

MAGNETIC FLOAT LEVEL SWITCH

LS SERIES

Ex d IIB + H₂ T6
 工研院字號認證審核中
 ITRI/Taiwan certificate examining

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 provide 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 ; Explosion proof available

Straight Style LS Series: LS-simple type; WLS- weather proof type; ELS-explosion proof type

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

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

Switch Table

Item Code	23	15	36
Contact Form	A (SPST)	C (SPDT)	C (SPDT)
Switching Capacity Max.	40 W/VA	60 W/VA	20 W/VA
Switching Voltage Max.	230V AC/DC	250V AC/DC	150V AC/DC
Switching Current Max.	2A	1A	1A
Carrying Current Max.	3A	2A	2A
Working Temperature	-20°C~+130°C	-20°C~+130°C	-20°C~+130°C
Suitable Float Size	all float size available Except ø28: 3 setting points only	float size > ø49 available Except ø49: 1 setting point only	all float size available

*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	
Suitable Float Size: ø28, ø40, ø49, ø50, ø75								ø40	ø40	ø40 ø50	ø49
								ø49	ø49	ø49 ø75	ø50
								ø50	ø50		ø75
								ø75	ø75		
1xSPST	1xSPDT	SPST (Common Wire Style)		2xSPST	2xSPDT	SPST (Common Wire Style)			SPST (Common Wire Style)		
					3xSPST	3xSPDT				4xSPDT	
								4xSPST		4xSPDT	

*Float numbers more than four float on request, please contact to manufactory.



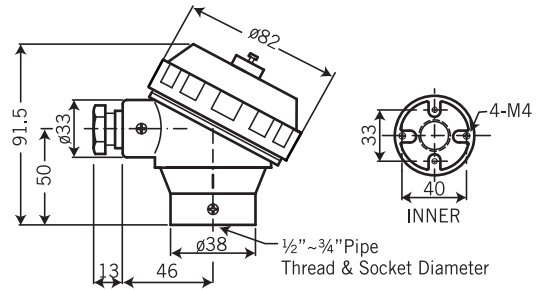
Head Type Technical Data



HN TYPE

HN Type

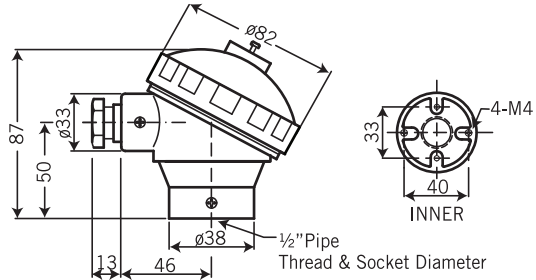
Protection: IP68
Material: Aluminum Alloy
Weight: 264g
Protection tube connection: 1/2", 3/4" (PF,NPT,BSP); M20 x 1.5
Extension wire connection: 1/2", 3/4" (PF,NPT,BSP); M20 x 1.5
 Other specifications are available on request.



HP TYPE

HP Type

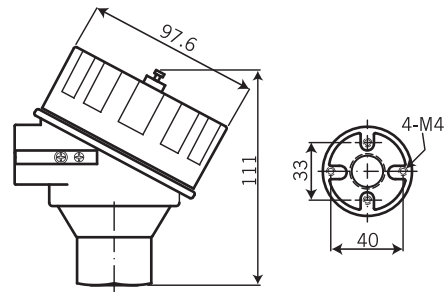
Protection: Weather Proof Type
Material: Polypropylene
Weight: 112g
Protection tube connection: 1/2"NPT, 1/2"BSP
Extension wire connection: 3/4"NPT, M20 x 1.5
 Other specifications are available on request.



