

ELS Level sensors are used for controlling level of a tank.
Different kinds materials and housing connection types are available.

Working Principle:

When magnetic field of magnet within the buoy moving along tube according to liquid level comes up to the reed sensor, it opens or closes the electric circuit. Such changes of reed sensors and alarm or level information can be assessed through a relay circuit or control device. It is preferred by the users because relay output is provided within the housing.



ELS LEVEL SWITCH

Advantages :

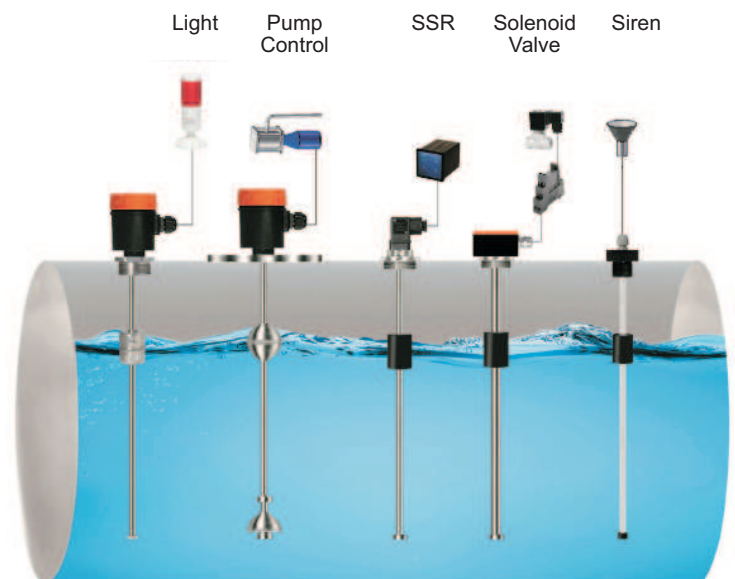
- * Different material options according to liquid type
- * Different contact options
- * Fast delivery
- * Different type applications possible



Areas of Applications:

Tank level measurement and control, boiler control, warehouse control.
Yacht water level control, Dirty level control.
Hydraulic oil tank level measurement and control.

Application Examples :

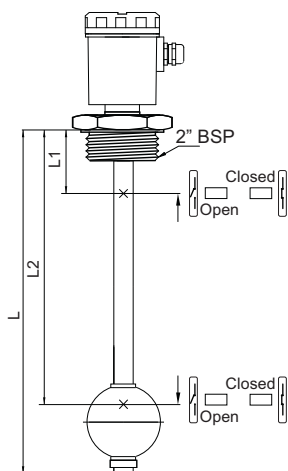


Technical Specifications :

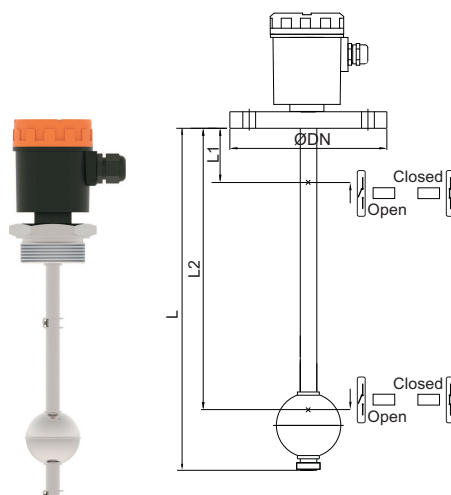
ELS

Float Material	304 Stainless Steel
Wetted Parts Material	304 Stainless Steel (Std.) Opt. 316 St.St.
Pipe Material	304 Stainless Steel (Std.) Opt. 316 St.St.
Float Type	S4A or S40A (Std.) Selectable from Table.
Working Temperature	Max. 125 °C
Mechanical Connection	2" BSP (Std.) Opt. Selectable
Electrical Connection	Terminal, With Cable, With Socket
Number of Float	1 (Std.) Available Numerous
Stem Length	Max. 2500 mm (Thread Included)
Number of Contact	2 x SPST - NO (Std.) Opt. can be added
Contact Current	1,5 Amper (Std.)
Max.Contact Capacity	50 W / VA
Max. Supply Voltage	200 VDC / 250 VAC (Std.) Opt. Selectable

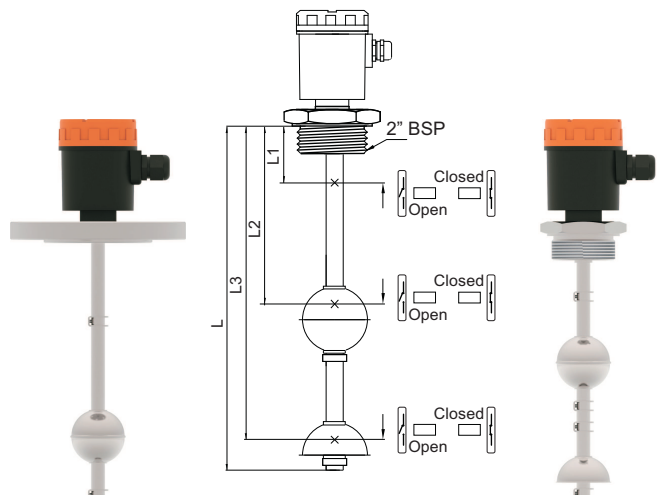
Sample Models :



