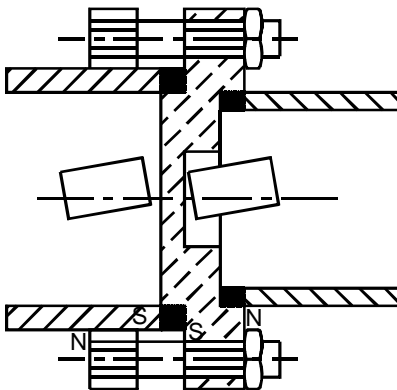




OPERATING PRINCIPLE:



The float movement of the level switch is transmitted through a solid non magnetic wall by the repulsion of like magnetic poles. This ensures that the float magnet imparts a snap action to the electric or pneumatic switch elements. 'S.B.E.M.' level switches are absolutely leak proof & not subject to material fatigue due to gland less design.

FEATURES:

- Modular construction ...
 1. Switch module.
 2. Flange module.
 3. Float module.This means it gives flexibility with unlimited switch combinations to suit individual needs.
- Available in Electric On/Off and pneumatic proportional.
- Electric Switch available in Flameproof version also.
- Available with fixed or adjustable differential.
- High temperature version available.
- All wetted parts in stainless steel.
- Different types of Float Chambers available. For details refer LF-137-0804

SWITCH MODULES:

Type selection depending on application :

- Output required : electric or pneumatic
- Required action / function : Alarm annunciator, Motor starter or Pneumatic Proportional valves
- Type of enclosure to meet environmental conditions
- Flame Proof or Weather Proof: IP 65 / IP 67
- Max. operating temperature inside vessel / tank for high temperature stand off

Type Code	Output		Terminal Configuration.	Enclosure Material of Construction	Degree of Protection	Max. Ambient temp.	Max. Operating temp.
EA	Electric ON/OFF.		C/O contact position with 1 microswitch 	Die cast Aluminium	IP 65	0° C to 70°C	0° C to 180°C
EY	Electric On/Off Flameproof		C/O contact position with 2 microswitches 	Die cast Aluminium grade LM 6	IP 65	0° C to 70°C	0° C to 180°C
H	High Temp Stand-off with Electric ON/OFF.			For high temp. stand off sleeve-Cast Aluminium	IP 65	0° C to 70°C	-20°C to 300°C

- Operating pressure : 30 Kg/cm² (wet side)
- Contact rating : 5 Amps 230 VAC Resistive, (standard)
- Special execution on request: 1)IP 67 2)Operating temperature up to 300° C 3)Contact rating 10A@ 230VAC 4)Silicon bellows

Type Code	Output		Input/Output Diagram and Pressure Ratings	Enclosure Material Of Construction	Max Ambient Temp	Max Operating Temp
PNP	Pneumatic Proportional		E - Exhaust Port S - Input Port 1.4 Kg/cm ² air pressure C - Controlled output port 0.2 to 1.0 Kg/cm ² 	Aluminium	0-70°C	0-300°C

Supply connections : Std. 1/8" NPT (female), Optional 1/4" NPT (male/female), 1/4" BSP (male/female) with adaptors.
Instrument quality air supply is essential for PNP switch modules.
For more details on PNP switch controller refer LF-137-0808