XDS/XDA TYPE

XDS / XDA Type

Material: XDS-SS316; XDA-Aluminum alloy
Weight: XDS-1278g; XDA-460g
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 IP68



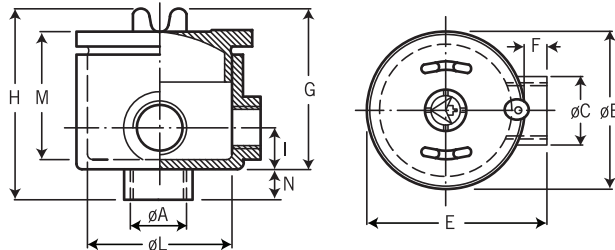
FM Approvals: XP/II/1/ABCD/T6; DIP/II, III/1/EFG/T6; Type 4X
 Explosionproof for Class I, Division 1, Groups A,B,C and D; and dust-ignitionproof for Class II, III Division 1, Groups E,F and G, hazardous (classified) locations; indoor/ outdoor (NEMA Type 4X).



S2 TYPE

S2 Type

Protection: Explosion Proof, EEx d IIC-T6, II 2 GD; IP66
Material: Aluminum Alloy



Type	Dimensions											Terminal Block (on request)	Weight Gr.
	unit=mm	øA	øB	øC	E	F	G	H	I	øL	M		
S2		90	38	100	10	78	92	24	76	69	14	4x4mm ²	510



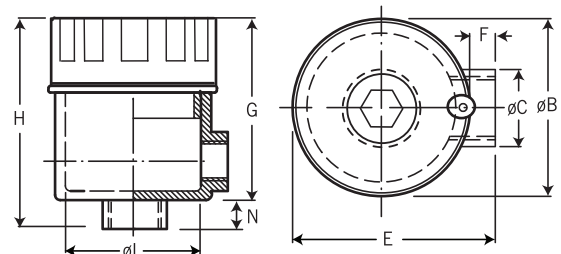
ES/EA TYPE

ES / EA Type

Protection: Ex II 2 GD Ex d IIB+H2 Gb T6
 Ex tb IIIC Db T85°C; IP68

Material: ES: SS316; EA: Aluminum Alloy

Extension wire connection: 1/2", 3/4" (PF, NPT, BSP)
Weight: 1054 g



Type	Dimensions								
	unit=mm	G	H	øL	N	øB	øC	E	F
ES/EA		76	90	56.5	14	74	35.5	87	13

Float Specification

<p>$\phi 75 \times 75\text{mm}$ (SUS316)</p> <p>Float Size: $\phi 75$ Max. Working Pressure: 30 kg/cm² Working S.G.: ≥ 0.68 The Guide Tube Size: $\phi 20$ Material: SUS316 Limited Operating Temperature: -20~140°C</p>	<p>$\phi 49 \times 49\text{mm}$ (SUS316)</p> <p>Float Size: $\phi 49$ Max. Working Pressure: 30 kg/cm² Working S.G.: ≥ 0.68 The Guide Tube Size: $\phi 12$ Material: SUS316 Limited Operating Temperature: -20~140°C</p>
<p>$\phi 40 \times 38\text{mm}$ (SUS316)</p> <p>Float Size: $\phi 40$ Max. Working Pressure: 30 kg/cm² Working S.G.: ≥ 0.8 The Guide Tube Size: $\phi 9.5$ Material: SUS316 Limited Operating Temperature: -20~140°C</p>	<p>$\phi 28 \times 27\text{mm}$ (SUS316)</p> <p>Float Size: $\phi 28$ Max. Working Pressure: 15 kg/cm² Working S.G.: ≥ 0.8 The Guide Tube Size: $\phi 8$ Material: SUS316 Limited Operating Temperature: -20~140°C</p>
<p>$\phi 50 \times 70\text{mm}$ (P.V.C)</p> <p>Float Size: $\phi 50$ Max. Working Pressure: 3 kg/cm² Working S.G.: ≥ 0.7 The Guide Tube Size: $\phi 18$ Material: P.V.C Limited Operating Temperature: 0~70°C</p>	<p>$\phi 50 \times 75\text{mm}$ (PVDF)</p> <p>Float Size: $\phi 50$ Max. Working Pressure: 5 kg/cm² Working S.G.: ≥ 0.8 The Guide Tube Size: $\phi 20$ Material: PVDF Limited Operating Temperature: 0~120°C</p>
<p>$\phi 50 \times 75\text{mm}$ (P.P)</p> <p>Float Size: $\phi 50$ Max. Working Pressure: 3 kg/cm² Working S.G.: ≥ 0.7 The Guide Tube Size: $\phi 21$ Material: P.P Limited Operating Temperature: 0~60°C</p>	<p>$\phi 26 \times 26\text{mm}$ (P.P)</p> <p>Float Size: $\phi 26$ Max. Working Pressure: 3 kg/cm² Working S.G.: ≥ 0.7 The Guide Tube Size: $\phi 8$ Material: P.P Limited Operating Temperature: 0~60°C</p>
<p>$\phi 38 \times 38\text{mm}$ (P.P)</p> <p>Float Size: $\phi 38$ Max. Working Pressure: 3 kg/cm² Working S.G.: ≥ 0.7 The Guide Tube Size: $\phi 12$ Material: P.P Limited Operating Temperature: 0~60°C</p>	<p>$\phi 38 \times 38\text{mm}$ (PVDF)</p> <p>Float Size: $\phi 38$ Max. Working Pressure: 3 kg/cm² Working S.G.: ≥ 0.7 The Guide Tube Size: $\phi 12$ Material: PVDF Limited Operating Temperature: 0~60°C</p>