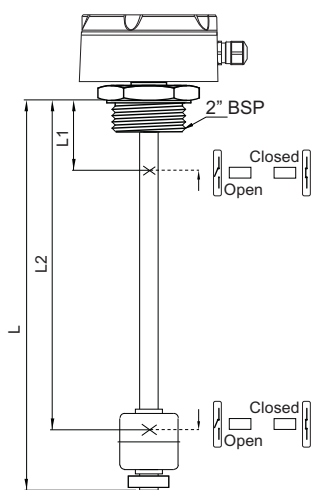
Housing - Thread



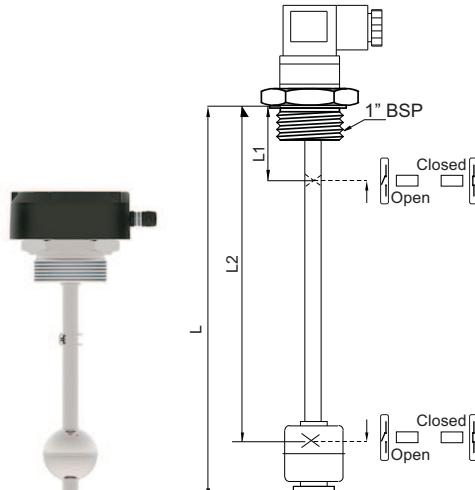
Housing - Flanged



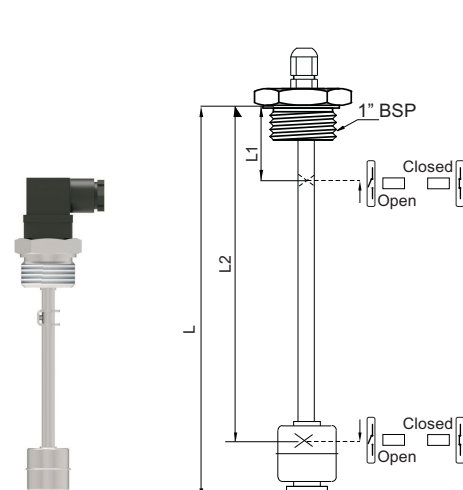
Housing - Double Float



Housing

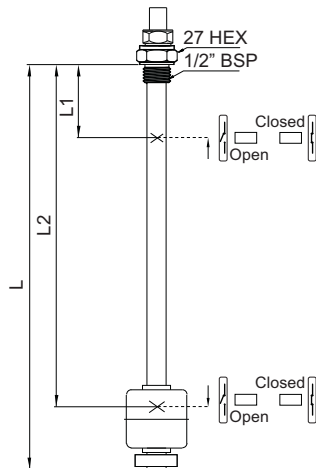


With Socket

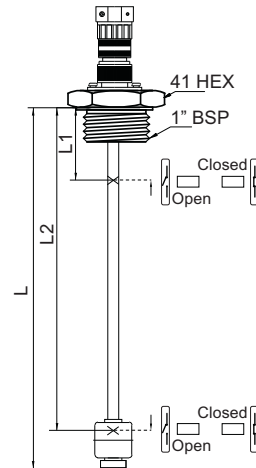


With Cable

Sample Models :



Moving Thread



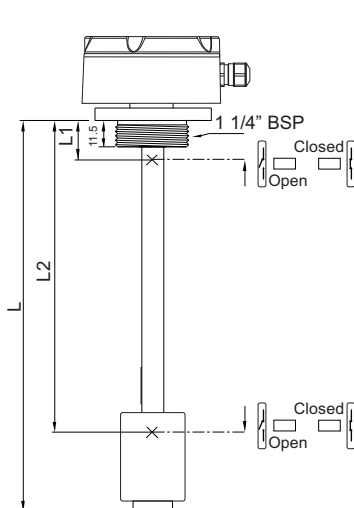
Military Socket

Technical Specifications :

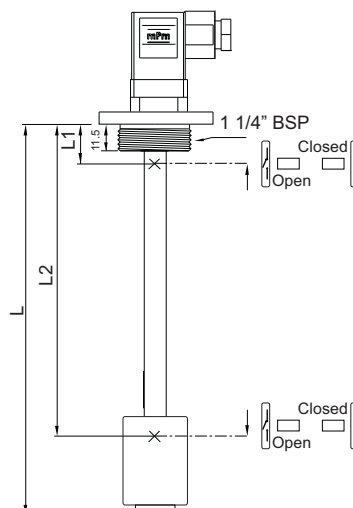
ELSy

Float Material	PU (Std.)
Wetted Parts Material	304 Stainless Steel (Std.) Opt. 316 St.St.
Pipe Material	304 Stainless Steel (Std.) Opt. 316 St.St.
Float Type	P3 (Std.) Selectable from Table.
Working Temperature	Max. 80 °C
Mechanical Connection	1 1/4" BSP
Electrical Connection	Terminal, With Cable, With Socket
Number of Float	1 (Std.) Available Numerous
Stem Length	Max. 2500 mm (Thread Included)
Number of Contact	2 x SPST - NO (Std.) Opt. can be added
Contact Current	1,5 Amper (Std.)
Max.Contact Capacity	50 W / VA
Max. Supply Voltage	200 VDC / 250 VAC (Std.) Opt. Selectable

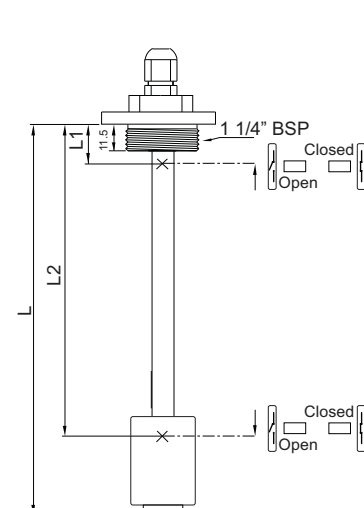
Sample Models :



