

DX-ELS level sensors are used for tank levels and for controls.
Different options available for housing , connection and material type.

Working Principle:

In the float when the magnet magnetic area moves according to the liquid in the tube, then the reed swithes the electrical circuit on or off when it reaches the level of the sensor. The changes of the reed sensors with alarm or a level information can be assessable with a relay circuit or a control device. The advantages of providing the analog output in the enclosure are preferred by the users.

Application Areas:

Tank level measurement and control, boiler control, store room control..

Yacht water level control, sewage level control.

Hydraulic oil tank level measurement and control



DX-ELS

LEVEL CONTROL

DX-ELS

Advantages:

- *A variety of materials according to the flow
- *Different choices of ignition
- *Quick delivery
- *Different types of technics

CE 2284



Certification

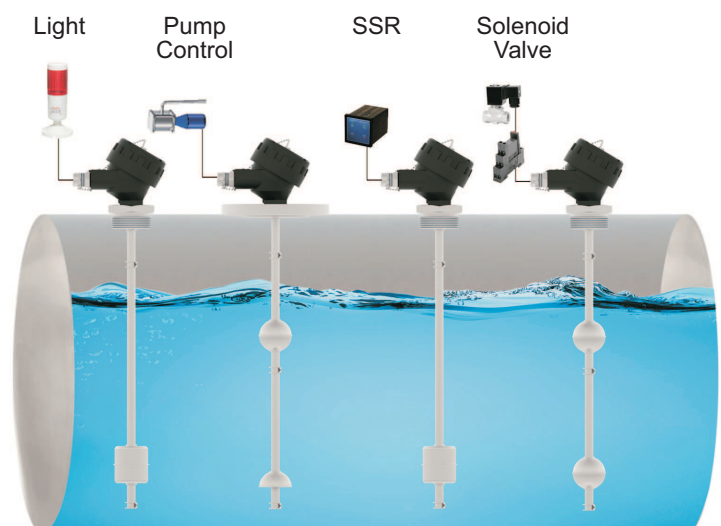


II 1/2 G Ex db ia IIC Tx Ga/Gb For Gas

II 1/2 D Ex tb ia IIC Tx Da/Db For Dust

*Have a look at the temperature class chart.

Example of application :



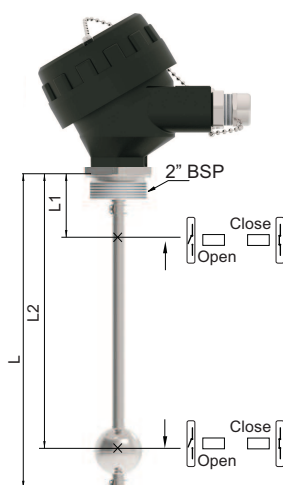
Technical Specifications :

DX-ELS

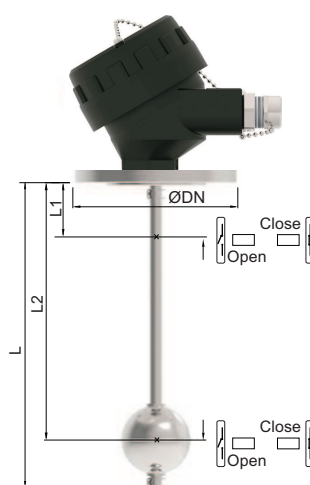
Working Temperature (Tp)	Max. 125 °C
Ambient Humidity	0-98 % Rh (Non-condensing)
Ambient Temperature (Ta)	(-) 20 °C ... (+) 60 °C
Material	304 St.St. (Std.) Opt. 316 St.St. , Aluminum
Connection	Aluminium Injection - AISi12Fe (Std)
Housing	Black (RAL 9005)
Float	316 St.St. (Std.) Opt. PU , PP
Pipe	304 St.St. (Std.) Opt. 316 St.St. , Brass
Connection	2" BSP (Std.) Opt.Selectable from Table.
Float Type	S40A (Std.) , Selectable from Table.
Number of Float	1 (Std.) A large number of available.
Stem Length	Max. 2500 mm (Thread Included)
Electrical Connection	Terminals
Cable and Plug Entry	M20 x 1,5 (Std)
Number of contacts	2 x SPST - NA (Std.) Opt. It can be added.
Contact Current	1,5 Amper (Std.)
Max. Contact Current	50 W / VA veya 20 W / VA
Max. Supply Voltage	30/200 VDC / 240 VAC (Std.) Opt. Selectable.
Protection Class	IP 66/68 (EN60529)
Certifications and Approvals	CE Declaration , EMC , LVD , ATEX