ON-OFF Gap

A. Metal

<p>$\phi 75 \times 75\text{mm}$ (SUS316)</p>	<p>$\phi 49 \times 49\text{mm}$ (SUS316)</p>
<p>$\phi 40 \times 38\text{mm}$ (SUS316)</p>	<p>$\phi 28 \times 27\text{mm}$ (SUS316)</p>

B. Non-Metal

<p>$\phi 50 \times 70\text{mm}$ (P.V.C)</p>	<p>$\phi 50 \times 75\text{mm}$ (PVDF)</p>
<p>$\phi 50 \times 75\text{mm}$ (P.P)</p>	<p>$\phi 26 \times 26\text{mm}$ (P.P)</p>
<p>$\phi 38 \times 38\text{mm}$ (P.P)</p>	<p>$\phi 38 \times 38\text{mm}$ (PVDF)</p>

LS-100 Series One Float Type

Metal Float			
LS-101	LS-102	LS-103	LS-104
<p>L=std. 48mm / L1=std. 21mm (upon available on request)</p>	<p>L=std. 68mm / L1=std. 27mm (upon available on request)</p>	<p>L=std. 80mm / L1=std. 32mm (upon available on request)</p>	<p>L=std. 110mm / L1=std. 49mm (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=std. 48mm (upon available on request)</p>	<p>L=std. 110mm (upon available on request)</p>	<p>L=std. 110mm (upon available on request)</p>	<p>L=std. 110mm (upon available on request)</p>
LS-105P (P.P)		LS-106P (PVDF)	
<p>L=std. 60mm (upon available on request)</p>		<p>L=std. 60mm (upon available on request)</p>	

Ordering Information

LS	Code	Model					
↓	- Metal Float		101	102	103	104	
	- Non-Metal Float		101P	102P	103P	104P	105P
↓	Code	Material of Wetted Parts					
↓		(1) SS304 (2) SS316 (3) P.V.C (4) P.P (5) PVDF (6) option					
↓	Code	Contact Form					
↓		(1) SPST (230V AC/DC) (2) SPDT (250V AC/DC) (3) SPDT (150V AC/DC)					
↓	Code	Wiring Code Numbers					
↓		Please refer to <i>Wiring Code Numbers</i> table.					
↓	Code	Float Size					
↓		(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) (I) ø38 x 38 (P.P) (J) ø38 x 38 (PVDF)					
↓	Code	Total Insertion Length					
↓		L=_____mm					
↓	Code	Setting Point & Switch Acting Functions					
↓		Please fill in the requested length and float Rised ↑ON or Fall down ↓ON ø1=_____mm <input type="checkbox"/> ON					
LS							Complete Ordering Code