

Level sensors are used for tank level and control.

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. Continuous type serial aligned resistance and reed relays are engaged and disengaged. Such changes of reed sensors and alarm or level information can be assessed through a relay circuit or control device.

Precision of reed sensor increases according to lowness of its placement range. It is preferred by the users due to the advantages of providing analogue output within the housing.

Furthermore, it is possible to follow and to control the process in the field through UDS indicator.



ELStx

LEVEL TRANSMITTER

ELS-tx

Advantages :

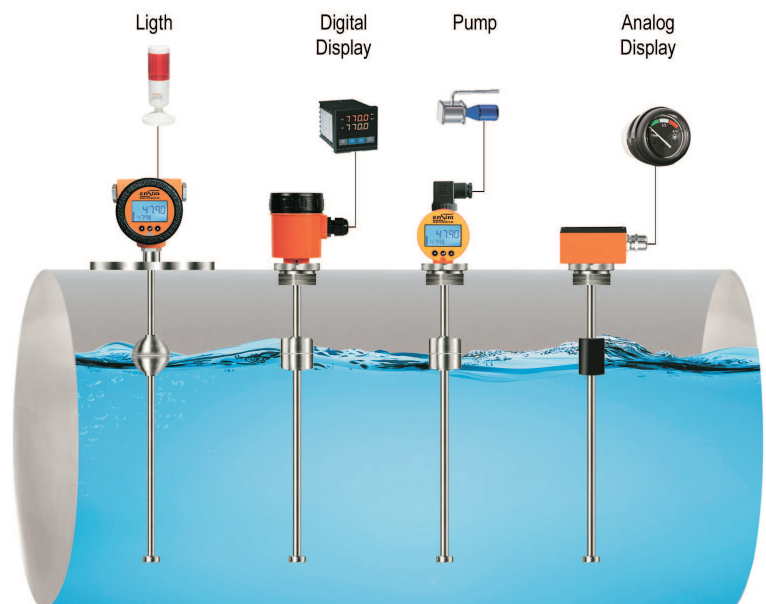
- * Different material options according to liquid type
- * Different contact options
- * Fast delivery
- * Different type applications possible



Areas of Application :

Tank level measuring and control, boiler control, storage control.

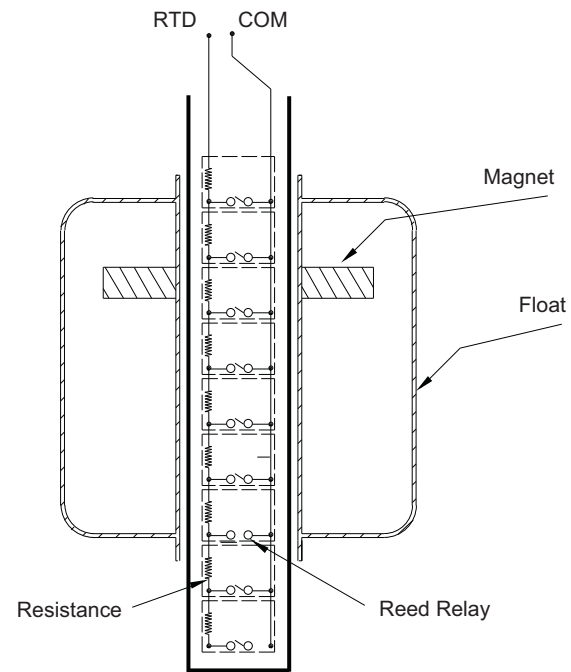
Application Examples :



