

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	SPST (Common Wire Style)		2xSPST		2xSPDT		3xSPST		3xSPDT	
								SPST (Common Wire Style)		SPST (Common Wire Style)	
								4xSPST		4xSPDT	

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



Approvals:



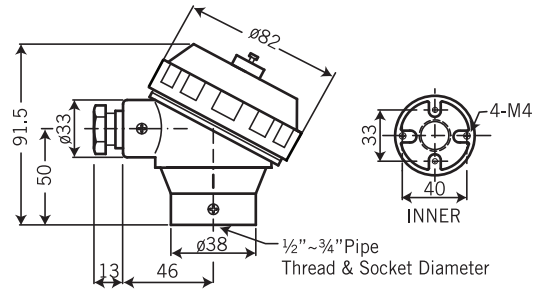
Head Type Technical Data



HN TYPE

HN Type

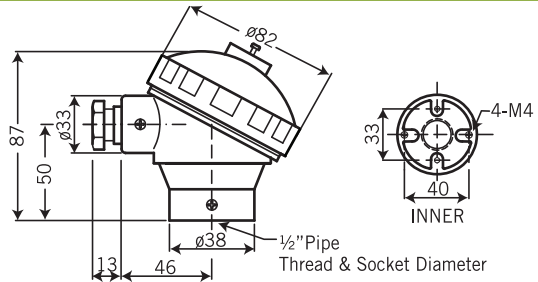
Protection: IP68
Material: Aluminum Alloy
Weight: 264g
Protection tube connection: 1/2", 3/4" (PF,NPT,BSP); M20 x 1.5
Extension wire connection: 1/2", 3/4" (PF,NPT,BSP); M20 x 1.5
 Other specifications are available on request.



HP TYPE

HP Type

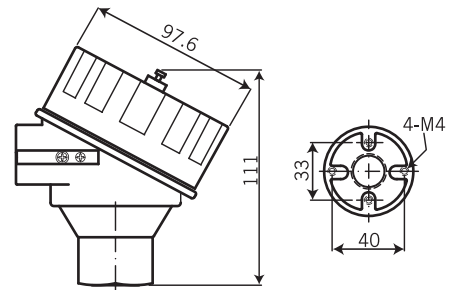
Protection: Weather Proof Type
Material: Polypropylene
Weight: 112g
Protection tube connection: 1/2" NPT, 1/2" BSP
Extension wire connection: 3/4" NPT, M20 x 1.5
 Other specifications are available on request.



XDS/XDA TYPE

XDS / XDA Type

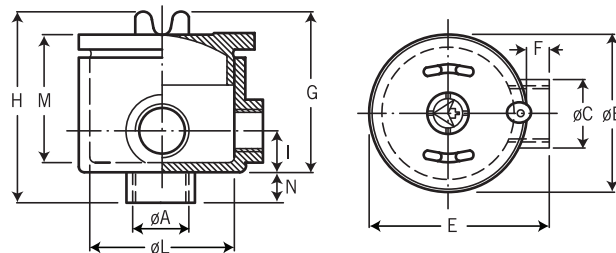
Material: XDS-SS316; XDA-Aluminum alloy
Weight: XDS-1278g; XDA-460g
Protection tube connection: 1/2" PF, 3/4" PF, 1/2" NPT, 3/4" NPT, 1/2" BSP, 3/4" BSP, G1/2", G3/4", M20x1.5, M24x1.5, M25x1.5
Extension wire connection: M20x1.5, M25x1.5, 1/2" NPT, 3/4" NPT
EC certificate no.: BSI 07 ATEX 1532458U
ATEX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



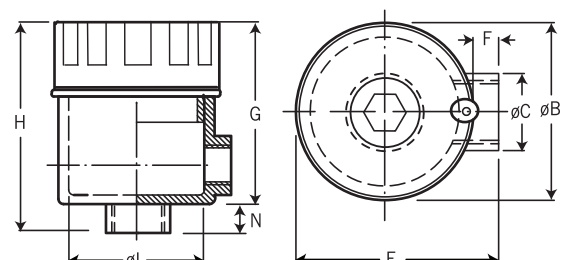
Type	Dimensions											Terminal Block (on request)	Weight Gr.
	øA	øB	øC	E	F	G	H	I	øL	M	N		
S2	3/4"	90	38	100	10	78	92	24	76	69	14	4x4mm ²	510