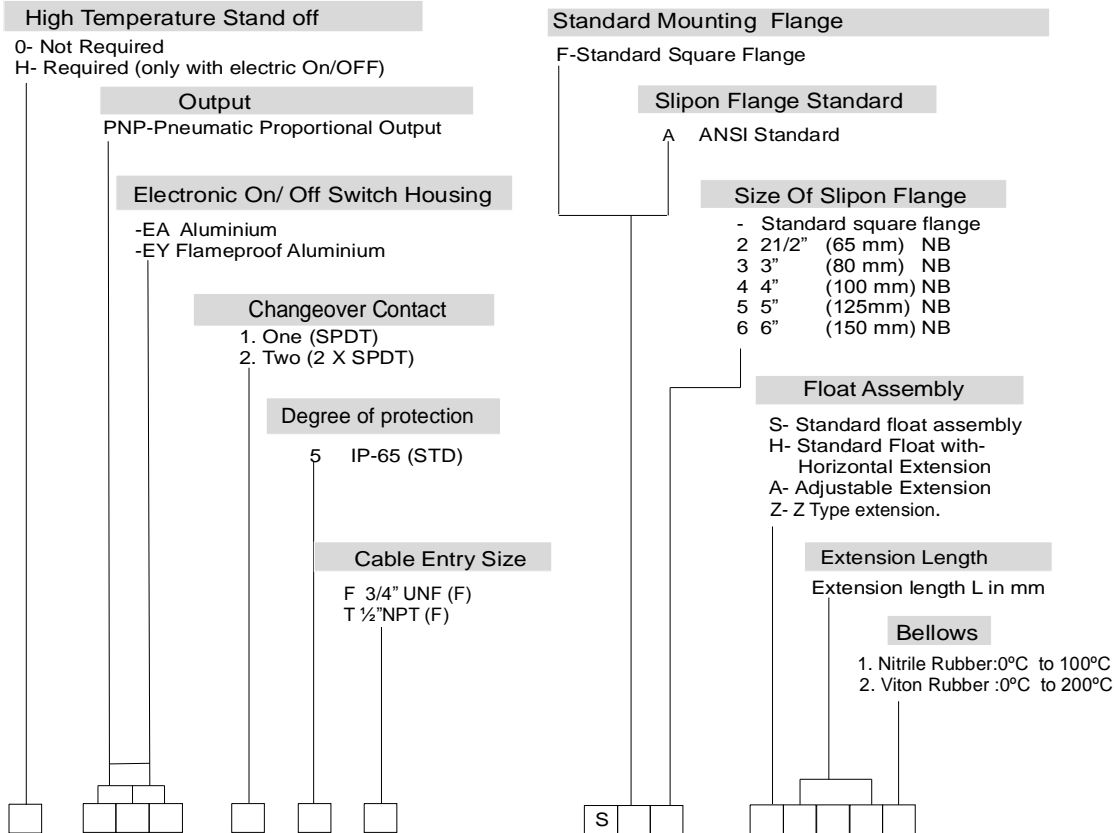
FLANGE MODULES:

Type selection depending on :

- Standard mounting flange
- Flange / nozzle mounting to ANSI.

Tank Code	Type		Material Of Construction	Mounting Details
SF	Standard mounting square flange	<p>4 Holes \varnothing 14 on 92 PCD</p> <p>Mounting Face</p> <p>Bore \varnothing 66 Min</p>	Stainless steel casting AISI 316	Direct mounting tank opening Min. \varnothing 66 mounting holes to suit - M 12/1/2" BSW
SA	Slip on flange to suit side and top	<p>Bore \varnothing 66 Min</p> <p>L mm</p>	a - sealing flange (fabricated) AISI 316 b - slip on flange. carbon steel passivated sealing flange.	Slip on flange nozzle mounting range 2 1/2" NB to 6" for ANSI, NB L max. 2 1/2", 3" 70 4", 5" 80 6" 90

ORDERING CODE:



ORDERING EXAMPLES MODULE CODES

1. Model Code:

H	-	E	A	2	5	F	S	A	4	S	3	0	0	-
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Float switch with Electric ON/OFF, enclosure of aluminium with high temperature standoff having IP 65 degree of protection with 2 changeover contacts & 3/4" UNF Cable entry. Standard Square Flange, with a Standard Float Assembly & Extension Length L= 300mm.