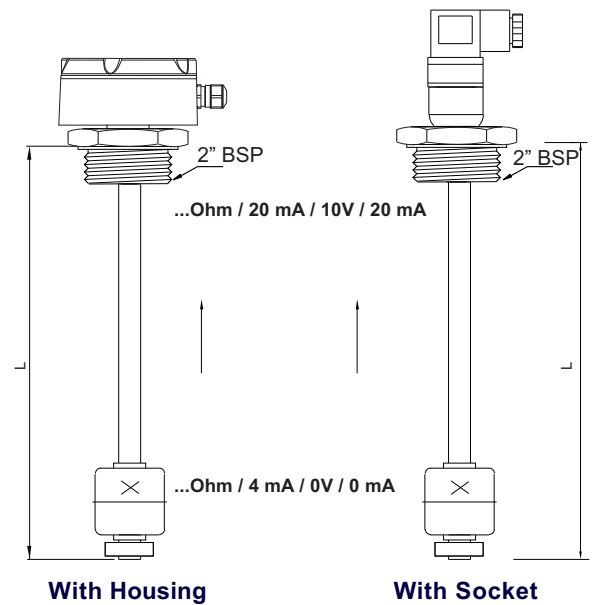
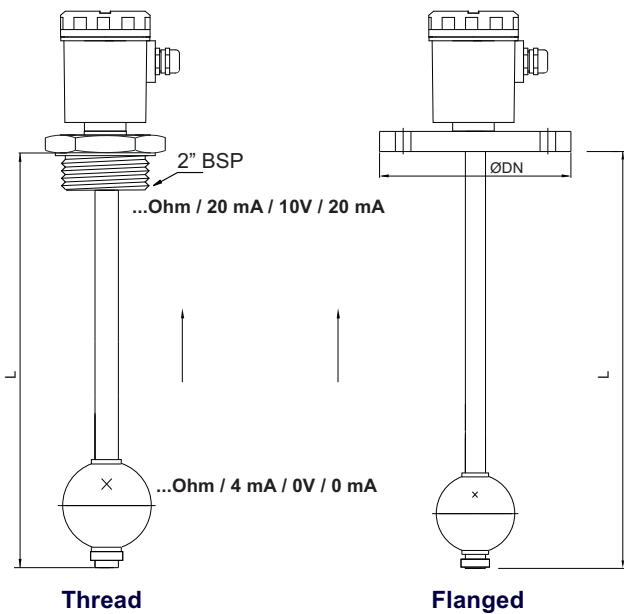
Technical Specifications :

ELS-tx

Float Material	304 Stainless Steel (Std.) Opt. 316 Stainless Steel
Wetted Parts Material	304 Stainless Steel
Pipe Material	304 Stainless Steel
Float Type	S4A or S40A (Std.) Selectable from Table
Working Temperature	Max. 125 °C
Mechanical Connection	2" BSP (Std.) Opt. (eligible)
Electrical Connection	Terminal , With Cable , With Socket
Number of Float	1 (Std.)
Stem Length	Max. 6000 mm (Thread Including)
Power Supply	12...36 VDC
Output	4.20 mA Std. Two wire Opt. 4-20 mA , 0-20 mA , 0-10 V, Three wire , Ohm
Frequency of Detection	Std. 15 mm / 10 mm / 5 mm
Protection Class	IP 65 (Std.) , IP 66



Sample Models :

