

# MAGNETIC FLOAT LEVEL SWITCH

## LS SERIES

The vertical float level switch consist of a float with a built in permanent magnet, and guide tube built in reed switch (one or more), when the float rise up or fall down in liquid that induct the reed switch to become ON or OFF contact function. The ON-OFF contact provdie a liquid level control for application by request.

### Technical Data

**Material:** Wetted parts are available for SS304, SS316, PVC, PP, PVDF by requested. Multiple level point are available by requested for customer.

**Enclosure Housing:** Weather proof IP65 and IP67; Explosion proof available  
**Straight Style LS Series:** LS-simple type; WLS-IP65 & weather proof type; ELS-explosion proof type

**Angle Style Series:** LA-simple type; WLA-IP65 & weather proof type; ELA-explosion proof type

**Connection Size:** Thread type- 1½" to 3"; Flange type- 1½" to 4"

### Switch Table

<b>Contact Form</b>	A (SPST)	C (SPDT)
<b>Switching Capacity Max.</b>	40 W/VA	60 W/VA
<b>Switching Voltage Max.</b>	230V AC/DC	230V AC/DC
<b>Switching Current Max.</b>	2A	1A
<b>Carrying Current Max.</b>	3A	2A
<b>Working Temperature</b>	-20°C~+130°C	-20°C~+130°C

\*Special rate available on request.

### Wiring Code Numbers

One Float		Two Float			Three Float			Four Float			
1	2	3	4	5	6	7	8	9	10	11	
							Ø40	Ø40	Ø28	Ø49	
							Ø49	Ø49	Ø40	Ø75	
							Ø75	Ø75	Ø49		
									Ø75		
<b>Suitable Float Size: Ø28, Ø40, Ø49, Ø75</b>											
1xSPST	1xSPDT	2xSPST	SPST (Common Wire Style)	2xSPDT	3xSPST	SPST (Common Wire Style)	3xSPDT	4xSPST	SPST (Common Wire Style)	4xSPDT	



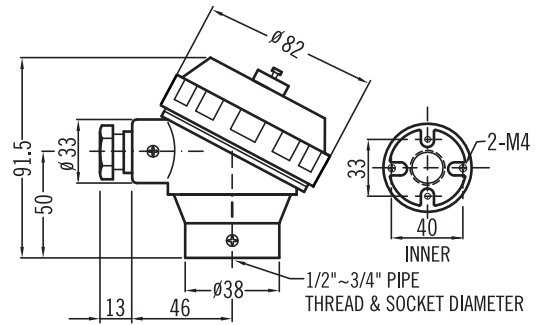
Head Type Technical Data



HN TYPE

HN Type

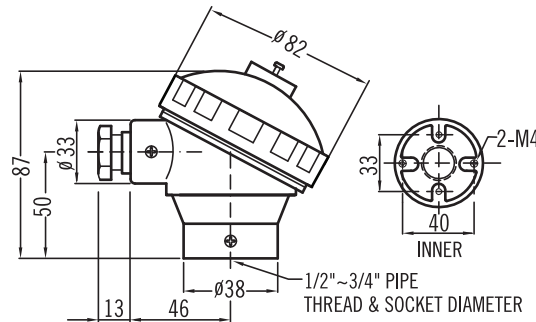
**Protection:** IP67  
**Material:** Aluminum Alloy  
**Weight:** 264g  
**Protection tube connection:** 1/2", 3/4" (PF, NPT, BSP), M20X1.5  
**Extension wire connection:** 1/2", 3/4" (PF, NPT, BSP), M20X1.5  
 Other specifications are available on request.



HP TYPE

HP Type

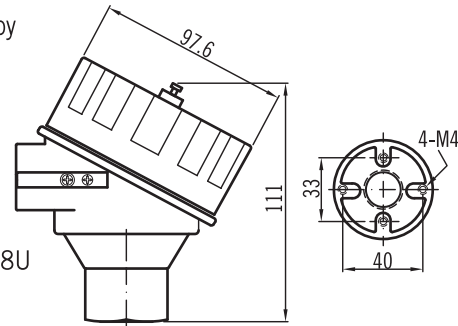
**Protection:** IP65  
**Material:** Polypropylene  
**Weight:** 112g  
**Protection tube connection:** 1/2" NPT, 1/2" BSP  
**Extension wire connection:** 3/4" NPT, M20X1.5  
 Other specifications are available on request.