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

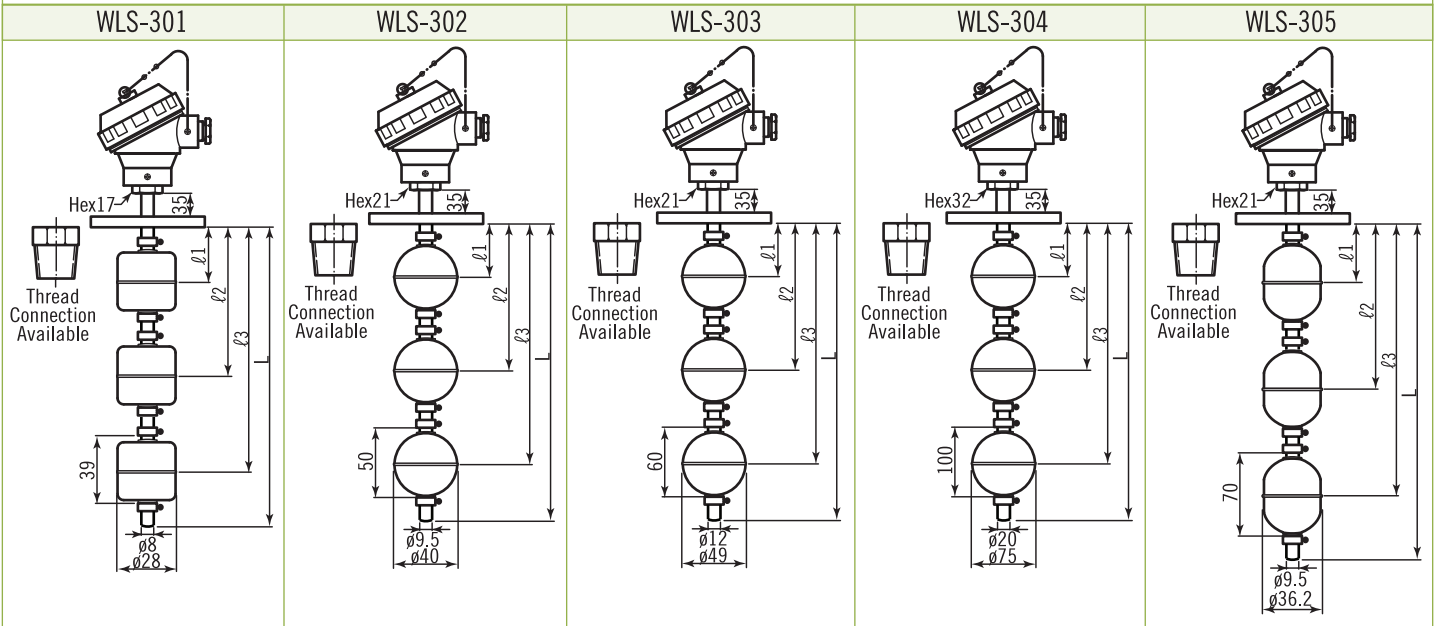
φ50 x 70mm (P.V.C)	φ50 x 75mm (PVDF)

φ50 x 75mm (P.P)	φ26 x 26mm (P.P)

