

## 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:



TD0400TJ  
工電(2016)第00225號  
工電(2016)第00226號



Switches with Intertek  
Test Report, refer to  
UL508 Standard.



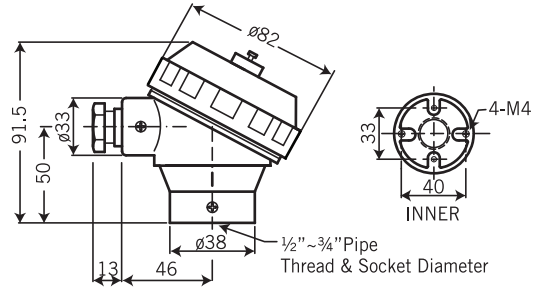
Head Type Technical Data



HN TYPE

HN Type

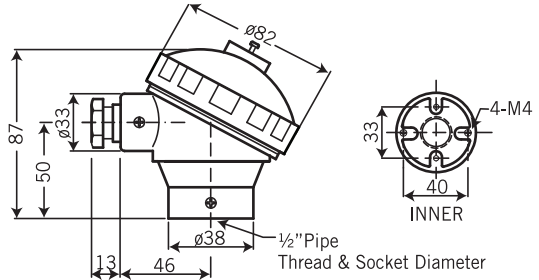
**Protection:** IP68  
**Material:** Aluminum Alloy  
**Weight:** 264g  
**Protection tube connection:** 1/2", 3/4" (PF,NPT,BSP); M20 x 1.5  
**Extension wire connection:** 1/2", 3/4" (PF,NPT,BSP); M20 x 1.5  
 Other specifications are available on request.



HP TYPE

HP Type

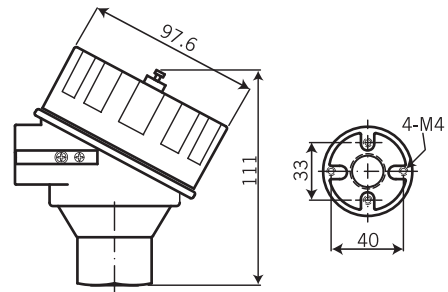
**Protection:** Weather Proof Type  
**Material:** Polypropylene  
**Weight:** 112g  
**Protection tube connection:** 1/2"NPT, 1/2"BSP  
**Extension wire connection:** 3/4"NPT, M20 x 1.5  
 Other specifications are available on request.



XDS/XDA TYPE

XDS / XDA Type

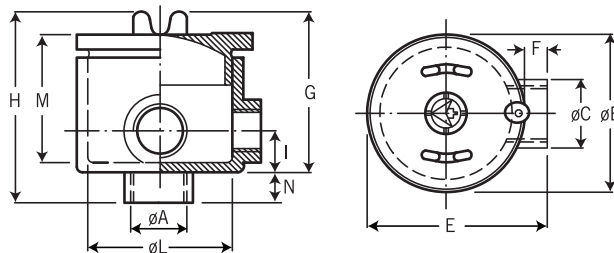
**Material:** XDS-SS316; XDA-Aluminum alloy  
**Weight:** XDS-1278g; XDA-460g  
**Protection tube connection:** 1/2"PF, 3/4"PF, 1/2"NPT, 3/4"NPT, 1/2"BSP, 3/4"BSP, G1/2", G3/4", M20x1.5, M24x1.5, M25x1.5  
**Extension wire connection:** M20x1.5, M25x1.5, 1/2"NPT, 3/4"NPT  
**EC certificate no.:** BSI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



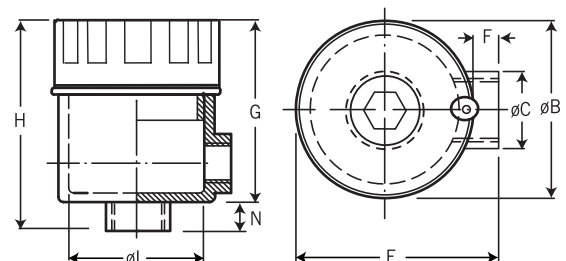
Type	Dimensions											Terminal Block (on request)	Weight Gr.
	øA	øB	øC	E	F	G	H	I	øL	M	N		
S2	3/4"	90	38	100	10	78	92	24	76	69	14	4x4mm <sup>2</sup>	510



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/cm<sup>2</sup>  
 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/cm<sup>2</sup>  
 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/cm<sup>2</sup>  
 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/cm<sup>2</sup>  
 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/cm<sup>2</sup>  
 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/cm<sup>2</sup>  
 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/cm<sup>2</sup>  
 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/cm<sup>2</sup>  
 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/cm<sup>2</sup>  
 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/cm<sup>2</sup>; PVDF: 5 kg/cm<sup>2</sup>  
 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

