

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 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 WVA	60 WVA	20 WVA
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	2xSPST	SPST (Common Wire Style)	2xSPDT	3xSPST	SPST (Common Wire Style)	3xSPDT	SPST (Common Wire Style)	4xSPST	4xSPDT	

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



Approvals:



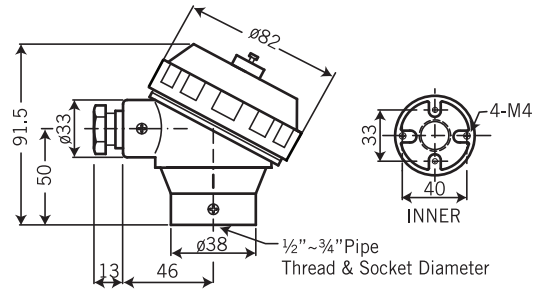
Head Type Technical Data



HN TYPE

HN Type

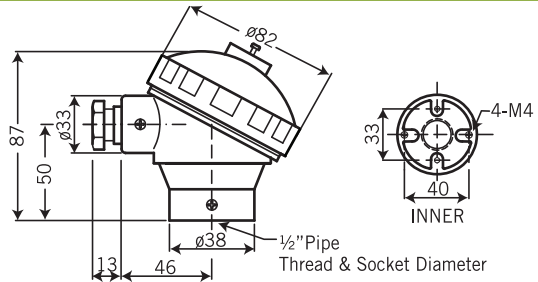
Protection: IP68
Material: Aluminum Alloy
Weight: 264g
Protection tube connection: 1/2", 3/4" (PF,NPT,BSP); M20 x 1.5
Extension wire connection: 1/2", 3/4" (PF,NPT,BSP); M20 x 1.5
 Other specifications are available on request.



HP TYPE

HP Type

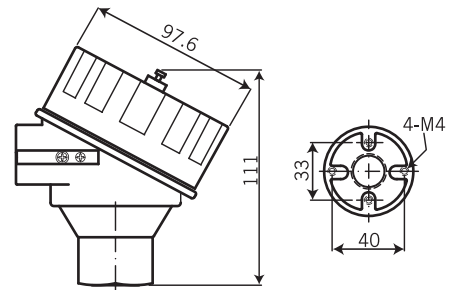
Protection: Weather Proof Type
Material: Polypropylene
Weight: 112g
Protection tube connection: 1/2" NPT, 1/2" BSP
Extension wire connection: 3/4" NPT, M20 x 1.5
 Other specifications are available on request.



XDS/XDA TYPE

XDS / XDA Type

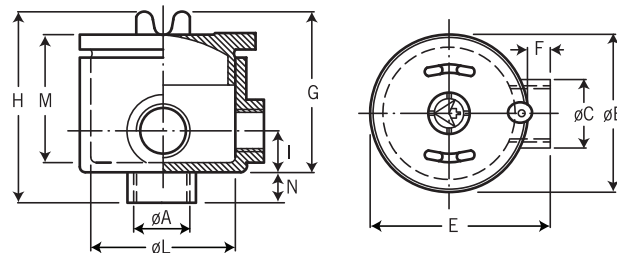
Material: XDS-SS316; XDA-Aluminum alloy
Weight: XDS-1278g; XDA-460g
Protection tube connection: 1/2" PF, 3/4" PF, 1/2" NPT, 3/4" NPT, 1/2" BSP, 3/4" BSP, G1/2", G3/4", M20x1.5, M24x1.5, M25x1.5
Extension wire connection: M20x1.5, M25x1.5, 1/2" NPT, 3/4" NPT
EC certificate no.: BSI 07 ATEX 1532458U
ATEX 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



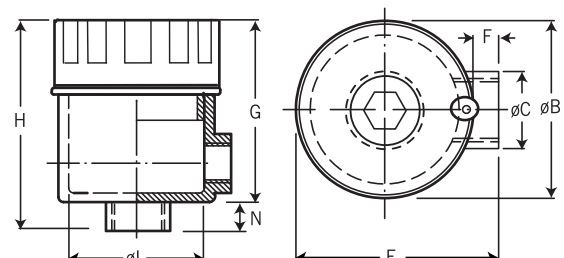
Type	Dimensions											Terminal Block (on request)	Weight Gr.
	øA	øB	øC	E	F	G	H	I	øL	M	N		
S2	3/4"	90	38	100	10	78	92	24	76	69	14	4x4mm ²	510