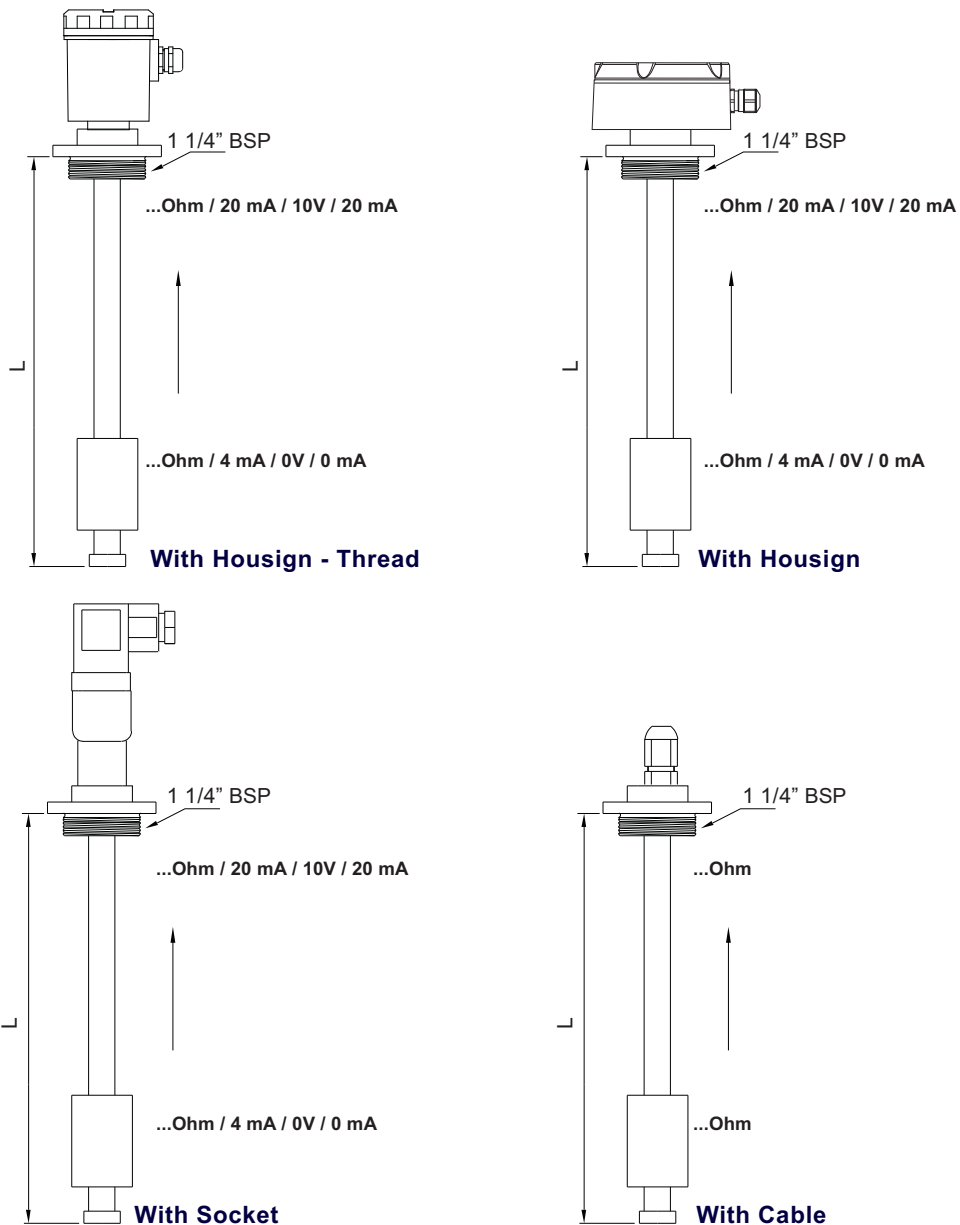


Technical Specifications :

ELSy-tx

Float Material	304 Stainless Steel (Std.) Opt. 316 Stainless Steel
Wetted Parts Material	304 Stainless Steel (Std.) Opt. 316 Stainless Steel
Pipe Material	304 Stainless Steel (Std.) Opt. 316 Stainless Steel
Float Type	S4A or S40A (Std.) Selectable from Table
Working Temperature	Max. 125 °C
Mechanical Connection	1 1/4" BSP (Std.) Opt. (eligible)
Electrical Connection	Terminal , With Cable , With Socket
Number of Float	1 (Std.)
Stem Length	Max. 6000 mm (Thread Including)
Power Supply	12....36 VDC
Output	4.20 mA Std. Two wire Opt. 4-20 mA , 0-20 mA , 0-10 V, Three wire , Ohm
Frequency of Detection	Std. 15 mm / 10 mm / 5 mm
Protection Class	IP 65 (Std.) , IP 66

Sample Models :

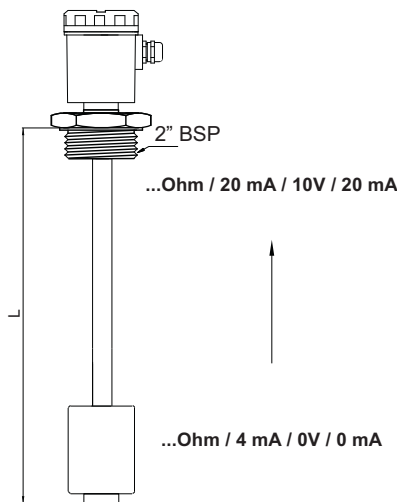


Technical Specifications :

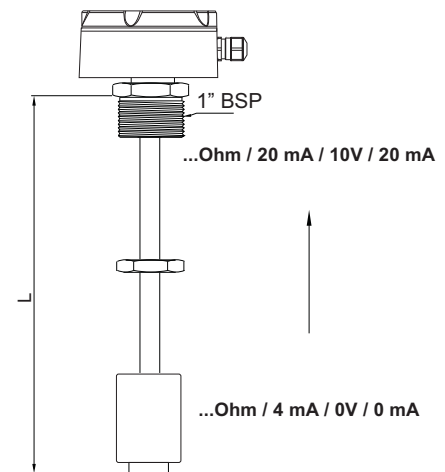
ELSp-tx

Float Material	PU (Std.)
Wetted Parts Material	PVC (Std.) Opt. Delrin, PTFE
Pipe Material	PVC (Std.)
Float Type	P6 (Std.) Selectable from Table
Working Temperature	Max. 80 °C
Mechanical Connection	1" BSP , 2" BSP (Std.) Opt. (eligible)
Electrical Connection	Terminal , With Cable , With Socket
Number of Float	1 (Std.)
Stem Length	Max. 2000 mm (Thread Including)
Power Supply	12...36 VDC
Output	4.20 mA Std. Two wire Opt. 4-20 mA , 0-20 mA , 0-10 V, Three wire , Ohm
Frequency of Detection	Std. 15 mm / 10 mm / 5 mm
Protection Class	IP 65 (Std.) IP 66 , IP 67

