoted Switch - 'SFPS'



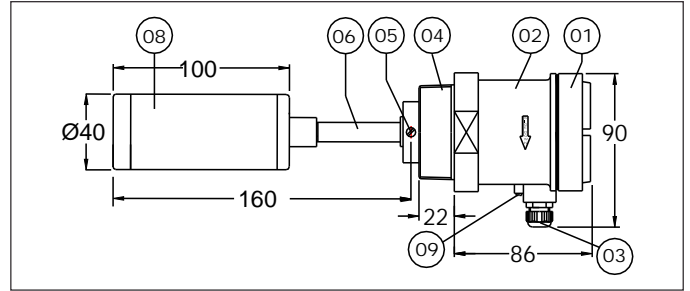
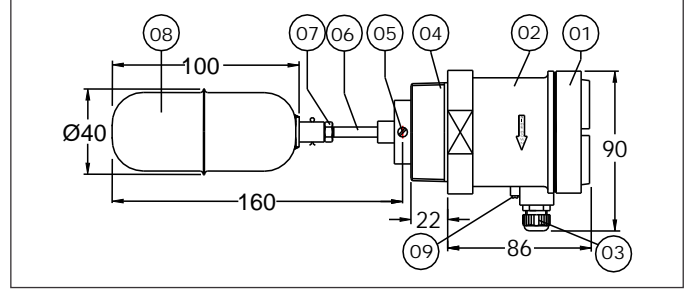
Specifications :

MOC	: SS316
Enclosure	: Cast Al, WP
Process Connection	: Screwed, 1-1/2" BSP(M)
Switch type	: Micro switch (SPDT)
Switching Capacity	: 5A, 250 VAC
Max Temp	: upto 100°C
Max Pressure	: upto 10 Kg / cm ²



Specifications :

MOC	: PP
Enclosure	: Cast Al, WP
Process Connection	: Screwed, 1-1/2" BSP(M)
Switch type	: Micro switch (SPDT)
Switching Capacity	: 5A, 250 VAC
Max Temp	: upto 70°C
Max Pressure	: upto 2 Kg / cm ²



Model identification No:

MOC (Float x Process conn)

SS304 _____

SS316 _____

PP _____

Float x Process Connection combine

Ø40 x 1-1/2" BSP (M) _____

Ø50 x 2" BSP (M) _____

Others _____

Accessories

None _____

External cage _____

Mtg Socket _____

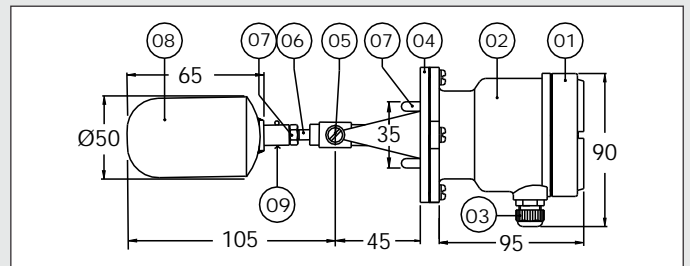
SFPS-			
	N	S	P
	1	2	O
	W	C	F

Compact Float Pivoted Switch - 'CFPS'



Specifications :

MOC	: SS316
Enclosure	: Cast Al, WP
Process Connection	: SQ80 x 82.5 PCD Flange
Switch type	: Airbreak (SPDT)
Switching Capacity	: 5A, 250 VAC
Max Temp	: upto 150°C
Max Pressure	: upto 10 Kg / cm ²



Model identification No:

MOC (Float x Process conn)

SS 316 _____

Others _____

Process Connection combine

Sq 80 x 82.5 PCD _____

Others _____

CFPS-		
	S	O
	1	O

TERMINOLOGY

- | | | | | |
|------------------|------------------|---------------|--------------------|--------------------|
| 01) Terminal cap | 03) Conduit conn | 05) Pivot pin | 07) Float lock nut | 09) Earthing screw |
| 02) Enclosure | 04) Process conn | 06) Trim | 08) Float | |

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Custom built specs./options available on demand.

We reserve the right to modify design and specifications without prior notice.



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