2. Model Code:

-	-	E	A	2	6	T	S	A	1	Z	2	0	0	1
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

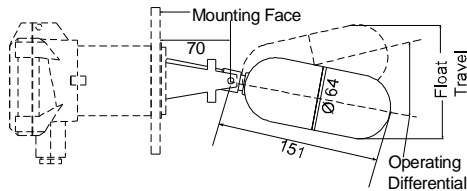
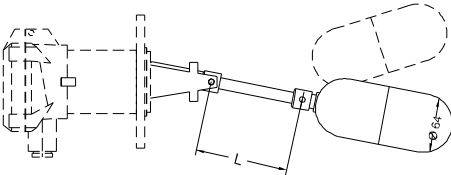
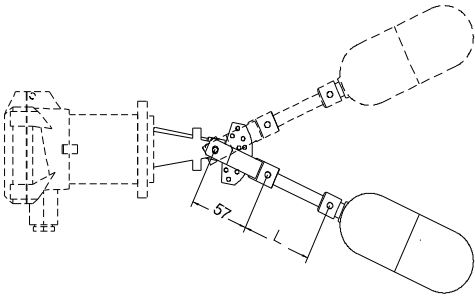
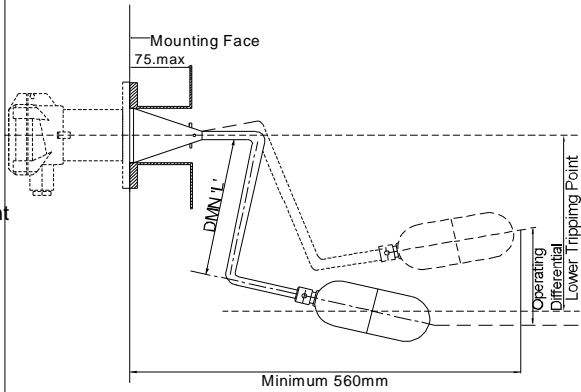
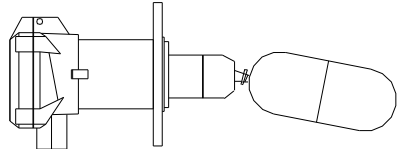
Float switch with Electric ON/OFF, aluminium housing with IP 65 degree of protection with 2 changeover contacts & 1/2" NPT Cable entry. 6" ANSI slip on flange, with a Z-type Float Assembly & extension length=200mm with nitrile rubber bellows.

3. For PNP Model Code please refer LF-137-0808

FLOAT MODULES:

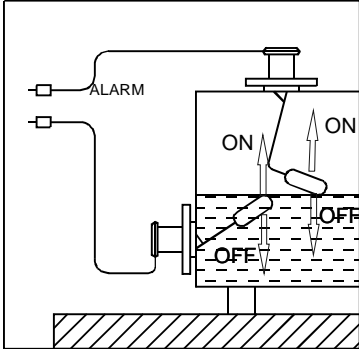
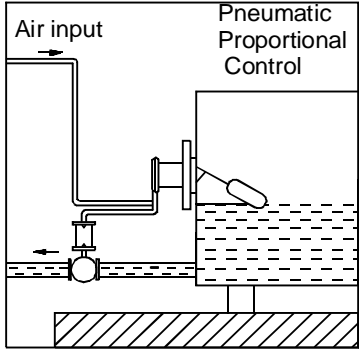
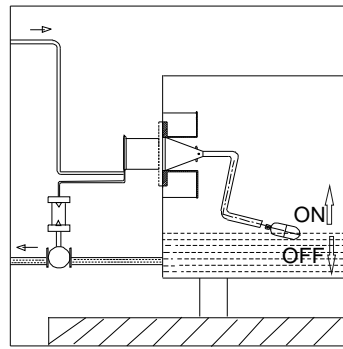
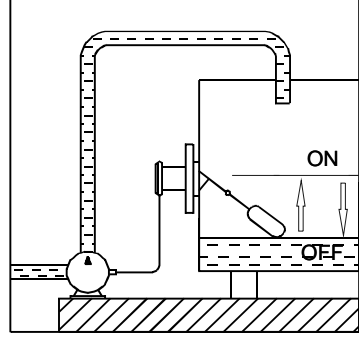
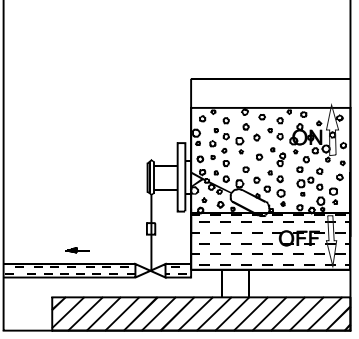
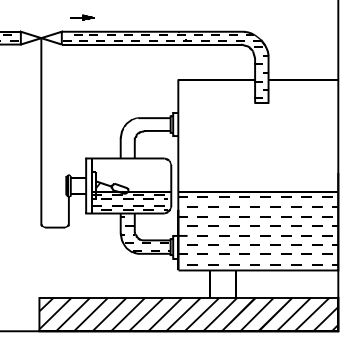
Type selection depending on :