Sample Models

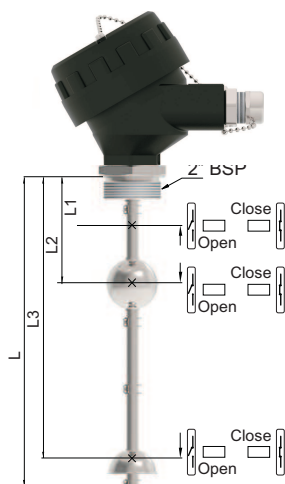
**Housing - Thread
(Std.)**



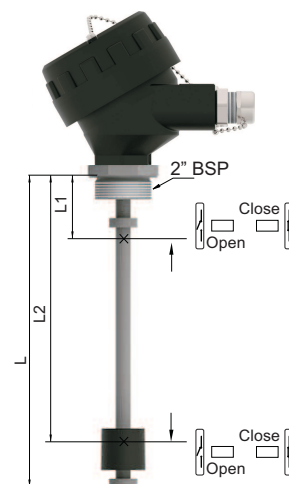
Housing - Flanged



**Housing
Double Float**



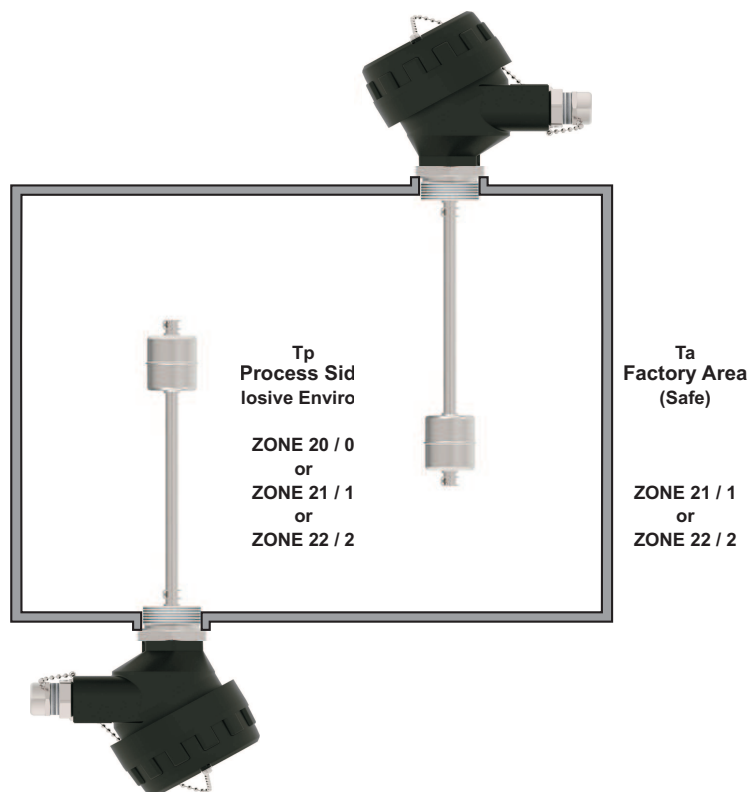
Housing - Thread



Test Rod :

Rod Material	304 St.St. (Std.) Opt. 316 St.St.
Shaft Material	304 St.St. (Std.) Opt. 316 St.St.

It is produced as a spring. As an optional it can be inside housing.