Housing



With Socket



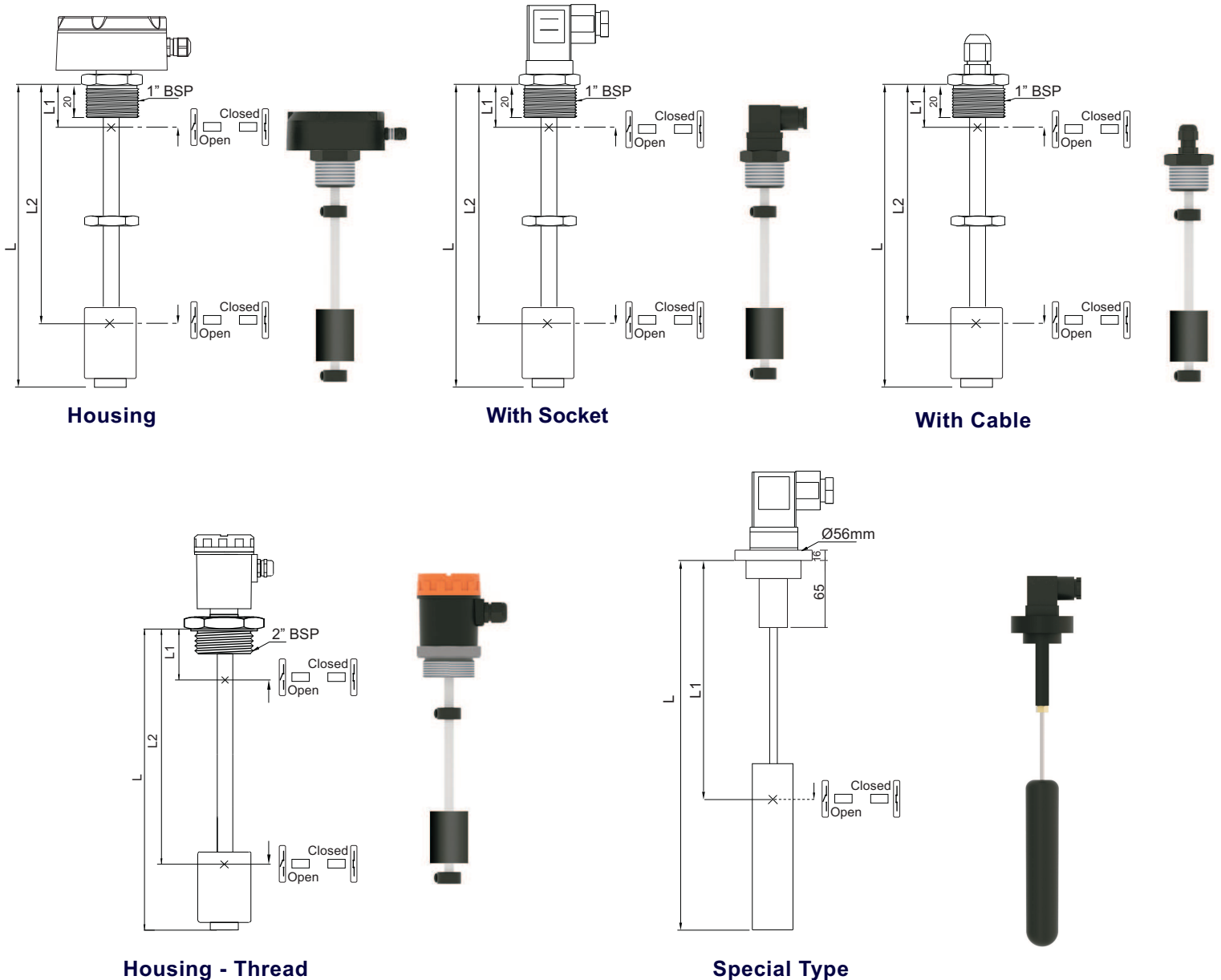
With Cable

Technical Specifications :

ELSp

Float Material	PU (Std.)
Wetted Parts Material	Aluminium (Std.) Opt. PVC, Delrin, PTFE, PFT
Pipe Material	Brass (Std.) Opt. PVC
Float Type	P3 (Std.) Selectable from Table.
Working Temperature	Max. 80 °C
Mechanical Connection	1" BSP + Nut
Electrical Connection	Terminal, With Cable, With Socket
Number of Float	1 (Std.) Available Numerous
Stem Length	Max. 2500 mm (Thread Included)
Number of Contact	2 x SPST - NO (Std.) Opt. can be added
Contact Current	1,5 Amper (Std.)
Max.Contact Capacity	50 W / VA
Max. Supply Voltage	200 VDC / 250 VAC (Std.) Opt. Selectable

Sample Models :