- Mounting position
- Level differential required
- Output of switch module

Type Code	Type		Switch Orientation	Float Travel in mm	Operating Differential						
					Liquid Density (Min) - 0.7 Kg/dm ³						
					Operating differential values are referred to Liquid Density=1						
S	Standard Float Assembly		Horizontal	117 total	With On/Off Switch module 12mm total						
H	Horizontal		Horizontal	600 max	247 max. With L=990mm (0.25 X L approx)						
A	Adjustable Differential extension		Horizontal with On/Off switch modules only	Adjustable 160-790 (approx.)	Adjustable 35-555 (approx.)						
				Std. Extension Lengths <table border="1" style="font-size: small; border-collapse: collapse;"> <thead> <tr> <th>Code</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td>-000</td> <td>Without extension</td> </tr> <tr> <td>-080</td> <td>80mm</td> </tr> <tr> <td>-180</td> <td>180mm</td> </tr> <tr> <td>-280</td> <td>280mm</td> </tr> </tbody> </table> For 'A' total length with extension - L+278mm (from mounting face)		Code	Length	-000	Without extension	-080	80mm
Code	Length										
-000	Without extension										
-080	80mm										
-180	180mm										
-280	280mm										
Z	Z type extension (to lower tripping point below mounting)		Horizontal	O.D Operating differential +/- 10 Extension Length LTP Lower Trip Point +/- 25mm							
S	Standard with Bellows		Horizontal	For Float Travel & Operating Differential Refer Application Note							

Material Of Construction for Wetside Components: AISI 316 Stainless Steel

APPLICATION EXAMPLES:

<p>HIGH/LOW ALARMS</p>	<p>STANDARD HORIZONTAL MOUNTING</p>	<p>CONTROL WITH 'Z' TYPE LEVEL SWITCH</p>
 <p>FIG 1</p>	 <p>FIG. 2</p>	 <p>FIG. 3</p>
<p>CONTROL PUMPS OR VALVES WITH ADJUSTABLE DIFFERENTIAL</p>	<p>INTERFACE CONTROL</p>	<p>EXTERNALLY MOUNTED FLOAT SWITCH IN CHAMBER</p>
 <p>FIG. 4</p>	 <p>FIG. 5</p>	 <p>FIG. 6</p>

Minimum information required to quote -

1) Sketch giving details of installation

2) Application details

- Fluid _____
- Operating pressure Kg/cm² _____
- Operating temp. °C _____
- Minimum density Kg/dm³ _____
- Tank material _____
- Switch mounting position Horizontal/Vertical _____

3) Switch module

- Electric/Pneumatic proportional _____
- Switch housing AISI 316. Aluminium LM6. _____
- Contact rating 5 A/10A, 1 C/o / 2 C/o _____
- Degree of protection IP 65 / IP 67 _____
- High temp. stand off. Yes/No. _____

4) Flange module

- Standard square flange/slip on flange _____
- Slip on flange material _____
- Nozzle size 2 1/2" NB to 6" NB _____