<b>φ75 x 75mm (SUS316)</b>	<b>φ49 x 49mm (SUS316)</b>

<b>φ40 x 38mm (SUS316)</b>	<b>φ28 x 27mm (SUS316)</b>

**φ36.2 x 51.5mm (SUS316)**

### B. Non-Metal

<b>φ50 x 70mm (P.V.C)</b>	<b>φ50 x 75mm (PVDF)</b>

<b>φ50 x 75mm (P.P)</b>	<b>φ26 x 26mm (P.P)</b>

<b>φ38 x 38mm (P.P)</b>	<b>φ38 x 38mm (PVDF)</b>

## ELS-200 Series Two Float Type

### Metal Float

ELS-201	ELS-202	ELS-203	ELS-204	ELS-205

### Non-Metal Float

ELS-201P (P.P)	ELS-202P (P.P)	ELS-203P (PVDF)	ELS-204P (P.V.C)
ELS-205P (P.P)	ELS-206P (PVDF)		

## Ordering Information

ELS	Code	Model																								
		<table border="1"> <tr> <th colspan="5">- Metal Float</th> <th colspan="7">- Non-Metal Float</th> </tr> <tr> <td>201</td> <td>202</td> <td>203</td> <td>204</td> <td>205</td> <td>201P</td> <td>202P</td> <td>203P</td> <td>204P</td> <td>205P</td> <td>206P</td> <td></td> </tr> </table>	- Metal Float					- Non-Metal Float							201	202	203	204	205	201P	202P	203P	204P	205P	206P	
- Metal Float					- Non-Metal Float																					
201	202	203	204	205	201P	202P	203P	204P	205P	206P																
		<table border="1"> <tr> <th>Code</th> <th colspan="2">Process Connection Size</th> </tr> <tr> <td>A</td> <td>1½" (for float ø28, ø40 only)</td> <td>B 2" (float ø75 not available)</td> </tr> </table>	Code	Process Connection Size		A	1½" (for float ø28, ø40 only)	B 2" (float ø75 not available)																		
Code	Process Connection Size																									
A	1½" (for float ø28, ø40 only)	B 2" (float ø75 not available)																								
		<table border="1"> <tr> <th>Code</th> <th colspan="2">Process Connection Rating</th> </tr> <tr> <td></td> <td colspan="2">Thread Type (A) PT (B) NPT (C) BSP (D) Option</td> </tr> <tr> <td></td> <td colspan="2">Flange Type (E) JIS 5K (F) JIS 10K (G) ANSI 150# (H) Option</td> </tr> </table>	Code	Process Connection Rating			Thread Type (A) PT (B) NPT (C) BSP (D) Option			Flange Type (E) JIS 5K (F) JIS 10K (G) ANSI 150# (H) Option																
Code	Process Connection Rating																									
	Thread Type (A) PT (B) NPT (C) BSP (D) Option																									
	Flange Type (E) JIS 5K (F) JIS 10K (G) ANSI 150# (H) Option																									
		<table border="1"> <tr> <th>Code</th> <th colspan="2">Material of Wetted Parts</th> </tr> <tr> <td></td> <td colspan="2">(1) SS304 (2) SS316 (3) P.V.C (4) P.P (5) PVDF (6) Option</td> </tr> </table>	Code	Material of Wetted Parts			(1) SS304 (2) SS316 (3) P.V.C (4) P.P (5) PVDF (6) Option																			
Code	Material of Wetted Parts																									
	(1) SS304 (2) SS316 (3) P.V.C (4) P.P (5) PVDF (6) Option																									
		<table border="1"> <tr> <th>Code</th> <th colspan="2">Contact Form</th> </tr> <tr> <td></td> <td colspan="2">(1) SPST (230V AC/DC) (2) SPDT (250V AC/DC) (3) SPDT (150V AC/DC)</td> </tr> </table>	Code	Contact Form			(1) SPST (230V AC/DC) (2) SPDT (250V AC/DC) (3) SPDT (150V AC/DC)																			
Code	Contact Form																									
	(1) SPST (230V AC/DC) (2) SPDT (250V AC/DC) (3) SPDT (150V AC/DC)																									
		<table border="1"> <tr> <th>Code</th> <th colspan="2">Wiring Code Numbers</th> </tr> <tr> <td></td> <td colspan="2">Please refer to <i>Wiring Code Numbers</i> table.</td> </tr> </table>	Code	Wiring Code Numbers			Please refer to <i>Wiring Code Numbers</i> table.																			
Code	Wiring Code Numbers																									
	Please refer to <i>Wiring Code Numbers</i> table.																									