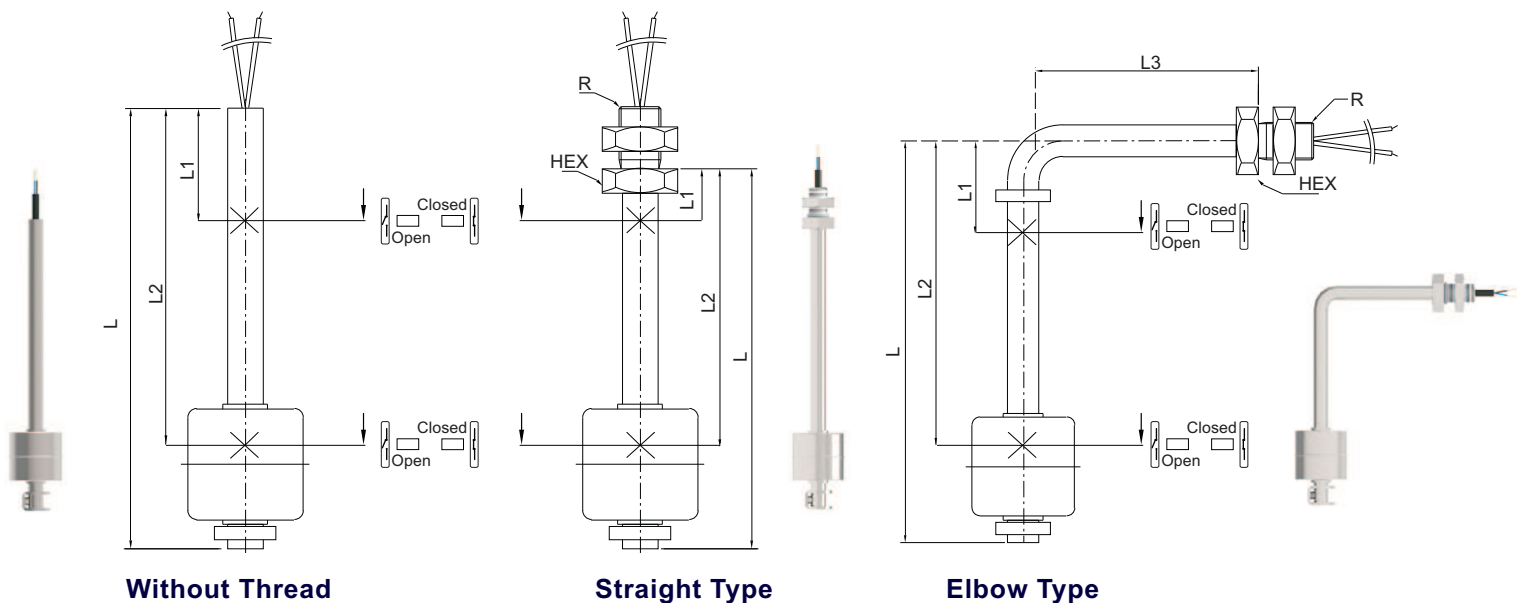


Technical Specifications :

ELSm

Float Material	304 Stainless Steel (Std.) Opt. 316 St.St.
Wetted Parts Material	304 Stainless Steel (Std.) Opt. 316 St.St.
Pipe Material	304 Stainless Steel (Std.) Opt. 316 St.St.
Float Type	S1Y (Std.) , Selectable from Table.
Working Temperature	Max. 125 °C
Mechanical Connection	1/8" BSP + Nut (Std.) Opt. M10 x 1 mm ² + Nut
Electrical Connection	With Cable,
Number of Float	1 (Std.) Available Numerous
Stem Length	Max. 2500 mm (HEX Included)
Number of Contact	2 x SPST - NO (Std.) Opt. can be added
Contact Current	1 Amper (Std.)
Max.Contact Capacity	10 W / VA
Max. Supply Voltage	200 VDC / 140 VAC (Std.) Opt. Selectable

Sample Models :



Test Rod:

Rod Material	304 Stainless Steel (Std.) Opt. 316 Stainless Steel
Arm Material	304 Stainless Steel (Std.) Opt. 316 Stainless Steel

It has been manufactured as spring-operated. Optionally, the handle can be put inside the housing.

Level Control Device :

Power Supply	220 VAC , 2.8 VA
Output	2 pcs. 5A / 250 VAC Relay (Start/Stop)
Working Temperature	(-) 20 °C...(+) 70 °C
Dimension	72 mm x 72 mm
Input	Contact information , coming from ELS