Housing :

ORDER CODE	TYPE	MATERIAL	PROTECTION CLASS	TEMPERATURE (°C)	SIZE a x b (mm)
750	B22x	Aluminium	IP 66 / 68	(-) 40...(+) 200	117 x 102
704	B21x	Aluminium	IP 66 / 68	(-) 40...(+) 200	132 x 104

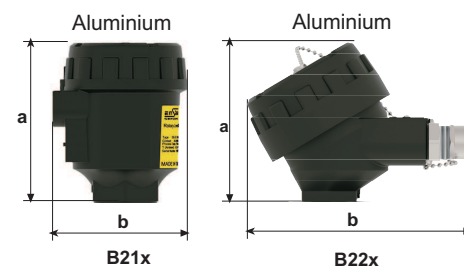
Cover Seal : NBR Nitrile Rubber 120 °C, Opt. FPM (Viton) 200 °C)

EU-Type Examination Certificate Number : TSE 22ATEX 0175U

The marking of the equipment :



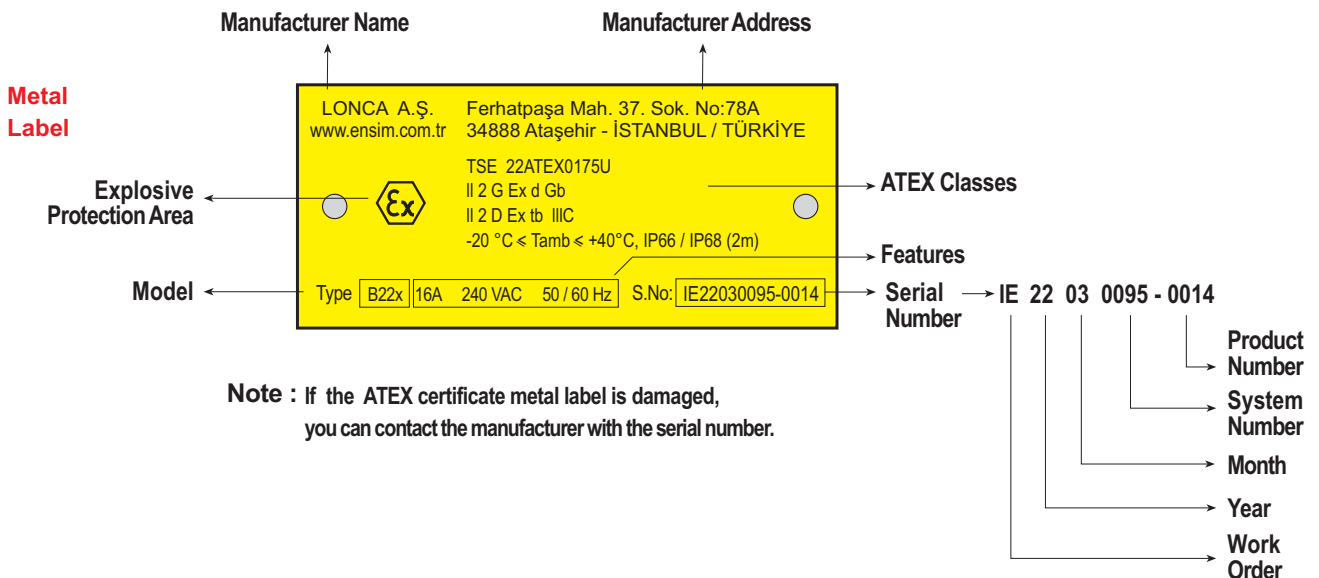
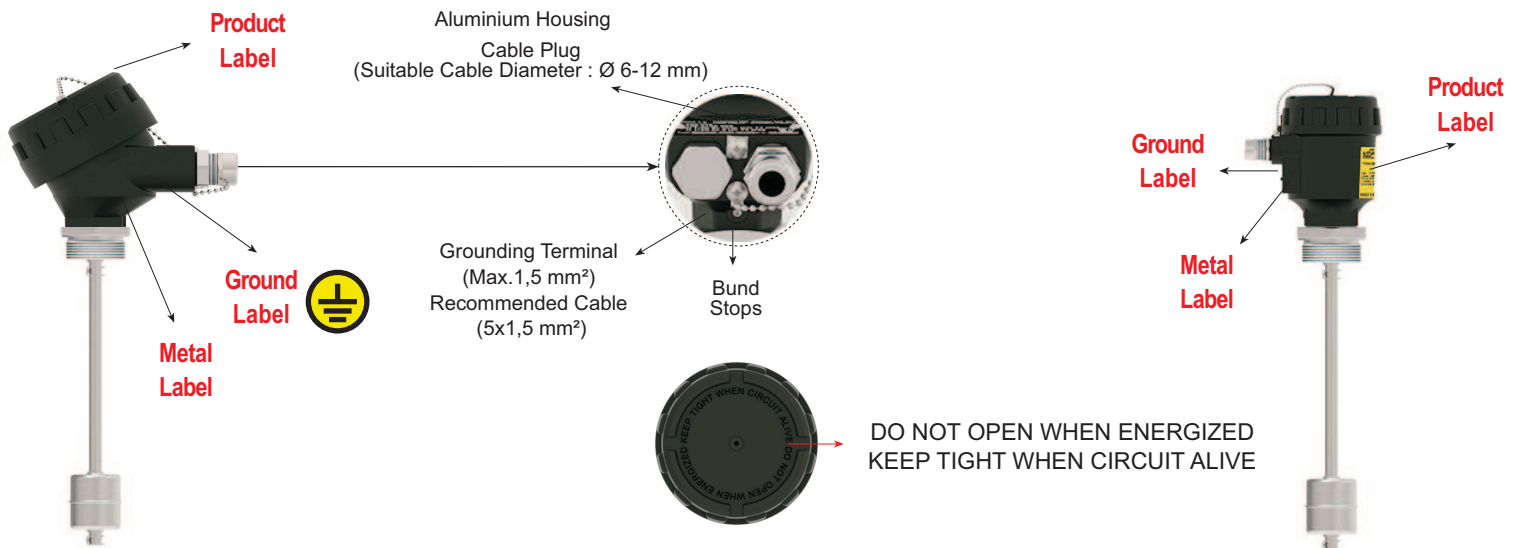
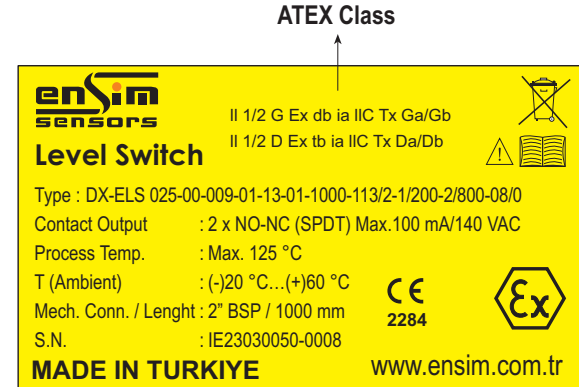
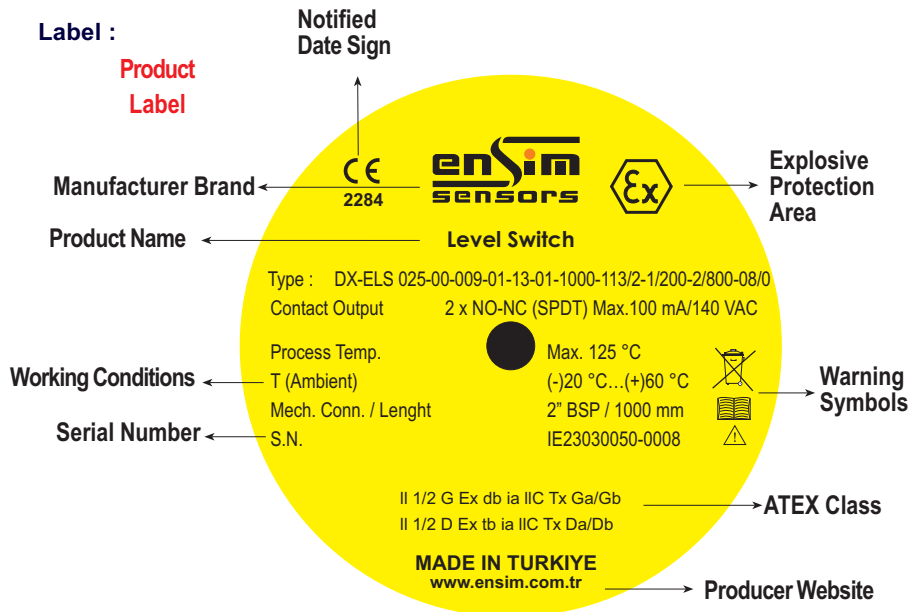
II 2G Ex d IIC Gb
II 2D Ex tb IIIC