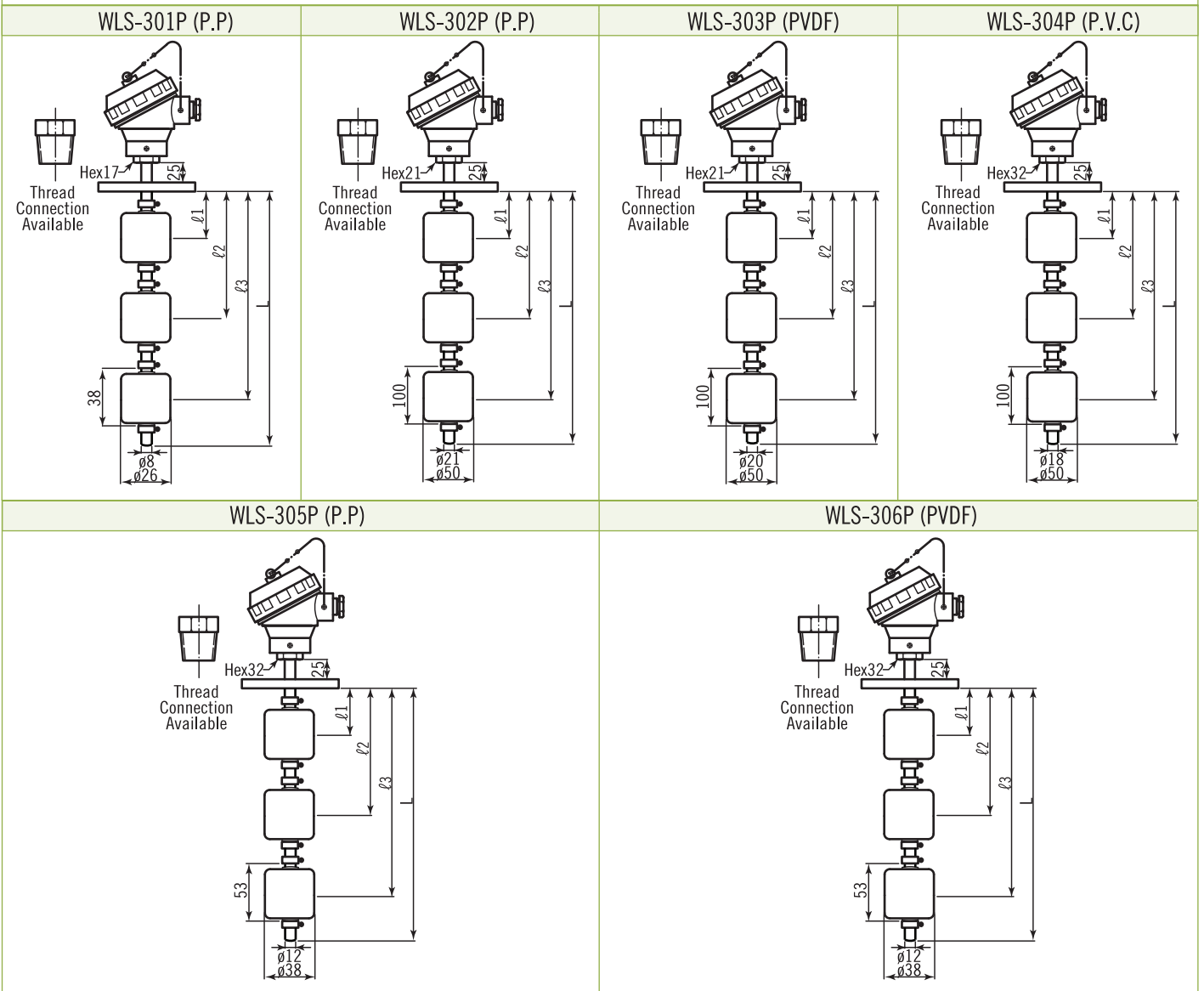
φ38 x 38mm (P.P)	φ38 x 38mm (PVDF)

WLS-300 Series Three Float Type

Metal Float



Non-Metal Float



Ordering Information

WLS	Code	Model	Code	Wiring Code Numbers	
↓	– Metal Float		301 302 303 304 305	Please refer to <i>Wiring Code Numbers</i> table.	
	– Non-Metal Float		301P 302P 303P 304P 305P 306P		
	Code	Process Connection Size			Code Head Type
	A	1½" (for float ø28, ø40 only)			(1) HN type (2) HP type (3) option
	B	2" (float ø75 not available)			Code Float Size
	C	3"	D option		(A) ø28 x 27 (SS316) (B) ø40 x 38 (SS316) (C) ø49 x 49 (SS316)
		Code Process Connection Rating			(D) ø75 x 75 (SS316) (E) ø26 x 26 (P.P) (F) ø50 x 75 (P.P)
		Thread type (A) PT (B) NPT (C) BSP (D) option			(G) ø50 x 75 (PVDF) (H) ø50 x 70 (P.V.C) (I) ø38 x 38 (P.P)
		Flange type (E) JIS 5K (F) JIS 10K (G) ANSI 150# (H) option			(J) ø38 x 38 (PVDF) (K) ø36.2 x 51.5 (SS316)
		Code	Material of Wetted Parts		Code Conduit Connection
		(1) SS304 (2) SS316 (3) P.V.C (4) P.P		(A) ½"PF(F) (B) ½"NPT(F) (C) ¾"PF(F) (D) ¾"NPT(F)	
		(5) PVDF (6) option		(O) Option	
	Code	Contact Form		Code Total Insertion Length	
	1	SPST (230V AC/DC)		L= _____mm	
	2	SPDT (250V AC/DC)		Code Setting Point & Switch Acting Functions	
	3	SPDT (150V AC/DC)		Please fill in the requested length and float Rised ↑ON or Fall down ↓ON	
				ℓ1= _____mm <input type="checkbox"/> ON	
				ℓ2= _____mm <input type="checkbox"/> ON	
				ℓ3= _____mm <input type="checkbox"/> ON	
WLS				+ Complete Ordering Code	