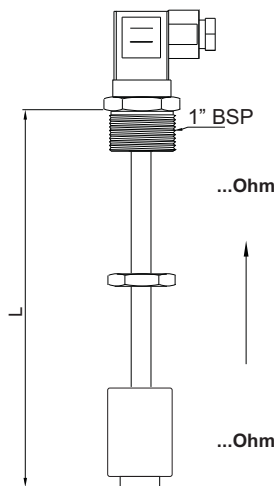
Sample Models :



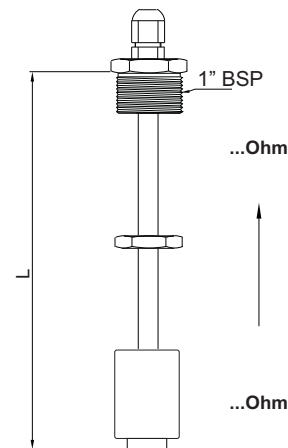
With Housign - Thread



With Housign



With Socket



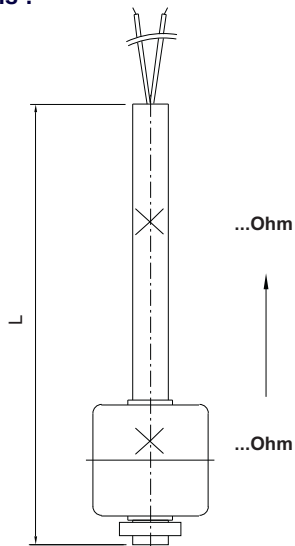
With Cable

Technical Specifications :

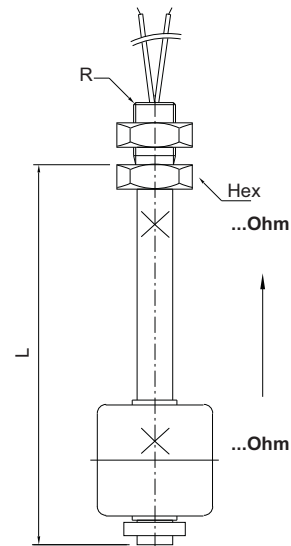
ELSm-tx

Float Material	304 Stainless Steel (Std.) Opt. 316 Stainless Steel
Wetted Parts Material	304 Stainless Steel (Std.) Opt. 316 Stainless Steel
Pipe Material	304 Stainless Steel (Std.) Opt. 316 Stainless Steel
Float Type	S4A or S40A (Std.) Selectable from Table
Working Temperature	Max. 125 °C
Mechanical Connection	3/8" BSP or 1/2" BSP (Std.) Opt. (eligible)
Electrical Connection	With Cable
Number of Float	1 (Std.)
Stem Length	Max. 2000 mm (Hex Including)
Power Supply	12...36 VDC
Output	Ohm
Frequency of Detection	Std. 15 mm / 10 mm / 5 mm
Protection Class	IP 67

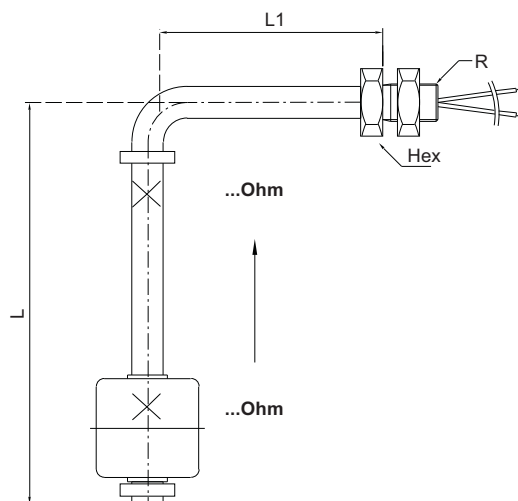
Sample Models :



Without Thread



Straight Type



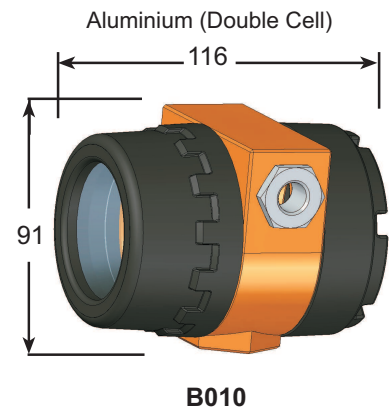
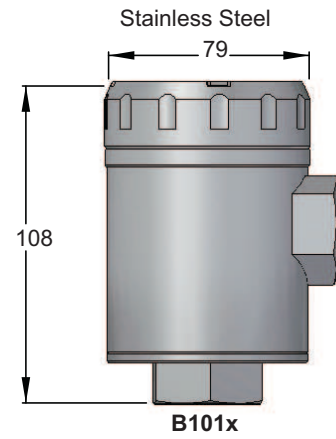
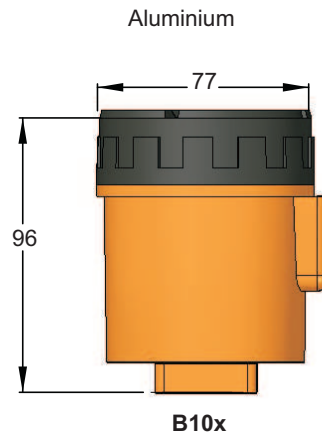
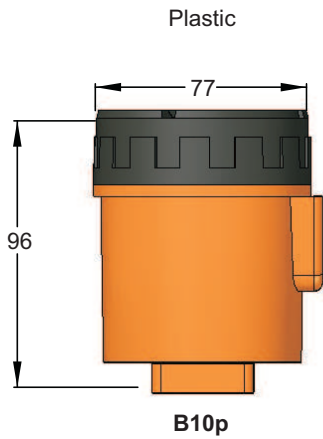
Elbow Type