ES/EA TYPE

ES / EA Type

Protection: Explosion Proof Type
Material: ES: SS316 / EA: Aluminum Alloy
Extension wire connection: 1/2", 3/4" (PF, NPT, BSP)
Weight: 1054 g



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

Float Specification

φ75 x 75mm (SUS316)

Float Size: φ75
 Max. Working Pressure: 30 kg/cm²
 Working S.G.: ≥0.68
 The Guide Tube Size: φ20
 Material: SUS316
 Limited Operating Temperature: -20~140°C

φ50 x 70mm (P.V.C)

Float Size: φ50
 Max. Working Pressure: 3 kg/cm²
 Working S.G.: ≥0.7
 The Guide Tube Size: φ18
 Material: P.V.C
 Limited Operating Temperature: 0~70°C

φ49 x 49mm (SUS316)

Float Size: φ49
 Max. Working Pressure: 30 kg/cm²
 Working S.G.: ≥0.68
 The Guide Tube Size: φ12
 Material: SUS316
 Limited Operating Temperature: -20~140°C

φ50 x 75mm (PVDF)

Float Size: φ50
 Max. Working Pressure: 5 kg/cm²
 Working S.G.: ≥0.8
 The Guide Tube Size: φ20
 Material: PVDF
 Limited Operating Temperature: 0~120°C

φ40 x 38mm (SUS316)

Float Size: φ40
 Max. Working Pressure: 30 kg/cm²
 Working S.G.: ≥0.8
 The Guide Tube Size: φ9.5
 Material: SUS316
 Limited Operating Temperature: -20~140°C

φ50 x 75mm (P.P)

Float Size: φ50
 Max. Working Pressure: 3 kg/cm²
 Working S.G.: ≥0.7
 The Guide Tube Size: φ21
 Material: P.P
 Limited Operating Temperature: 0~60°C

φ28 x 27mm (SUS316)

Float Size: φ28
 Max. Working Pressure: 15 kg/cm²
 Working S.G.: ≥0.8
 The Guide Tube Size: φ8
 Material: SUS316
 Limited Operating Temperature: -20~140°C

φ26 x 26mm (P.P)

Float Size: φ26
 Max. Working Pressure: 3 kg/cm²
 Working S.G.: ≥0.7
 The Guide Tube Size: φ8
 Material: P.P
 Limited Operating Temperature: 0~60°C

φ36.2 x 51.5mm (SUS316)

Float Size: φ36.2
 Max. Working Pressure: 30 kg/cm²
 Working S.G.: ≥0.8
 The Guide Tube Size: φ9.5
 Material: SUS316
 Limited Operating Temperature: -20~140°C

φ38 x 38mm (P.P) or (PVDF)

Float Size: φ38
 Max. Working Pressure: P.P: 3 kg/cm²; PVDF: 5 kg/cm²
 Working S.G.: ≥0.7
 The Guide Tube Size: φ12
 Material: P.P or PVDF
 Limited Operating Temperature: P.P: 0~60°C; PVDF: 0~120°C

ON-OFF Gap

A. Metal

φ75 x 75mm (SUS316)	φ49 x 49mm (SUS316)

φ40 x 38mm (SUS316)	φ28 x 27mm (SUS316)

φ36.2 x 51.5mm (SUS316)