		<table border="1"> <tr> <th>Code</th> <th colspan="2">Head Type</th> </tr> <tr> <td></td> <td colspan="2">(1) XDS (2) XDA (3) S2 (4) ES (5) EA (6) Option</td> </tr> </table>	Code	Head Type			(1) XDS (2) XDA (3) S2 (4) ES (5) EA (6) Option																			
Code	Head Type																									
	(1) XDS (2) XDA (3) S2 (4) ES (5) EA (6) Option																									
		<table border="1"> <tr> <th>Code</th> <th colspan="2">Float Size</th> </tr> <tr> <td></td> <td colspan="2">(A) ø28x27 (SS316) (B) ø40x38 (SS316) (C) ø49x49 (SS316) (D) ø75x75 (SS316) (E) ø26x26 (P.P) (F) ø50x75 (P.P) (G) ø50x75 (PVDF) (H) ø50x70 (P.V.C) (I) ø38x38 (P.P) (J) ø38x38 (PVDF) (K) ø36.2x51.5 (SS316)</td> </tr> </table>	Code	Float Size			(A) ø28x27 (SS316) (B) ø40x38 (SS316) (C) ø49x49 (SS316) (D) ø75x75 (SS316) (E) ø26x26 (P.P) (F) ø50x75 (P.P) (G) ø50x75 (PVDF) (H) ø50x70 (P.V.C) (I) ø38x38 (P.P) (J) ø38x38 (PVDF) (K) ø36.2x51.5 (SS316)																			
Code	Float Size																									
	(A) ø28x27 (SS316) (B) ø40x38 (SS316) (C) ø49x49 (SS316) (D) ø75x75 (SS316) (E) ø26x26 (P.P) (F) ø50x75 (P.P) (G) ø50x75 (PVDF) (H) ø50x70 (P.V.C) (I) ø38x38 (P.P) (J) ø38x38 (PVDF) (K) ø36.2x51.5 (SS316)																									
		<table border="1"> <tr> <th>Code</th> <th colspan="2">Conduit Size</th> </tr> <tr> <td></td> <td colspan="2">(A) ½"PF(F) (B) ½"NPT(F) (C) ¾"PF(F) (D) ¾"NPT(F) (O) Option</td> </tr> </table>	Code	Conduit Size			(A) ½"PF(F) (B) ½"NPT(F) (C) ¾"PF(F) (D) ¾"NPT(F) (O) Option																			
Code	Conduit Size																									
	(A) ½"PF(F) (B) ½"NPT(F) (C) ¾"PF(F) (D) ¾"NPT(F) (O) Option																									
		<table border="1"> <tr> <th>Code</th> <th colspan="2">Total Insertion Length</th> </tr> <tr> <td></td> <td colspan="2">L= _____ mm</td> </tr> </table>	Code	Total Insertion Length			L= _____ mm																			
Code	Total Insertion Length																									
	L= _____ mm																									
		<table border="1"> <tr> <th>Code</th> <th colspan="2">Setting Point &amp; Switch Acting Functions</th> </tr> <tr> <td></td> <td colspan="2">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</td> </tr> </table>	Code	Setting Point & Switch Acting Functions			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																			
Code	Setting Point & Switch Acting Functions																									
	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																									
		<table border="1"> <tr> <th>Code</th> <th colspan="2">Explosion Proof Type / Head Housing Type</th> </tr> <tr> <td>A</td> <td colspan="2"><b>Certificate on Housing Only / S2:</b> EEx d IIC-T6, II 2 GD</td> </tr> <tr> <td>B</td> <td colspan="2"><b>Taiwan Explosion Proof Certification / ES &amp; EA:</b> Ex d IIB + H2 T6 Gb</td> </tr> <tr> <td>S</td> <td colspan="2"><b>Certificate on Housing Only / XDS &amp; XDA:</b> II 2 G D Ex d IIC T6 Ex tD A21 T100°C</td> </tr> </table>	Code	Explosion Proof Type / Head Housing Type		A	<b>Certificate on Housing Only / S2:</b> EEx d IIC-T6, II 2 GD		B	<b>Taiwan Explosion Proof Certification / ES &amp; EA:</b> Ex d IIB + H2 T6 Gb		S	<b>Certificate on Housing Only / XDS &amp; XDA:</b> II 2 G D Ex d IIC T6 Ex tD A21 T100°C													
Code	Explosion Proof Type / Head Housing Type																									
A	<b>Certificate on Housing Only / S2:</b> EEx d IIC-T6, II 2 GD																									
B	<b>Taiwan Explosion Proof Certification / ES &amp; EA:</b> Ex d IIB + H2 T6 Gb																									
S	<b>Certificate on Housing Only / XDS &amp; XDA:</b> II 2 G D Ex d IIC T6 Ex tD A21 T100°C																									
ELS		Complete Ordering Code																								

WWW.NEW-FLOW.COM • TEL: 886-7-8135500 • FAX: 886-7-8225588 • Email: info@new-flow.com

NEW

01Apr2018