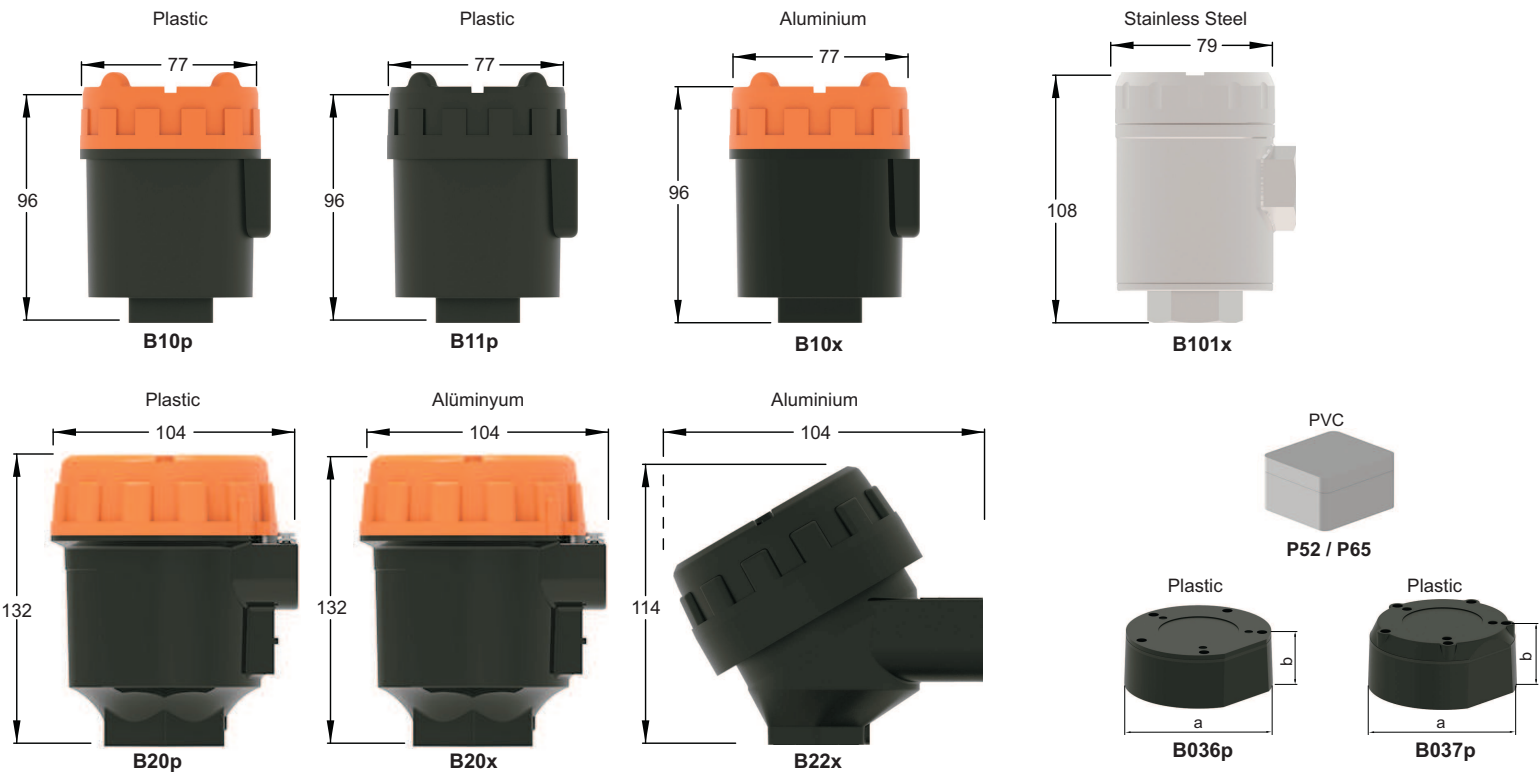


SK P1 / SK P2

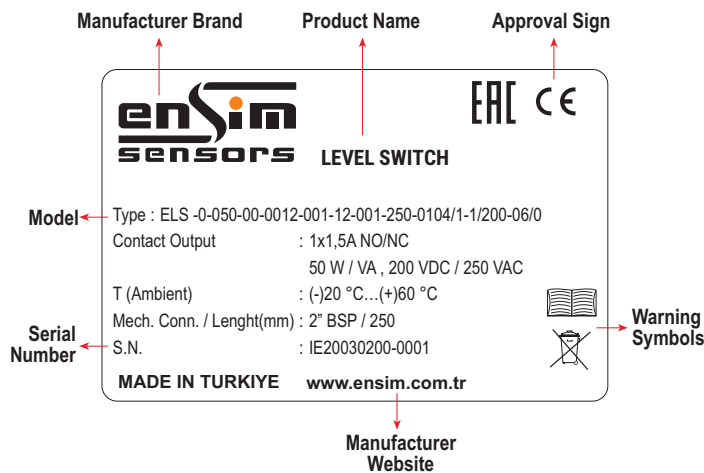


Housing :

ORDER CODE	TYPE	MATERIAL	PROTECTION CLASS	TEMPERATURE (°C)	SIZE a x b x c (mm)
050	B10p	Plastic (PBT)	IP 65	(-) 40 °C ... (+) 150 °C	96 x 77
053	B11p	Plastic (PVDF)	IP 65	(-) 40 °C ... (+) 120 °C	96 x 77
103	B20p	Plastic (PBT)	IP 65	(-) 40 °C ... (+) 150 °C	132 x 104
193	B037	Plastic (PBT)	IP 65	(-) 30 °C ... (+) 100 °C	93 x 43
503	B10x	Aluminium	IP 65	(-) 40 °C ... (+) 150 °C	96 x 77
603	B20x	Aluminium	IP 66	(-) 40 °C ... (+) 200 °C	132 x 104
750	B22x	Aluminium	IP 66	(-) 40 °C ... (+) 150 °C	114x102
850	B101x	Stainless Steel	IP 65	(-) 40 °C ... (+) 150 °C	108 x 79
250	P52	PC Grey	IP 65	(-) 20 °C ... (+) 125 °C	52 x 50 x 36
252	P65	PC Grey	IP 65	(-) 20 °C ... (+) 125 °C	65 x 58 x 36



Product Label :

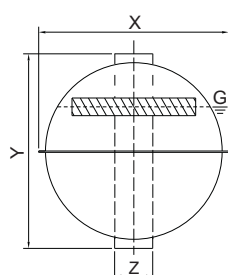


Protection Case :

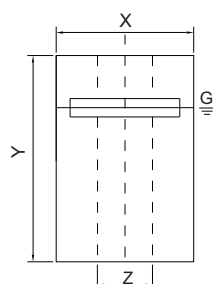
Material : 304 Stainless Steel
Welded manufacturing
Opens - Closes Hinged
To Protect Against external conditions.



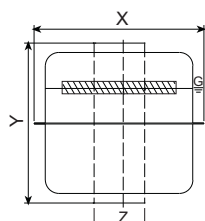
Float :



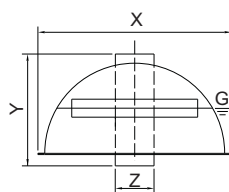
S2A / S5A / S6A
S40A / S41A / S53A



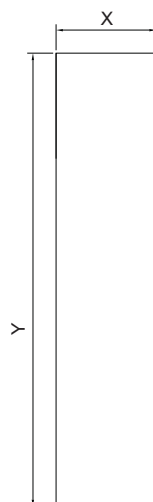
P3 / P6 / P7 P9



S1Y / S1A / S7A / S17A
S10Y / S11A / S54A



S42A / S52A



P25

For Minimum
Distance



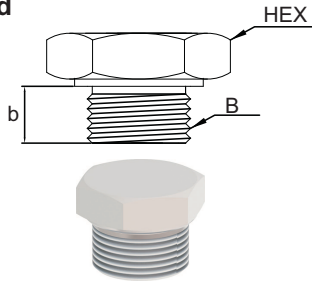
Order Code	Type	Material	X	Y	Z	Pipe Dia.	Max. Pressure	Max. Temp.	Density	A	B	C
0001	S1Y	304 St. St.	28	28	9.5	8	10	150	0.80	25	50	25
0101	S1A	316 St. St.	28	28	9.5	8	10	150	0.80	25	50	25
0006	S10Y	304 St. St.	25,4	24,5	9.5	8	10	110	0,82	22	45	22
0110	S11A	316L St. St.	28,6	28	9.5	8	15	200	0,70	26	52	26
0102	S2A	316 St. St.	43	43	11	10	15	150	0.80	34	68	34
0104	S5A	316 St. St.	73	73	20	16	30	150	0.65	50	99	50
0105	S6A	316 St. St.	73	73	17	15	30	150	0.65	50	99	50
0106	S7A	316 St. St.	43	52	15	13	30	150	0.88	34	68	34
0111	S17A	316 St. St.	52	35	15	13	30	150	0.85	39	78	39
0113	S40A	316 St. St.	55	55	15	13	30	150	0.80	42	82	42
0114	S41A	316 St. St.	55	55	15	13	30	150	0,9	42	82	42
0115	S42A	316 St. St.	55	30	15	13	20	150	1,2	42	55	42
0118	S52A	316 St. St.	73	40	20	16	20	150	0,9	50	65	50
0119	S53A	316L St. St.	52,5	50,2	15,5	14	10	200	0,6	42	82	42
0120	S54A	316L St. St.	51	61,2	15,5	14	10	200	0,47	50	90	50
0228	S38A	316L St. St.	38	26	9,5	8	10	150	0,47	40	75	40