B. Non-Metal

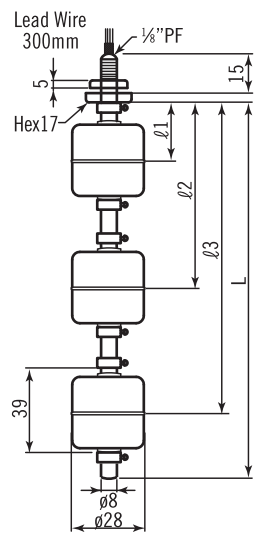
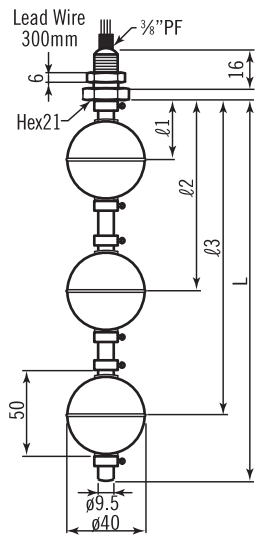
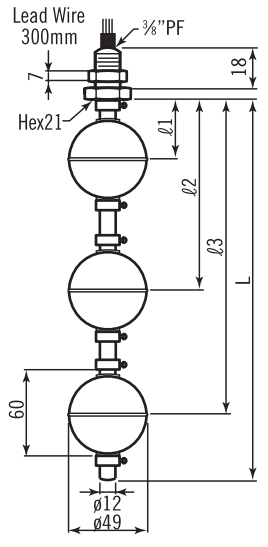
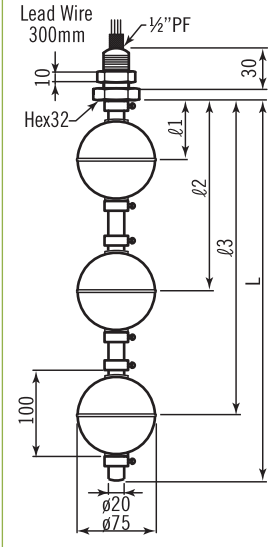
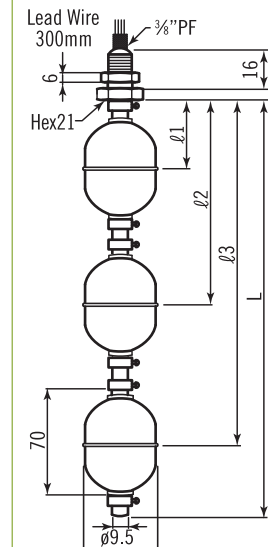
φ50 x 70mm (P.V.C)	φ50 x 75mm (PVDF)

φ50 x 75mm (P.P)	φ26 x 26mm (P.P)

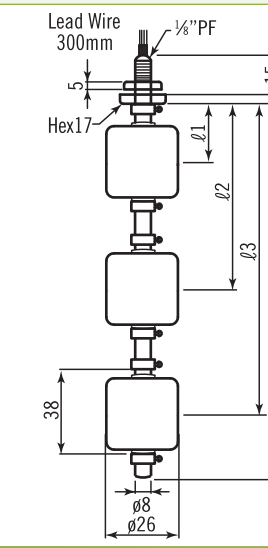
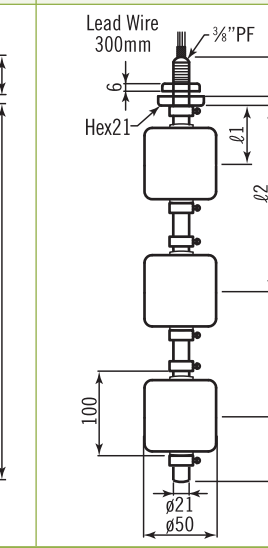
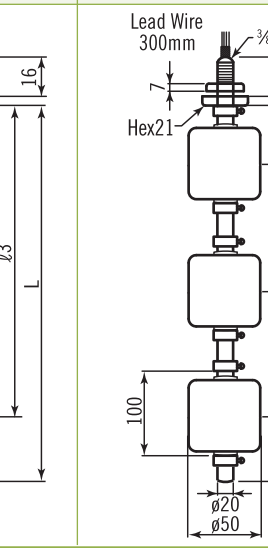
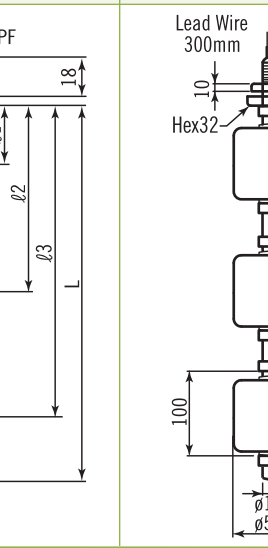
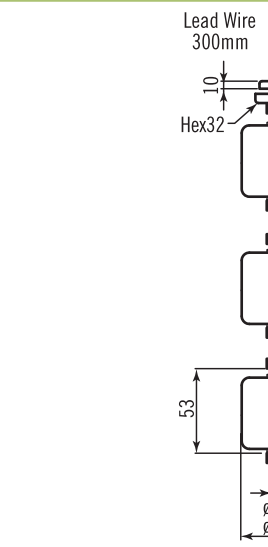
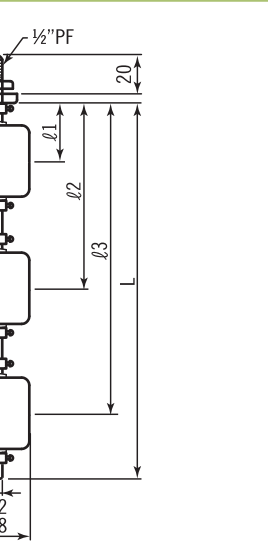
φ38 x 38mm (P.P)	φ38 x 38mm (PVDF)