5) Float module

- Std./Hori. extn/Ver. extn./Adj. extn./Ball type float _____
- Operating differential mm. _____
- Extension length horizontal _____
- Extension length vertical _____

6) Accessories (optional)

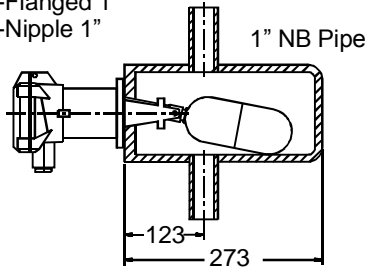
- Counter flange standard/extended _____
- Material of counter flange CS/SS316 _____
- Float chamber type _____
- Float chamber material _____



FLOAT CHAMBERS (FOR EXTERNAL MOUNTING)

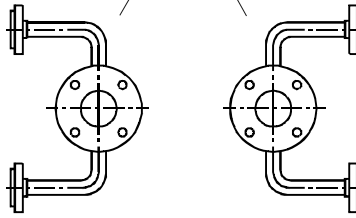
FOR DETAILS REFER LF-137-0804

Ends of pipe available bare weldable (as shown)
 -Flanged 1"
 -Nipple 1"



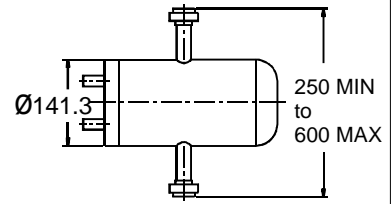
Type A

M 12 STUD
 4 NOS. EQIP.
 ON 92 P.C.D

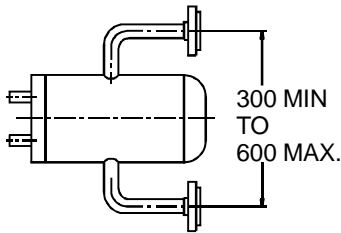


Type B

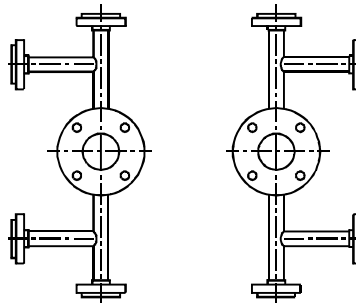
Type C



Type D

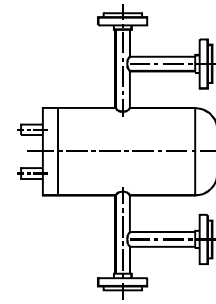


Type E



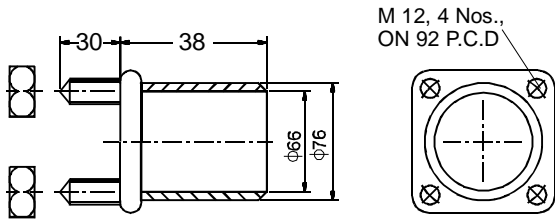
Type F
 (LH Connection)

Type G
 (RH Connection)

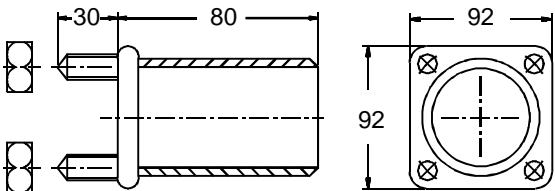


Type H

MOUNTING ACCESSORIES:



A. Counter flange extended - (weldable)
 Matl. : AISI - 316/CS painted
 Construction : fabricated.
 -To facilitate welding of counter flange on tank, provide $\varnothing 77$ hole on the tank.



B. Counter flange extended - (weldable)
 Matl. : AISI - 316/CS painted
 Construction : fabricated.
 To facilitate welding of counter flange on thick coated tank, provide $\varnothing 77$ hole on the tank.

*** Continuous developments may necessitate changes without notice. LF-137-0807-R08 07/10 LF_MagFloatSwitch_137EAEY



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