Digital Control Device (On / Off, PID)

Power Supply	100-240 VAC or 24 VAC / DC
Output	4-20 mA, Two Contact Opt. Rs485 ModBus RTU
Working Temp.	0 / +50 °C
Dimensions	72 mm x 72 mm
Input	Universal (mA, mV, V, RT, TC)

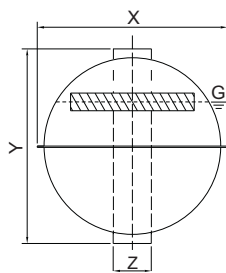


Housing :

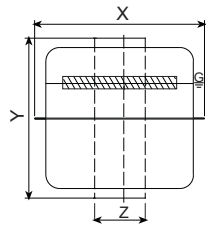


ORDER CODE	TYPE	MATERIAL	PROTECTION CLASS	TEMPERATURE (°C)	SIZE a x b x c (mm)
055	B10p	Plastic (PBT)	IP 65	(-) 40...(+) 150	96 x 77
062	B20p	Plastic (PBT)	IP 65	(-) 40...(+) 150	132 x 104
039	B037	Plastic (PBT)	IP 65	(-) 30...(+) 100	93 x 43
335	B10x	Aluminium	IP 65	(-) 40...(+) 150	96 x 77
376	B20x	Aluminium	IP 66	(-) 40...(+) 200	132 x 104
307	B010	Aluminium (Double Cell)	IP 68	(-) 40...(+) 100	91 x 116
102	B101x	Stainless Steel	IP 65	(-) 40...(+) 150	108 x 79
200	P52	PC Gray	IP 65	(-) 20...(+) 125	52 x 50 x 36
201	P65	PC Gray	IP 65	(-) 20...(+) 125	65 x 58 x 36

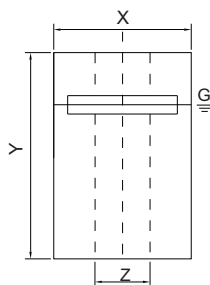
Float :



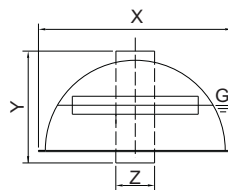
S2A / S5A / S6A
S40A / S41A / S53A



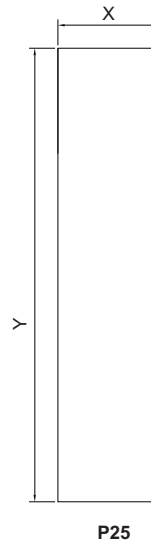
S1Y / S1A / S7A / S17A
S10Y / S11A / S54A



P3 / P6 / P7 P9

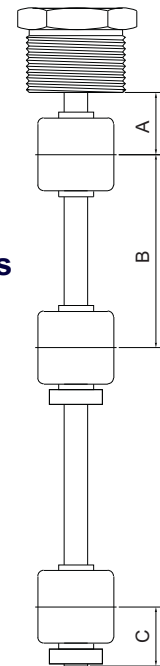


S42A / S52A



P25

Minimum Distances



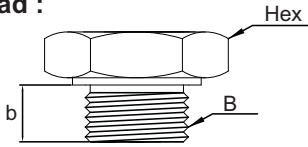
Order Code	Type	Material	X	Y	Z	Pipe Dia.	Max. Pressure (bar)	Max. Temp. (°C)	Density (g/cm ³)	A	B	C
102	S2A	316 St. St.	43	43	11	10	15	150	0.80	34	68	34
104	S5A	316 St. St.	73	73	20	16	30	150	0.65	50	99	50
105	S6A	316 St. St.	73	73	17	15	30	150	0.65	50	99	50
106	S7A	316 St. St.	43	52	15	13	30	150	0.88	34	68	34
111	S17A	316 St. St.	52	35	15	13	30	150	0.85	39	78	39
113	S40A	316 St. St.	55	55	15	13	30	150	0.80	42	82	42
114	S41A	316 St. St.	55	55	15	13	30	150	0,9	42	82	42
115	S42A	316 St. St.	55	30	15	13	20	150	1,2	42	55	42
118	S52A	316 St. St.	73	40	20	16	20	150	0,9	50	65	50
119	S53A	316L St. St.	52,5	50,2	15,5	14	10	200	0,6	42	82	42
120	S54A	316L St. St.	51	61,2	15,5	14	10	200	0,47	50	90	50