Protection Case :



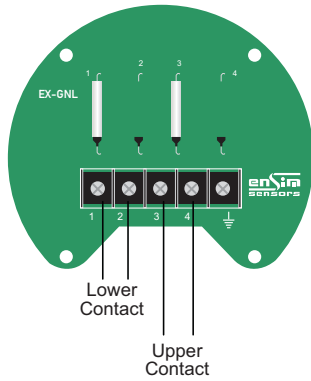
Material : 304 Stainless Steel
Welded manufacturing
Opens - Closes Hinged
To Protect Against external conditions.



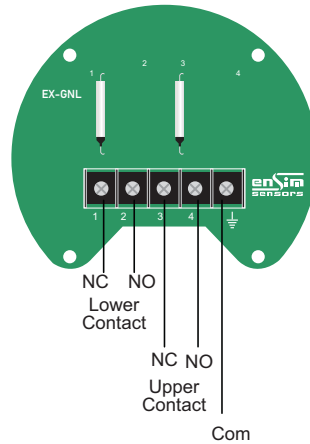
Electrical Installation :

For B21x

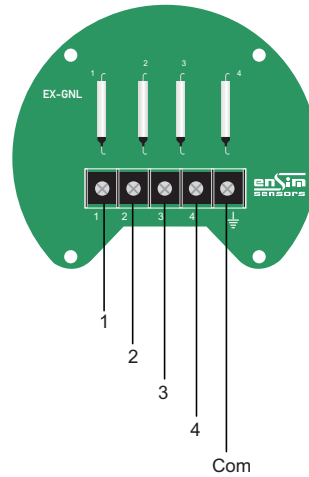
Two independent contacts NO or NC



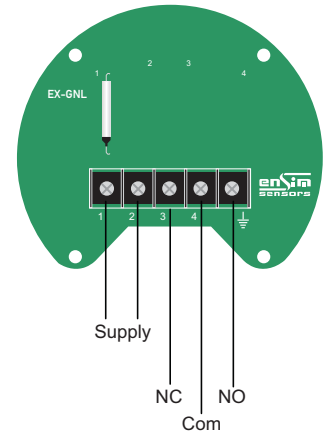
Two double contacts NO / NC (SPDT)



Four contacts NO or NC



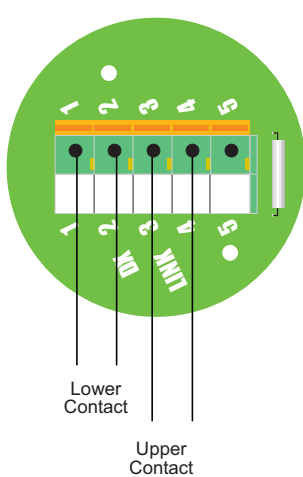
Liquid level relay (12 / 24 VDC)



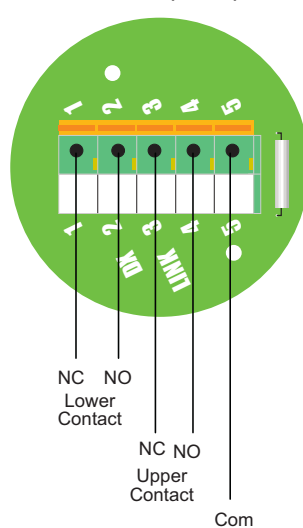
Note: RLY Led is designed to switch off while the pump is working.

For B22x

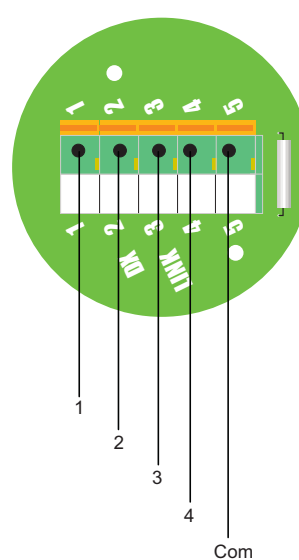
Two independent contacts NO or NC



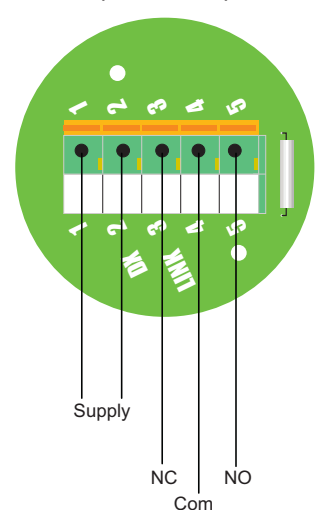
Two double contacts NO / NC (SPDT)