XDS TYPE

XDS / XDA Type

**Material:** XDS-SS316; XDA-Aluminum alloy  
**Weight:** XDS-1278 g; XDA-460 g  
**Protection tube connection:** 1/2" PF, 3/4" PF, 1/2" NPT, 3/4" NPT, 1/2" BSP, 3/4" BSP, G1/2", G3/4", M20x1.5, M24x1.5, M25x1.5  
**Extension wire connection:** M20x1.5, M25x1.5, 1/2" NPT, 3/4" NPT  
**EC certificate no.:** BSI 07 ATEX 1532458U  
**ATEX directive code:** II 2 G D  
**Standard code:** Ex d IIC T6, Ex tD A21  
 T100°C IP6x Ta= -20°C to +40°C



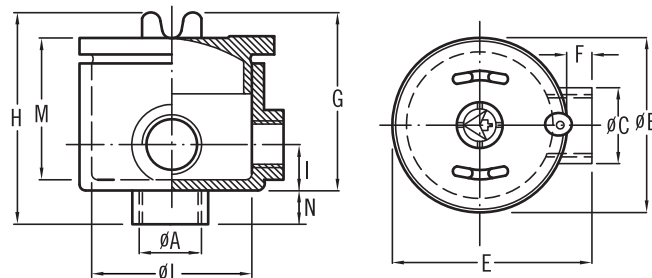
**FM Approvals:** XP/II/1/ABCD/T6; DIP/II,III/1/EFG/T6; Type 4X  
 Explosionproof for Class I, Division 1, Groups A,B,C and D; and dust-ignitionproof for Class II, III Division 1, Groups E,F and G, hazardous (classified) locations; indoor / outdoor (NEMA Type 4X).



XDA TYPE

S2 Type

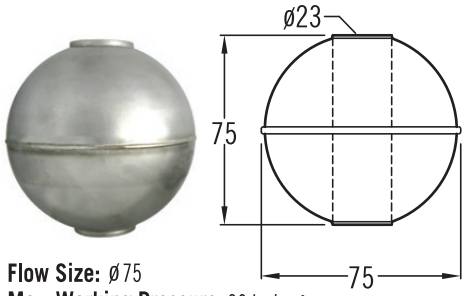
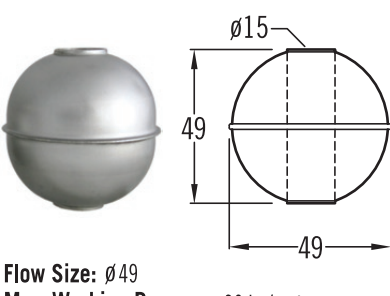
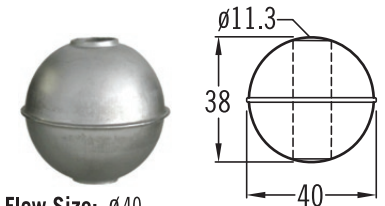
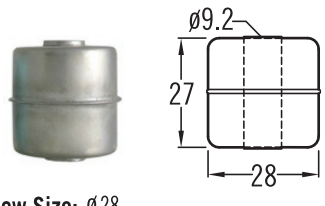
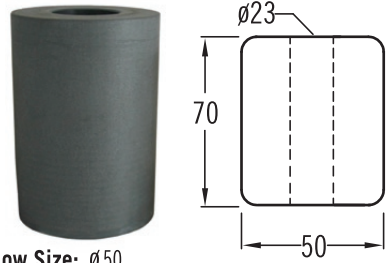
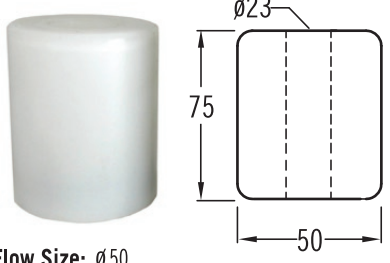
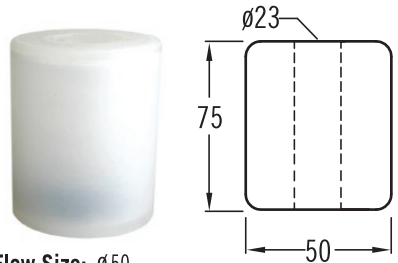
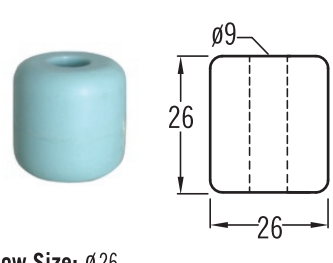
**Protection:** Explosion proof. EExdIIC T6 IP65  
**Material:** Aluminum Alloy