Order Code	Type	Material	X	Y	Z	Pipe Dia.	Max. Pressure (bar)	Max. Temp. (°C)	Density (g/cm ³)	A	B	C
201	P3	PU	30	45	12	10	1	80	0.76	28	60	40
203	P6	PU	35	42	15	13	1	80	0.65	35	65	40
204	P7	PU	44	50	18	15	1	80	0.40	38	70	50
213	P9	PP	46	44	17	15	5	80	0.65	38	76	38
206	P25-1	PU	25	150	-	-	1	80	0.80	-	-	-
207	P13	PU	30	32	12	10	1	80	0.90	28	75	40

All dimensions are stated as mm.

Mechanical Connections:

Thread :

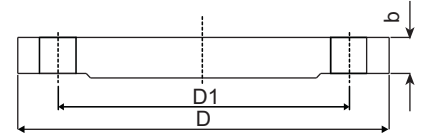


(ISO228-1)

Order Code	Dimension B	Hex (mm)	Thread Size b (mm)
001	1/8" BSP	17	12
002	1/4" BSP	17	12
003	3/8" BSP	24	20
004	1/2" BSP	27	14
005	3/4" BSP	32	14
006	1" BSP	41	23
007	1 1/4" BSP	51	23
008	1 1/2" BSP	60	23
009	2" BSP	70	23

Flanged

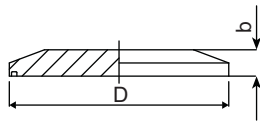
Order Code	(ISO1092-1) PN 16	D (mm)	D1 (mm)	b (mm)
103	DN 25	165	85	16
104	DN 32	140	100	16
106	DN 50	165	125	18
108	DN 80	200	160	20
109	DN 100	220	180	20



Order Code	(ISO1092-1) PN 40	D (mm)	D1 (mm)	b (mm)
303	DN 25	115	85	18
304	DN 32	140	100	20
306	DN 50	165	125	20
308	DN 80	200	160	20
309	DN 100	235	190	24

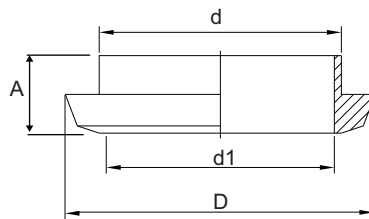
Order Code	(ANSI B16.5) 150 LBS	D (mm)	D1 (mm)	b (mm)
606	DN 50	152,4	121	19
607	DN 65	177,8	139,7	22,2
608	DN 80	190,5	152,4	23,8
609	DN 100	228,6	157,2	23,8

Clamp



Order Code	(ISO2852) Dimension	D (mm)	b (mm)
851	DN 32	50,5	15
852	DN 50	64	17
853	DN 65	91	17

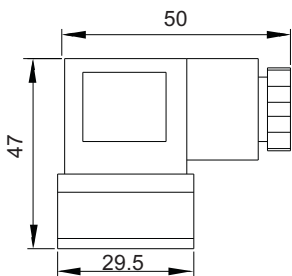
Dairy



Order Code	Dimension	Dimension	D (mm)	d1 (mm)	A (mm)
870	DN 40	DN 40	56	48	15
871	DN 50	DN 50	68	61	16
872	DN 100	DN 100	121	114	20

Electrical Connection Type:

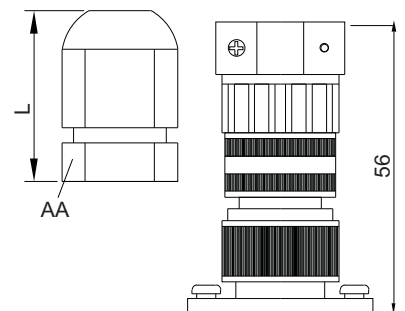
P01 / P03 / P04



K01 / K02 / K03

Order Code	Material	Protection Class	AA	L
01	Metal	PG7	14 AA	22
02	Metal	PG9	17 AA	22
03	Metal	PG11	20 AA	25
24	Plastic	PG13.5	24 AA	31
05	Metal-Ex 1/2" NPT	IP66/68 CESI 03ATEX	22 AA 305 X	25
06	Metal	R1/2"	22 AA	21