Four contacts NO or NC



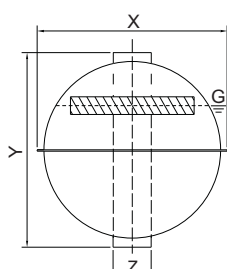
Liquid level relay (12 / 24 VDC)



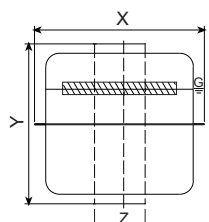
Note: RLY Led is designed to switch off while the pump is working.

Note : It has been produced according to IPC A 600 class 2 conditions and tested with 100 % E-test. Moreover, HASL (non-lead) surface test has been applied.

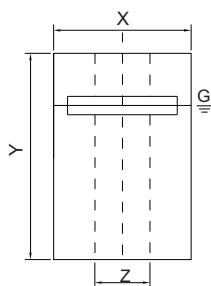
Float Types :



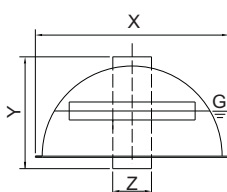
S2A / S5A / S6A
S40A / S41A / S53A



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

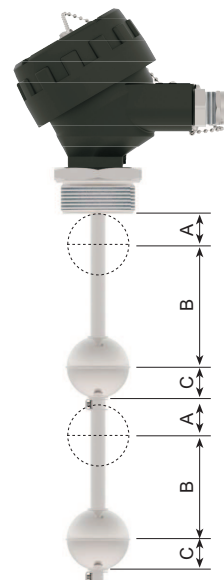


P3 / P6 / P7 P9



S42A / S52A

Minimum Distances

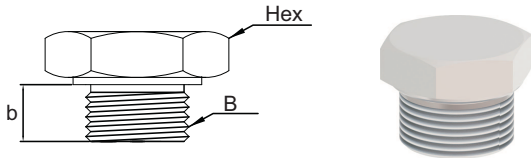


Order Code	Type	Material	X	Y	Z	Pipe Dia.	Max. Press.	Max. Temp.	Density	A	B	C
0001	S1Y	304 St. St.	28	28	9.5	8	10	150	0.80	25	50	25
0101	S1A	316 St. St.	28	28	9.5	8	10	150	0.80	25	50	25
0006	S10Y	304 St. St.	25,4	24,5	9.5	8	10	110	0,82	22	45	22
0110	S11A	316L St. St.	28,6	28	9.5	8	15	200	0,70	26	52	26
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. Press.	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

Mechanical Connection:

Thread (Connection has been welded with sensor)

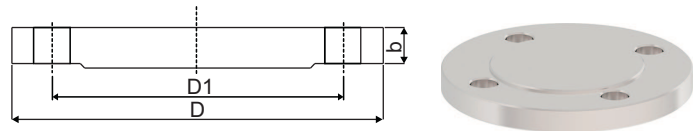


(ISO228-1)

Order Code	Dimension B	Hex [mm]	Stem 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 (Connection has been welded with sensor)

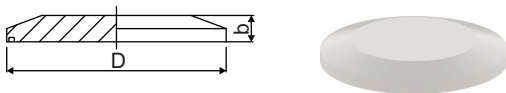
Order Code	(ISO1092-1) PN 16	D (mm)	D1 (mm)	b (mm)
0502	DN 25	165	85	16
0503	DN 32	140	100	16
0505	DN 50	165	125	18
0507	DN 80	200	160	20
0508	DN 100	220	180	20