Order Code	Type	Material	X	Y	Z	Pipe Dia.	Max. Pressure	Max. Temp.	Density	A	B	C
0201	P3	PU	30	45	12	10	1	80	0.76	28	60	40
0203	P6	PU	35	42	15	13	1	80	0.65	35	65	40
0204	P7	PU	44	50	18	15	1	80	0.40	38	70	50
0213	P9	PP	46	44	17	15	5	80	0.65	38	76	38
0206	P25-1	PU	25	150	-	-	1	80	0.80	-	-	-
0207	P13	PU	30	32	12	10	1	80	0.90	28	75	40

All dimensions are stated as mm.

Mechanical Connections:

Thread

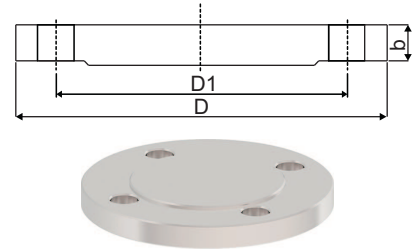


(ISO228-1)

Order Code	Dimension B	AA (mm)	Thread Length b (mm)
0001	1/8" BSP	17	12
0002	1/4" BSP	17	12
0003	3/8" BSP	24	20
0004	1/2" BSP	27	14
0005	3/4" BSP	32	14
0006	1" BSP	41	23
0008	1 1/4" BSP	51	23
0009	1 1/2" BSP	60	23
0012	2" BSP	70	23

Flanged

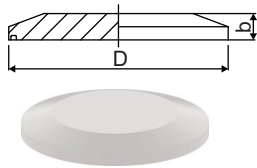
Order Code	(ISO1092-1) PN 16	D (mm)	D1 (mm)	b (mm)
0502	DN 25	165	85	16
0503	DN 32	140	100	16
0505	DN 50	165	125	18
0507	DN 80	200	160	20
0508	DN100	220	180	20



Order Code	(ISO1092-1) PN 40	D (mm)	D1 (mm)	b (mm)
0702	DN 25	115	85	18
0703	DN 32	140	100	20
0705	DN 50	165	125	20
0707	DN 80	200	160	20
0708	DN 100	235	190	24

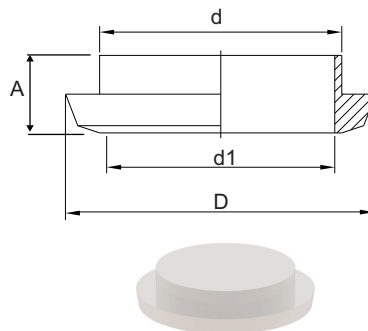
Order Code	(ANSI B16.5) 150 LBS	D (mm)	D1 (mm)	b (mm)
1005	DN 50	152,4	121	19
1006	DN 65	177,8	139,7	22,2
1007	DN 80	190,5	152,4	23,8
1008	DN 100	228,6	157,2	23,8

Clamp



Order Code	(ISO2852) Dimension	D (mm)	b (mm)
1501	DN 32	50,5	15
1502	DN 50	64	17
1503	DN 65	91	17

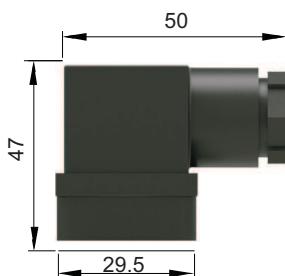
Dairy



Order Code	Dimension	Dimension	D (mm)	d1 (mm)	A (mm)
1600	DN 40	DN 40	56	48	13
1601	DN 50	DN 50	68	61	14
1602	DN1 00	DN 100	121	114	20

Electrical Connection Type:

P01 / P03 / P04



K01 / K02 / K03

Order Code	Material	Protection Class	HEX	L
01	Metal	PG7	14AA	22
02	Metal	PG9	17AA	22
03	Metal	PG11	20AA	25
24	Plastic	PG13.5	24AA	31
05	Metal-Ex 1/2"NPT	IP66/68	22AA	25
		CESI	305X	
06	Metal	R 1/2"	22AA	21

ML-2 / ML-5

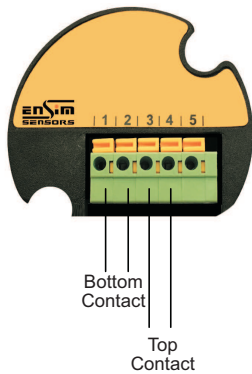


All dimensions are stated as mm.

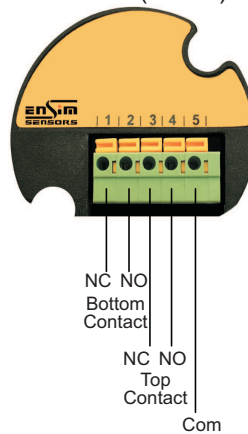
Electrical Connection Type:

B10p, B10x , B101x Housing

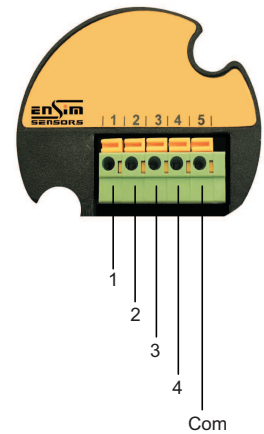
Two pieces independent contact
NO or NC



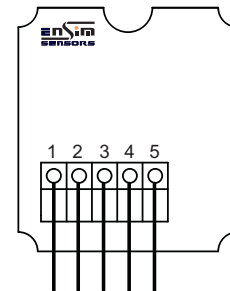
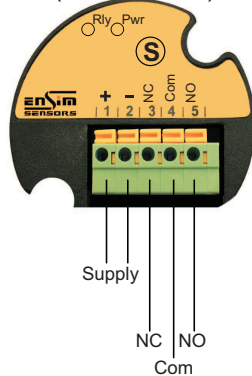
Two pieces double contact
NO / NC (SPDT)



Four pieces contact
NO or NC



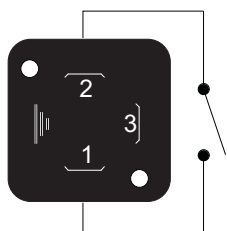
Liquid Level Contact
(12 / 24 VDC)



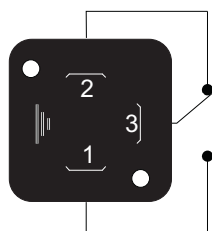
B035, P52, P65
Housing

Note: RLY LED has been designed
to turn off the pump is running.