ML-2 / ML-5

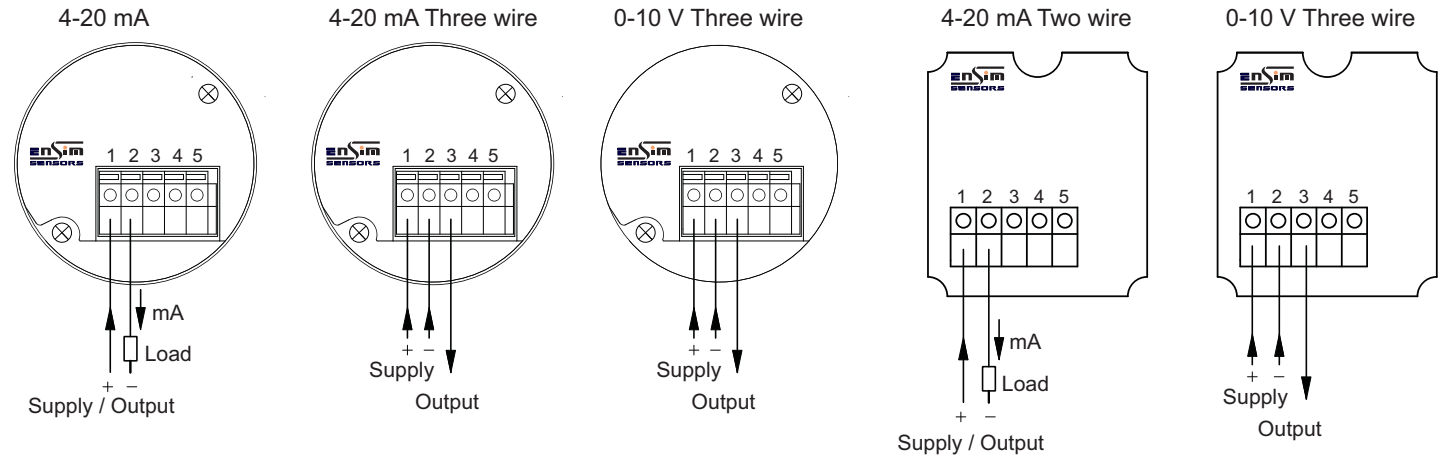


All dimensions are stated as mm.

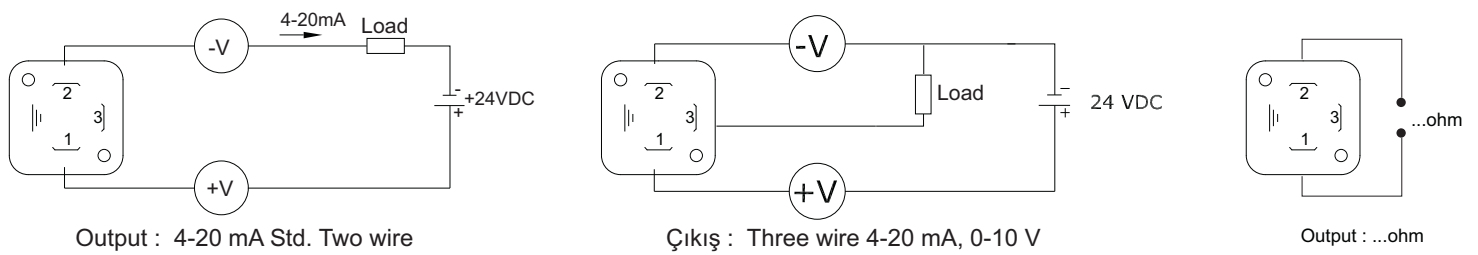
Electrical Connection Type :

B10p , B10x , B101x With Housing

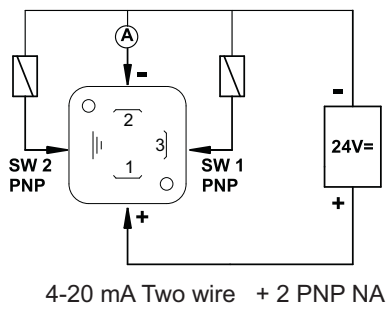
B038, P52, P65 With Housing



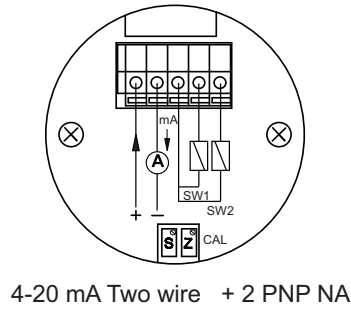
DIN43650 With Socket P01



EDS 01 For Display

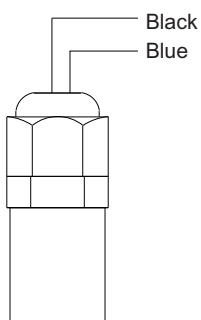


B010 Aluminium Housing (Double Cell)