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

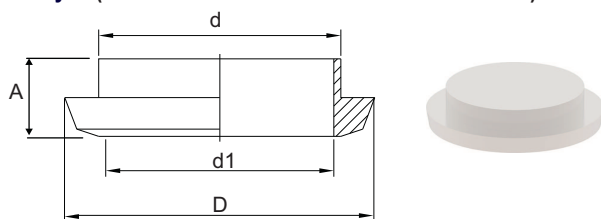
Order Code	(ANSI B16.5) 150 LBS	D (mm)	D1 (mm)	b (mm)
1005	DN 50	152,4	121	19
1006	DN 65	177,8	139,7	22,2
1007	DN 80	190,5	152,4	23,8
1008	DN 100	228,6	157,2	23,8

Clamp (Connection has been welded with sensor)



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

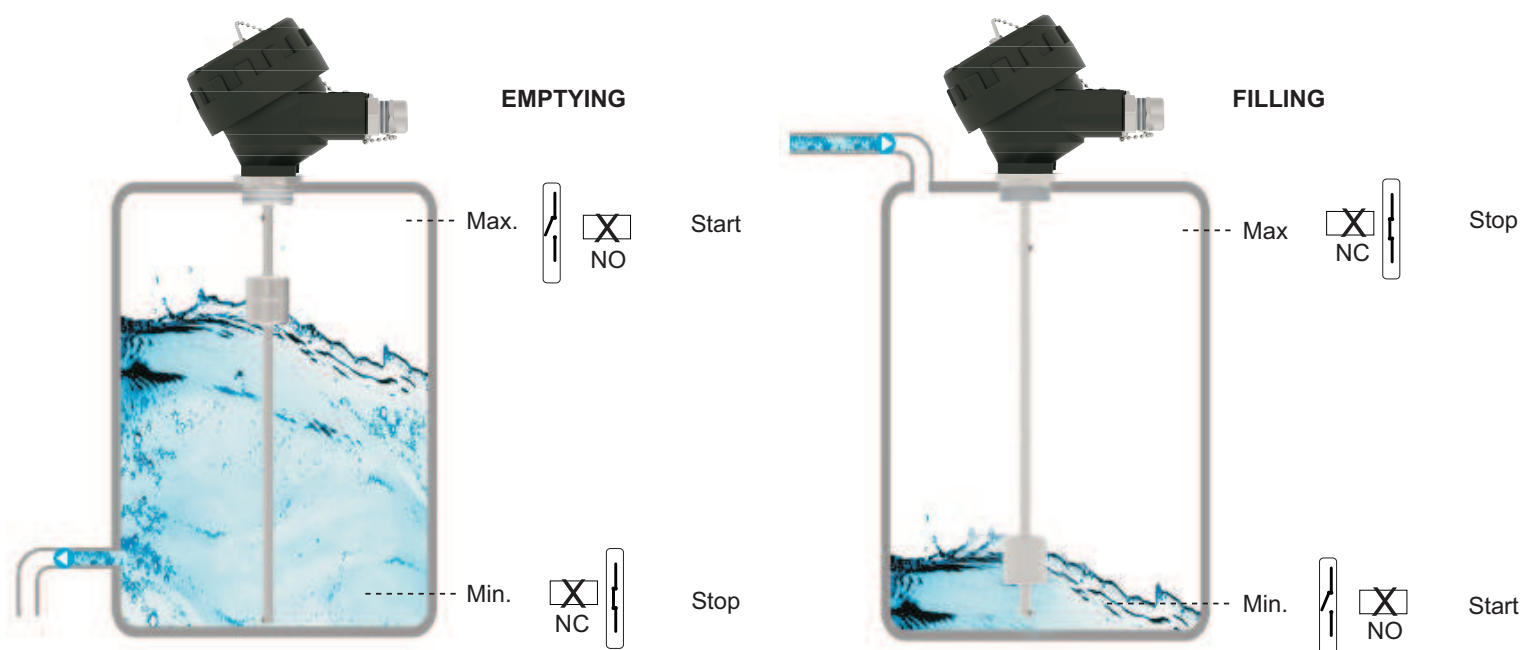
Dairy (Connection has been welded with sensor)



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	DN 100	DN 100	121	114	20

All dimensions are stated as mm.