S2 TYPE

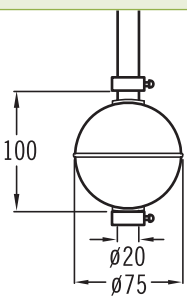
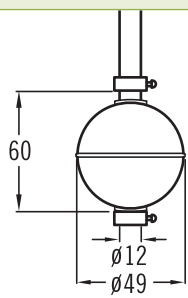
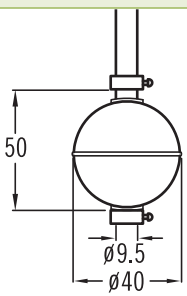
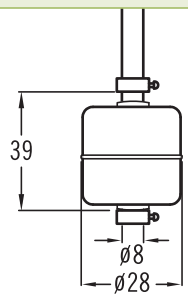
Type	Dimensions											Terminal Block (on request)	Weight Gr.
	ØA	ØB	ØC	E	F	G	H	I	ØL	M	N		
S2	3/4"	90	38	100	10	78	92	24	76	69	14	4x4 mm <sup>2</sup>	510

## Float Specification

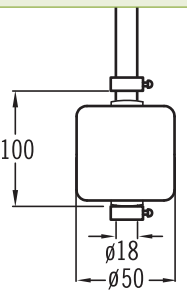
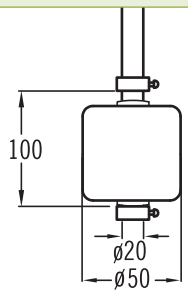
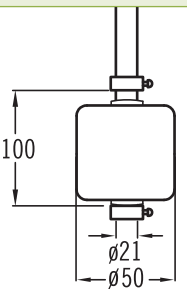
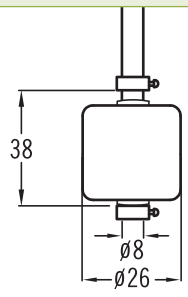
<b>ø75x75mm(SUS316)</b>	<b>ø49x49mm(SUS316)</b>
	
<b>Flow Size:</b> ø75 <b>Max. Working Pressure:</b> 30 kg/cm <sup>2</sup> <b>Working S.G.:</b> ≥ 0.68 <b>The Guide Tube Size:</b> ø20 <b>Material:</b> SUS316 <b>Limited Operating Temperature:</b> -20 ~ 140°C	<b>Flow Size:</b> ø49 <b>Max. Working Pressure:</b> 30 kg/cm <sup>2</sup> <b>Working S.G.:</b> ≥ 0.68 <b>The Guide Tube Size:</b> ø12 <b>Material:</b> SUS316 <b>Limited Operating Temperature:</b> -20 ~ 140°C
<b>ø40x38mm(SUS316)</b>	<b>ø28x27mm(SUS316)</b>
	
<b>Flow Size:</b> ø40 <b>Max. Working Pressure:</b> 30 kg/cm <sup>2</sup> <b>Working S.G.:</b> ≥ 0.8 <b>The Guide Tube Size:</b> ø9.5 <b>Material:</b> SUS316 <b>Limited Operating Temperature:</b> -20 ~ 140°C	<b>Flow Size:</b> ø28 <b>Max. Working Pressure:</b> 15 kg/cm <sup>2</sup> <b>Working S.G.:</b> ≥ 0.8 <b>The Guide Tube Size:</b> ø8 <b>Material:</b> SUS316 <b>Limited Operating Temperature:</b> -20 ~ 140°C
<b>ø50x70mm(P.V.C)</b>	<b>ø50x75mm(PVDF)</b>
	
