

# LINEAR O - ATEX E

## Continuous level sensor

### APPROVED IN ACCORDANCE WITH THE EUROPEAN STANDARD 94/9/EC - ATEX

These instruments, explosion-proof certified:

**CESI 03 ATEX 272 Ext.2 1/2G Exd IIC T5/T6 G2/Gb**, are used to control the level of liquids or fuels inside tanks, both underground and outdoors, installed in hazardous areas where flammable products are treated.

The principle of operation is potentiometric type, based on the gradual shutdown of a chain of resistors and reed contacts, placed inside of the measuring rod by a magnetic float.

### GENERAL CHARACTERISTICS

- Brass – Spansil – Stainless steel rod
- Measuring resolution 5 – 10 – 20 mm.
- Potentiometric signal output (LC).
- 4-20mA analog output (LCT).
- Up to 6 m length depending on the used float.
- Maximum working pressure 20 Bar.
- Working ambient temperature.  
-40/+40°C = T6, -40/+60 °C = T5
- Standard working temperature up to 100°C.  
Execution up to 120°C on request.
- Minimum degree of protection IP67
- Built-in temperature sensors, on request.  
PT – PTC – NTC

### FLOATS

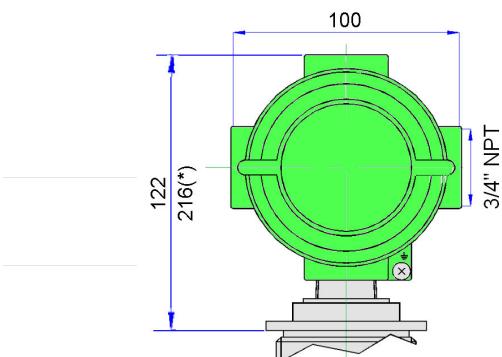
Tab.1



Material	Spansil – Butadiene - Acrylonitrile Copolymer				
Specific gravity	0,44	0,4	0,4	0,35	0,45
Measuring resolution - mm	5 – 10	5 – 10	5 – 10	5 – 10 – 20	5 – 10 – 20
Max. pressure – Bar	20	20	20	20	20
Max. temperature – Class	L = 100°C				
On request	M = 120°C				

### ELECTRICAL OUTPUT

Tab.2



<b>E1</b> IP67 Housing
With heatsink - see dimension (*) LC – LCT = Temperature class M



## PROCESS CONNECTIONS

Tab.3

Type of float	20	25	32	40	50	FOHX	DN50	DN65
	3/4"	1"	1 1/4"	1 1/2"	2"	Flange	Flange	Flange
B22	G-C-N	G-C-N	-	-	-	•	-	-
B28	G-C-N	G-C-N	-	-	-	•	-	-
B20	-	G	G-C-N	-	-	•	•	-
B45	-	G	G-C-N	G-C-N	-	•	•	-
B44	-	-	-	G	G-C-N	•	•	•

## Male thread

G	C	N
Parallel UNI 228/1	Conical UNI 7/1	Conical NPT

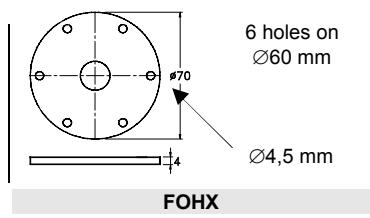
## Available materials

O	S
Brass	AISI-316 On request

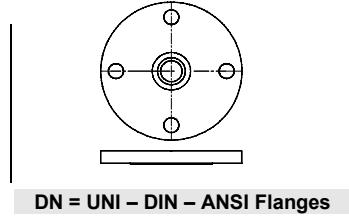
## DN = Available materials

C	S
Steel	AISI-316 On request

## FLANGES Dimensions in mm.

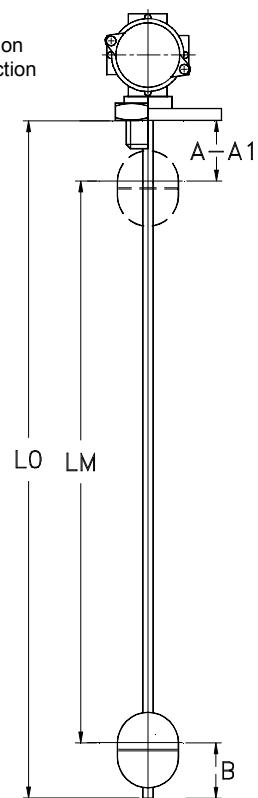


FOHX



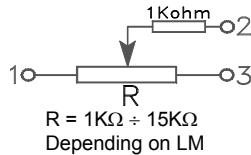
DN = UNI - DIN - ANSI Flanges

A Flanged connection  
A1 Threaded connection



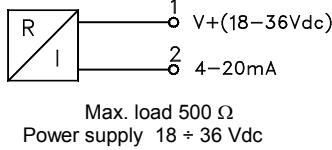
## WIRING

## POTENTIOMETRIC OUTPUT



R =  $1\text{K}\Omega \div 15\text{K}\Omega$   
Depending on LM

## 4-20 mA output



Max. load 500 Ω  
Power supply 18 ÷ 36 Vdc

LC

LCT

## DIMENSIONS mm.

Tab.4

The dimensions L0 and LM are referred to the stop of the fitting (A1) or flange (A) connection. Tolerance on dimension L0 and LM  $\pm 3$  mm.

	B22	B28	B20	B44	B45
A	10	15	10	25	25
A1	25	30	30	45	45
B	15	25	20	35	35
Damping tube On request	-	-	-L aluminium	-O brass	-S AISI-316

## OPTION – Built-in temperature sensor

Only for LC type = On request, it is possible to install a temperature sensor located at the bottom of the rod inside the instrument.

## PT100 – PT1000

EN 60751 – IEC 751

Class B – A (on request)

## PTC

Resistance a 25°C  $\leq 500$  Ω

Temperature 60°C ÷ 120°C

## NTC

Resistance a 25°C 2-5-10-50-100 KΩ

Precision  $\pm 5\%$  /  $\pm 3\%$  (on request)

## NOMENCLATURE

LC	B45	10	1300 / 1380	S	- L	25	G	O	E1	L
•										
	•									
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										•

Type: LC – LCT

Tab.1 Float

Tab.1 Measuring resolution (mm).

Tab.4 Measuring length LM / Total length L0 (mm).

- Stainless steel rod material.

Tab.4 Presence of damping tube and material (option).

Tab.3 Process connection dimension.

Tab.3 Process connection thread.

Tab.3 Process connection material.

Tab.2 Electrical output.

Tab.1 Temperature class.

All level controls Exd certified must be connected by interposing the appropriate blocking joints according to the European Standard EN 50018.

We reserve the right to change the data without notice

BE#179/2-02/2015



Level

Flow

Pressure

Temperature

Electronic

VALCO  
www.valco.it