LS-300 Series Three Float Type

Metal Float

LS-301	LS-302	LS-303	LS-304	LS-305
 <p>Lead Wire 300mm 1/8"PF 5 15 Hex17 Ø1 Ø2 Ø3 L 39 Ø8 Ø28</p>	 <p>Lead Wire 300mm 3/8"PF 6 16 Hex21 Ø1 Ø2 Ø3 L 50 Ø9.5 Ø40</p>	 <p>Lead Wire 300mm 3/8"PF 7 18 Hex21 Ø1 Ø2 Ø3 L 60 Ø12 Ø49</p>	 <p>Lead Wire 300mm 1/2"PF 10 30 Hex32 Ø1 Ø2 Ø3 L 100 Ø20 Ø75</p>	 <p>Lead Wire 300mm 3/8"PF 6 16 Hex21 Ø1 Ø2 Ø3 L 70 Ø9.5 Ø36.2</p>

Non-Metal Float

LS-301P (P.P)	LS-302P (P.P)	LS-303P (PVDF)	LS-304P (P.V.C)
 <p>Lead Wire 300mm 1/8"PF 5 15 Hex17 Ø1 Ø2 Ø3 L 38 Ø8 Ø26</p>	 <p>Lead Wire 300mm 3/8"PF 6 16 Hex21 Ø1 Ø2 Ø3 L 100 Ø21 Ø50</p>	 <p>Lead Wire 300mm 3/8"PF 7 18 Hex21 Ø1 Ø2 Ø3 L 100 Ø20 Ø50</p>	 <p>Lead Wire 300mm 1/2"PF 10 30 Hex32 Ø1 Ø2 Ø3 L 100 Ø18 Ø50</p>
LS-305P (P.P)	LS-306P (PVDF)		
 <p>Lead Wire 300mm 1/2"PF 10 20 Hex32 Ø1 Ø2 Ø3 L 53 Ø12 Ø38</p>	 <p>Lead Wire 300mm 1/2"PF 10 20 Hex32 Ø1 Ø2 Ø3 L 53 Ø12 Ø38</p>		

Ordering Information

LS	Code	Model										
		– Metal Float					– Non-Metal Float					
		301	302	303	304	305	301P	302P	303P	304P	305P	306P
		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) $\phi 28 \times 27$ (SS316) (B) $\phi 40 \times 38$ (SS316) (C) $\phi 49 \times 49$ (SS316) (D) $\phi 75 \times 75$ (SS316) (E) $\phi 26 \times 26$ (P.P) (F) $\phi 50 \times 75$ (P.P) (G) $\phi 50 \times 75$ (PVDF) (H) $\phi 50 \times 70$ (P.V.C) (I) $\phi 38 \times 38$ (P.P) (J) $\phi 38 \times 38$ (PVDF) (K) $\phi 36.2 \times 51.5$ (SS316)									
		Code	Total Insertion Length									
			L= _____mm									
		Code	Setting Point & Switch Acting Functions									
			Please fill in the requested length and float Rised \uparrow ON or Fall down \downarrow ON $\ell 1 =$ _____mm <input type="checkbox"/> ON $\ell 2 =$ _____mm <input type="checkbox"/> ON $\ell 3 =$ _____mm <input type="checkbox"/> ON									
LS												
Complete Ordering Code												