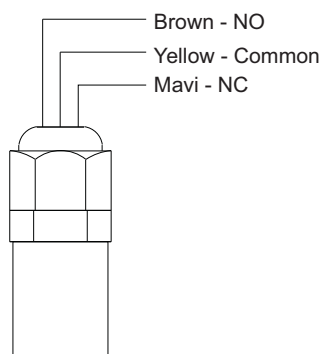


PG With Socket or with Cable

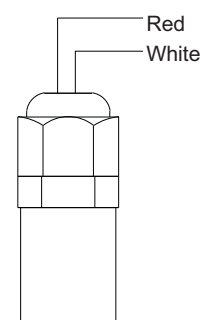
PVC Cable (105 °C)



Silicon Cable (200 °C)



PTFE Cable (230 °C)



Order Form : Please consider sample models when coding!..

1 MODEL

Standard Version	ELStx	ELSp (For Hydraulic Tanks).....	ELSp-tx
ELSy (For Yacht Industry).....	ELSy-tx	ELSm (For Machinery Manufacturing).....	ELSm-tx

2 CERTIFICATE

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

None.....	000	Stainless Steel Housing , B101x.....	102
Plastic Housing , B10p	055	PC Gray , P52.....	200
Plastic Housing , B20p	062	PC Gray , P65.....	201
Plastic Housing , B038	039	Special.....	x
Aluminium Housing , B10x	335		
Aluminium Housing , B20x	376		

4 ELECTRICAL CONNECTION

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

5 CONNECTION

Piped- Without Thread.....	000	1/8" NPT.....	051
Thread 1/8" BSP.....	001	1/4" NPT.....	052
Thread 1/4" BSP.....	002	3/8" NPT.....	053
Thread 3/8" BSP.....	003	1/2" NPT.....	054
Thread 1/2" BSP.....	004	3/4" NPT.....	055
Thread 3/4" BSP.....	005	1" NPT.....	056
Thread 1" BSP.....	006	1 1/4" NPT.....	057
Thread 1 1/4" BSP.....	007	1 1/2" NPT.....	058
Thread 1 1/2" BSP.....	008	2" NPT.....	059
Thread 2" BSP.....	009		
Thread 1/2" BSP (Moving Type).....	013	Special.....	x

Thread M10 x 1 mm Straight Type.....081

Note: Refer to the table for others.

Thread 1/8" BSP With Elbow091

Thread M10 x 1 mm With Elbow092

Thread 3/8" BSP With Elbow093

Thread 1/2" BSP With Elbow094

6 CONNECTION MATERIAL

304 Stainless Steel.....	01	Aluminum.....	05
316 Stainless Steel.....	02	PVC.....	08
Brass.....	03	Special.....	x

7 PIPE SIZE

8 mm.....	08	12.7 mm / 13 mm.....	13
10 mm.....	10	15 mm.....	15
12,7 mm.....	12	Special.....	x

8 PIPE MATERIAL

304 Stainless Steel.....	01	Brass.....	08
316 Stainless Steel.....	02	PVC.....	20
		Special.....	x

9 STEM LENGHT

.... mm

Note: From the connection, (including thread)

10 FLOAT TYPE

Select from table

Note: Proper connection and radius should be selected.

11 OUTPUT

4-20 mA Two Wire.....	19	3-180 Ohm.....	23
4-20 mA Three Wire.....	20	10-180 Ohm.....	24
0-10 V Three Wire.....	21	240-33 Ohm.....	25
0-20 mA Three Wire.....	22	Special.....	x

12 SENSITIVITY RANGE

15 mm.....	15	5 mm.....	05
10 mm.....	10	Special.....	x

13 OPTIONEL

None.....	/ 0	External Tank (Dimensions should be stated).....	/ H
pt100 Sensor.....	/ P	Test Rode.....	/ T
Analog Display.....	/ DA	Float Housing.....	/ M
Local Digital Display.....	/ EDS01	Special.....	x

SAMPLE

ELS-tx0055 - 00 - 09 - 02 - 13 - 02 - 1200 - 113 - 20 - 10 / 0

ELS-tx Level Transmitter, Plastic Housing, 2" BSP Male Thread , Connection and Pipe Material 316 Stainless steel , L= 1200 mm, S40A Float , 4-20 mA Three wire output , Sensing point in every 10 mm