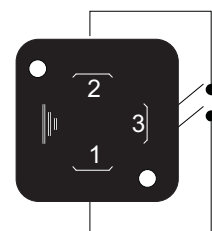
ISO 4400 (DIN 43650A) Socket P01 , P03 , P04



Single Contact
NO

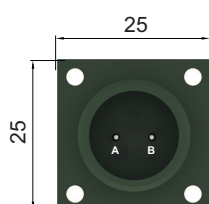


Single Contact
NO / NC (SPDT)



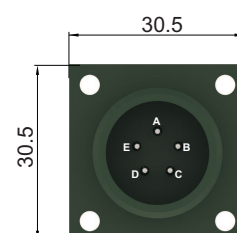
Two pieces single contact
NO

ML-2 Military Type (CA3101A)



Single Contact
NO

ML-5 Military Type



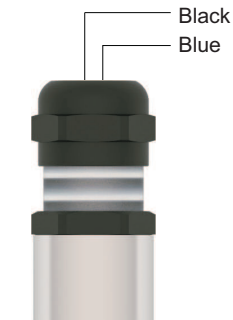
Four Contacts
NO

A: 1 Contact
B: 2 Contact
C: 3 Contact
D: 4 Contact
E: Common

Electrical Connection Type:

PG Socket or Cable

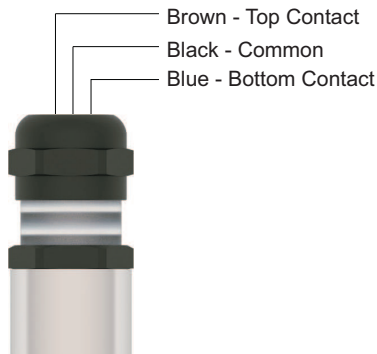
PVC Cable (105 °C)



Single contact
NO or NC

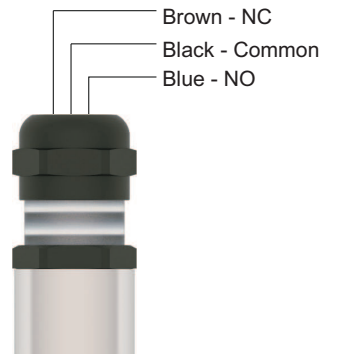
K01 , K02, K03

PVC Cable (105 °C)



Two pieces single contact
NO or NC

PVC Cable (105 °C)



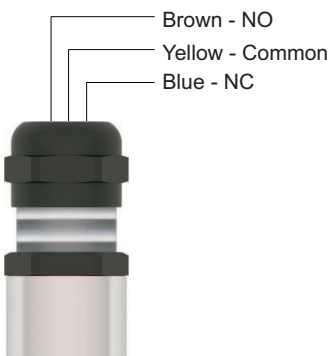
Single contact
NO / NC (SPDT)

Silicon Cable (200 °C)



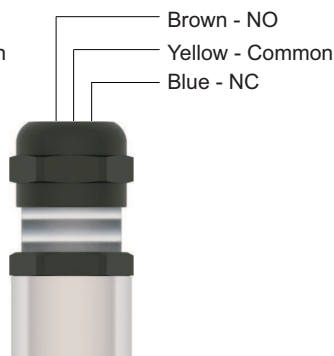
Single contact
NO or NC

Silicon Cable (200 °C)



Two pieces single contact
NO or NC

Silicon Cable (350 °C)



Two pieces single contact
NO or NC

PTFE Cable (230 °C)



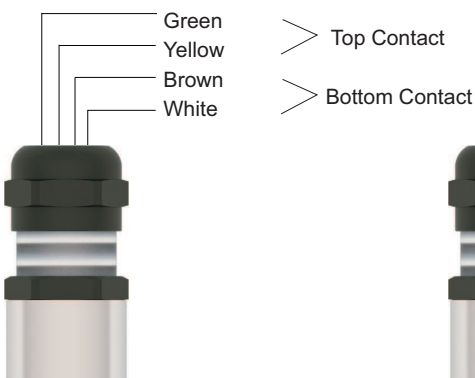
Single contact
NO or NC

PTFE Cable (350 °C)



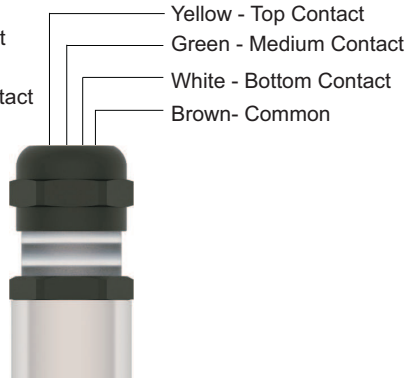
Single contact
NO or NC

PVC Cable (105 °C)