Sample Application :



Temperature Class Table

$(-) 20^{\circ}\text{C} \leq T_a \text{ Ambient} \leq (+) 30^{\circ}\text{C} \dots (+) 60^{\circ}\text{C}$			Working Temperature: $(-) 20^{\circ}\text{C} \dots (+) 125^{\circ}\text{C}$		Group II
MODEL			DX-ELS		
Without opening the cover standby time			30 min.	$(-)40 \dots (+)150^{\circ}\text{C}$	40 min. $(-)40 \dots (+)200^{\circ}\text{C}$
Ta AMBIENT TEMPERATURE	Tp PROCESS TEMPERATURE		TEMPERATURE CLASS		
60°C	< 80°C		T6		
60°C	< 90°C		T5		
60°C	< 125°C		T4		

$(-) 20^{\circ}\text{C} \leq T_a \text{ Ambient} \leq (+) 30^{\circ}\text{C} \dots (+) 60^{\circ}\text{C}$			Working Temperature: $(-) 20^{\circ}\text{C} \dots (+) 60^{\circ}\text{C}$		Group III
MODEL			DX-ELS		
Without opening the cover standby time			10 min.	$(-)40 \dots (+)60^{\circ}\text{C}$	
Ta AMBIENT TEMPERATURE	Tp PROCESS TEMPERATURE		TEMPERATURE CLASS		
60°C	< 60°C		T6		

1 MODEL

Standard Version DX-ELS

2 HOUSING

Aluminium Housing , B22x IP66/68.....750

Special.....x

Aluminium Housing , B21x IP66/68.....704

3 CERTIFICATE

No.....0

(EN10204-3-1) Material Certification.....1

4 ELECTRICAL CONNECTION

With Terminals.....00

Special.....x

5 CONNECTION (Connection has been welded with sensor)

Thread 3/8" BSP.....0003

1/8" NPT.....0200

Thread 1/2" BSP.....0004

1/4" NPT.....0201

Thread 3/4" BSP.....0005

3/8" NPT.....0202

Thread 1" BSP.....0006

1/2" NPT.....0203

Thread 1 1/4" BSP.....0008

3/4" NPT.....0204

Thread 1 1/2" BSP.....0009

1" NPT.....0205

Thread 2" BSP.....0012

1 1/4" NPT.....0206

Thread 1/2" BSP (Moving Type).....0112

1 1/2" NPT.....0207

2" NPT.....0208

Thread 3/8" BSP Elbow Type.....0109

Thread 1/2" BSP Elbow Type 0110

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

Special.....x

Note: Refer to the table for others.

6 CONNECTION MATERIAL

304 Stainless Steel.....001

Aluminium.....005

316 Stainless Steel.....002

Special.....x

7 PIPE SIZE

Ø 10 mm.....10

Ø 12.7 mm.....12

Ø 12 mm.....11

Ø 13 mm.....13

Ø 15 mm.....15

Special.....x

8 PIPE MATERIAL

304 Stainless Steel.....001	Special.....X
316 Stainless Steel.....002	

9 STEM LENGHT

.... mm

Note: From connection thread included

10a FLOAT MODEL

Select from Table.....

Note: Should be selected according to the connection and radius.

10b FLOAT NUMBER

Number / Piece.....

Note: Should be selected according to the connection and radius.

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.

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.

13 OPTIONAL

No.....0	Shetter (For the outside of the tank) 304 St. St...../ K2
Pt100 Sensor...../ P	Test Rod / T
Liquid Level Relay...../ SSR	Float Housing... / M
External Tank (Measurement must be specified) ... / H	Zener Baryer 9202B-B1B Single Channel...../B1B
	Zener Barier 9202B-B2B Double Channel...../B2B
	Special..... / x

EXAMPLES

DX-ELS - 704 - 0 - 0 - 0009 - 001 - 13 -1 - 1500 - 113 / 1 - 3 - 1400 - 3 - 400/0

DX-ELS Level Switch, Aluminium Housing B21x, 2" BSP Male Thread, Connection and Pipe Material 304 St.St.
L=1500 mm, S40A Float , L1= 1400 mm NO / NC Reed Relay Output , L2= 400 mm NO / NC Reed Relay Output