<b>Flow Size:</b> ø50 <b>Max. Working Pressure:</b> 3 kg/cm <sup>2</sup> <b>Working S.G.:</b> ≥ 0.7 <b>The Guide Tube Size:</b> ø18 <b>Material:</b> P.V.C <b>Limited Operating Temperature:</b> 0~70°C	<b>Flow Size:</b> ø50 <b>Max. Working Pressure:</b> 5 kg/cm <sup>2</sup> <b>Working S.G.:</b> ≥ 0.8 <b>The Guide Tube Size:</b> ø20 <b>Material:</b> PVDF <b>Limited Operating Temperature:</b> 0~120°C
<b>ø50x75mm(P.P)</b>	<b>ø26x26mm(P.P)</b>
	
<b>Flow Size:</b> ø50 <b>Max. Working Pressure:</b> 3 kg/cm <sup>2</sup> <b>Working S.G.:</b> ≥ 0.7 <b>The Guide Tube Size:</b> ø21 <b>Material:</b> P.P <b>Limited Operating Temperature:</b> 0~60°C	<b>Flow Size:</b> ø26 <b>Max. Working Pressure:</b> 3 kg/cm <sup>2</sup> <b>Working S.G.:</b> ≥ 0.7 <b>The Guide Tube Size:</b> ø8 <b>Material:</b> P.P <b>Limited Operating Temperature:</b> 0~60°C

## ON-OFF Gap

### A. Metal

<b>ø75x75mm(SUS316)</b>	<b>ø49x49mm(SUS316)</b>
	
<b>ø40x38mm(SUS316)</b>	<b>ø28x27mm(SUS316)</b>
	

### B. Non-Metal

<b>ø50x70mm(P.V.C)</b>	<b>ø50x75mm(PVDF)</b>
	
<b>ø50x75mm(P.P)</b>	<b>ø26x26mm(P.P)</b>
	

## LS-100 Series One Float Type

Metal Float			
LS-101	LS-102	LS-103	LS-104
<p>L=standard 48 mm L<sub>1</sub>= standard 21 mm upon available on request</p>	<p>L=standard 68 mm L<sub>1</sub>= standard 27 mm upon available on request</p>	<p>L=standard 80 mm L<sub>1</sub>= standard 32 mm upon available on request</p>	<p>L=standard 110 mm L<sub>1</sub>= standard 49 mm upon available on request</p>
Non-Metal Float			
LS-101P (P.P)	LS-102P (P.P)	LS-103P (PVDF)	LS-104P (P.V.C)
<p>L=standard 48 mm upon available on request</p>	<p>L=standard 110 mm upon available on request</p>	<p>L=standard 110 mm upon available on request</p>	<p>L=standard 110 mm upon available on request</p>

## Ordering Information

LS	Code	Model
		– Metal Float
		101 102 103 104
		– Non-Metal Float
		101P 102P 103P 104P
	<b>Code</b>	<b>Material of Wetted Parts</b>
		(1) SS304 (2) SS316 (3) P.V.C (4) P.P (5) PVDF (6) option
	<b>Code</b>	<b>Contact Form</b>
		(A) A type (C) C type (O) option
	<b>Code</b>	<b>Wiring Code Numbers</b>
		Please refer to <i>Wiring Code Numbers</i> table.
	<b>Code</b>	<b>Float Size</b>
		(A) ø28 x 27 (SS316) (B) ø40 x 38 (SS316) (C) ø49 x 49 (SS316) (D) ø75 x 75 (SS316) (E) ø26 x 26 (P.P) (F) ø50 x 75 (P.P) (G) ø50 x 75 (PVDF) (H) ø50 x 70 (P.V.C)
	<b>Code</b>	<b>Total Insertion Length</b>
		L= _____ mm
	<b>Code</b>	<b>Setting Point &amp; Switch Acting Functions</b>
		Please fill in the requested length and float Rised ↑ON or Fall down ↓ON L <sub>1</sub> = _____ mm <input type="checkbox"/> ON
LS		<b>Complete Ordering Code</b>