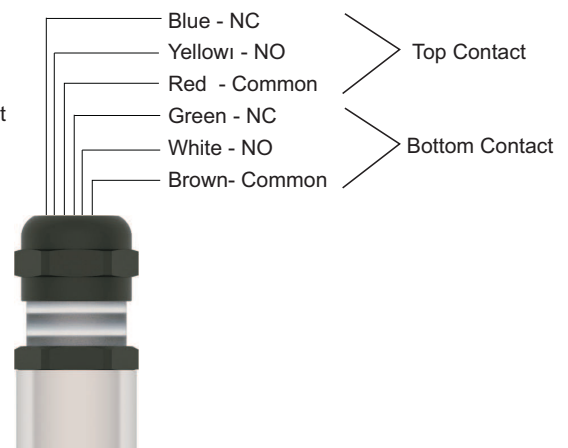
Two pieces independent contact
NO or NC

PVC Cable (105 °C)



Three pieces contact
NO or NC

PVC Cable (105 °C)

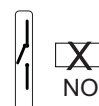


Two pieces independent contact
NO / NC (SPDT)

Sample application :



EMPTYING



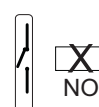
Stop



FILLING



Stop



Start

Order Form : Please consider sample models when coding

1 MODEL

Standart Version	ELS	ELSp (For Hydraulic Tanks).....	ELSp
ELSy (For Yacht Industry).....	ELSy	ELSm (For Machinery Manufacturing).....	ELSm

2 CERTIFICATE

None.....	0	(EN10204-3-1) Material Certification.....	1
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3 HOUSING

None.....	0	Stainless Steel Housing , B101x.....	800
Plastic Housing , B10p	050	PC Grey , P52.....	250
Plastic Housing , B11p	053	PC Grey , P65.....	252
Plastic Housing , B20p	103	Special.....	x
Plastic Housing , B037	193		
Aluminium Housing , B10x	503		
Aluminium Housing , B20x	603		
Aluminium Housing , B22x	750		

4 ELECTRICAL CONNECTION

Terminal (For Housing Models).....	00	M12- 2 Pins.....	70
Polyamide Large Socket P01	50	M12- 5 Pins.....	71
Polyamide Small Socket P02	51	M12- 8 Pins.....	72
Polyamide Large Lighted Socket P03	52	PVC Cable (Max .60 °C).....	80
Military Socket ML-2, 2 Pins	60	PVC Cable (Max. 105 °C).....	81
Military Socket ML-5, 5 Pins	61	Silicon Cable (Max. 200 °C).....	82
		PTFE Cable (Max. 230 °C).....	83
		Steel Shielded Cable (Max. 350 °C).....	48
		Special Cable.....	x
		Special Socket.....	x

5 CONNECTION

With Pipe- Without Thread.....	0000	1/8" NPT.....	0200
Thread 1/8"BSP.....	0001	1/4" NPT.....	0201
Thread 1/4"BSP.....	0002	3/8" NPT.....	0202
Thread 3/8" BSP.....	0003	1/2" NPT.....	0203
Thread 1/2" BSP.....	0004	3/4" NPT.....	0204
Thread 3/4" BSP.....	0005	1" NPT.....	0205
Thread 1" BSP.....	0006	1 1/4" NPT.....	0206
Thread 1 1/4" BSP.....	0008	1 1/2" NPT.....	0207
Thread 1 1/2" BSP.....	0009	2" NPT.....	0208
Thread 2" BSP.....	0012		
Thread 1/2" BSP (Moving Type).....	0112		
		DN 25 - PN16 Flanged.....	0502
		DN 32 - PN16 Flanged.....	0503
		DN 50 - PN16 Flanged.....	0505
		DN 80 - PN16 Flanged.....	0507
		DN 100 - PN16 Flanged.....	0508
		Ø56 Special Flange.....	1458
		Special.....	x
Thread M10x1 Straight Type.....	0113		
Thread 1/8" BSP Elbow Type.....	0111		
Thread M10 x 1 Elbow Type.....	0400		
Thread 3/8" BSP Elbow Type.....	0109		
Thread 1/2" BSP Elbow Type	0110		

Note: Refer to the table for others.

6 CONNECTION MATERIAL

304 Stainless Steel	001	PVC.....	061
316 Stainless Steel.....	002	Delrin.....	063
Aluminium (with nut for ELSp)	027	PTFE.....	066
		Special.....	x

7 PIPE SIZE (mm) Ø

Ø 8 mm.....	08	Ø 12.7 mm.....	12
Ø 10 mm.....	10	Ø 13 mm.....	13
Ø 12 mm.....	11	Ø 15 mm.....	15
		Special.....	x

8 PIPE MATERIAL

304 Stainless Steel	001	Brass.....	041
316 Stainless Steel.....	002	PVC.....	061
		Special.....	x

9 STEM LENGHT (mm) L

.... mm	Note: From the connection, including the thread.
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10a FLOAT TYPE

Select from table	Note: It must be selected according to the connection and radius.
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10b NUMBER OF FLOAT

Numbers...../...Pieces	Note: It must be selected according to the connection and radius.
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11a CONTACT NUMBER 1

NO Reed Relay.....	1	NO / NC Reed Relay.....	3
NC Reed Relay.....	2	NO Hold Type Reed Relay.....	4

11b DISTANCE (mm) L1

Length	/...mm	Note: From the connection, including the thread.
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12a CONTACT NUMBER 2

NO Reed Relay.....	1	NO / NC Reed Relay.....	3
NC Reed Relay.....	2	NO Hold Type Reed Relay.....	4
		None.....	0

12b DISTANCE (mm) L2

Length	/...mm	Note: From the connection, including the thread.
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13 OPTIONEL

None...../ 0	Test Rod...../ T
Pt100 Sensor...../ P	Float Housing...../ M
Liquid Level Relay...../ SSR	Shetter (For the outside of the tank) 304 St. St...../ K6
Extarnal Tank (Dimensions should be stated).. / H	Special.....x

SAMPLE

ELS -0-050-00-0005-001-13-001-1500-0001/1-3-1400-3-400/0

ELS Level Switches, Plastic Housing, 3/4" BSP Male Thread, Connection and Pipe Material 304 Stainless Steel
L=1500 mm, S1Y Float , L1= 1400 mm NO / NC Reed Relay Output 1400, L2= 400 mm NO / NC Reed Relay Output