

## GENERAL CHARACTERISTICS



The principle of operation is of potentiometric type, based on the gradual shutdown of a chain of resistors and reed contacts, placed inside the guiding rod, by a magnetic float. The only moving element is the float that moves, for buoyancy, along the measuring rod. This ensures a high degree of reliability.

- **Stainless steel – AISI 316**
- Measuring resolution 5 – 10 – 20 mm.
- Potentiometric signal output (**LC**).
- 4-20mA analog output (**LCT**).
- 0-5 / 0-10V analog output (**LCTV**).
- (0)4-20mA analog output with digital display (**LCO**).
- Up to 6m length.
- Maximum working pressure 50 Bar
- Operating ambient temperature -30/+55°C UR 90%.
- Standard working temperature up to 105°C.  
Executions up to 150°C on request.
- Minimum degree of protection IP65.
- Built-in temperature sensors, on request.  
PT – PTC – NTC.
- ATEX constructions (See Linear ATEX E – Linear ATEX I series)



## FLOATS

Tab.1

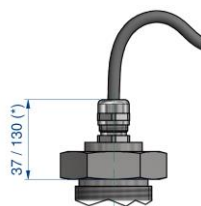
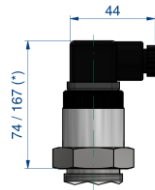
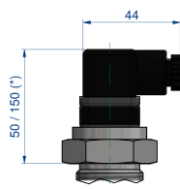
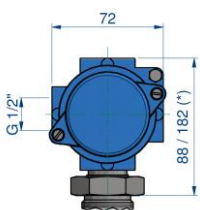


Material	Stainless steel – AISI 316						
Specific gravity	0,75	0,55	0,78	0,82	0,7	0,65	0,6
Measuring resolution - mm	5	5	20	10	5	10 – 20	10 – 20
Max. bar	30	10	15	10	50	40	15
Max. °C - Class	L = 105°C						
On request	R = 150°C						

## ELECTRICAL OUTPUT

Tab.2

W1	S1	S1	P1 - P2	P1 - P2	O1
IP65 Housing	DIN 43650 IP65 Plug	DIN 43650 IP65 Plug	P1 Brass cable-gland IP68 P2 Polyamide cable-gland IP67	P1 Brass cable-gland IP68 P2 Polyamide cable-gland IP67	OMNI electric head



LC – LCT – LCTV	LC	LCT - LCTV	LC	LCT - LCTV	LCO
With heatsink – see dimension (*)		LCT – LCTV – LCO = Temperature class R			

We reserve the right to change the data without notice

BE#177/4-05/2018

## PROCESS CONNECTIONS

Tab.3

LC type P1-P2 output = Installation from inside		Float type	LC - LCT - LCTV - LCO type = Installation from outside						
10 3/8"	15 1/2"		25 1"	32 1-1/4"	40 1-1/2"	50 2"	FSHX Flange	DN65 Flange	DN125 Flange
All type of floats All type of thread		S29-32	G	G-C-N	G-C-N	-	•	-	-
		S40-41	-	-	G-C-N	G-C-N	-	•	-
		S52S	-	-	-	G-C-N	-	•	-
		S52	-	-	-	G-C-N	-	•	-
		S100	-	-	-	-	-	-	•

### Male thread

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

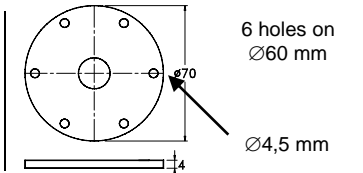
### Available materials

S
AISI-316

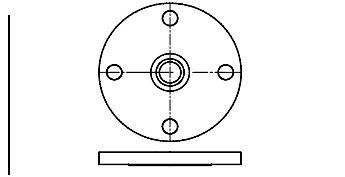
### DN = Available materials

S	C
AISI-316	Steel On request

### FLANGES Dimensions in mm.



FSHX



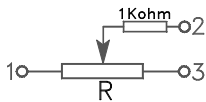
DN = UNI - DIN - ANSI Flanges

A Flanged connection  
A1 Threaded connection



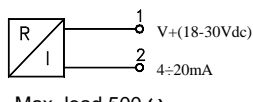
## WIRING

### POTENTIOMETRIC OUTPUT



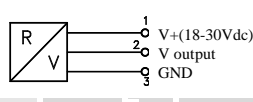
R = 1KΩ ÷ 15KΩ  
Depending on LM

### 4-20 mA OUTPUT



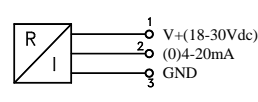
Max. load 500 Ω  
Power supply 18 ÷ 36 Vdc

### V OUTPUT



1 0 - 10    3 1 - 5  
2 0 - 5    4 0,5 - 4,5

### 4-20 mA OUTPUT WITH DIGITAL DISPLAY



1 V+(18-30Vdc)  
2 (0)4-20mA  
3 GND

LC

LCT

LCTV..

LCO

## 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 ± 3 mm.

	S29	S32	S40	S41	S52 (S)	S52	S100
A	15	15	15	10	25	35	50
A1	35	35	35	30	45	55	-
B	25	25	45	30	30	40	60

Damping tube  
On request

-	- S	- V
	AISI-316	PVC

## 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	PTC	NTC
EN 60751 - IEC 751	Resistance at 25°C ≤ 500 Ω	Resistance at 25°C 2-5-10-50-100 KΩ
Class B - (Class A on request)	Temperature 60°C ÷ 150°C	Precision ± 5% / ± 3% (on request)

## NOMENCLATURE

LC S52 10 1300 / 1400 S - S 50 G S W1 L 1,5 M

•												Type: LC - LCT - LCTV - LCO
	•											Tab.1 Float
		•										Tab.1 Measuring resolution (mm).
			•									Tab.4 Measuring length LM / Total length L0 (mm).
				•								Tab.3 Rod material.
					•							Tab.4 Damping tube (option).
						•						Tab.3 Process connection dimension.
							•					Tab.3 Process connection thread.
								•				Tab.3 Process connection material.
									•			Tab.2 Electrical output.
										•		Tab.1 Temperature class.
											•	Tab.2 Cable length (P1 - P2) 1,5m / 3m, other lengths on request.



# LINEAR S



## Request form

### External mounting

### Internal mounting

**W1**

Electrical housing IP 65

**S1**

Plug IP65  
DIN 43650

**P1**

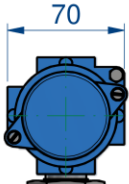
P1 Cable-gland brass IP68  
P2 Cable-gland polyamide IP67  
L cable.....mm

**P2**

**C**

Only internal mounting  
Cable L.....mm

LC/LCT



70

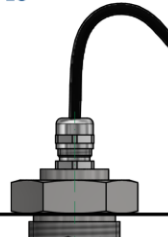
LC



LCT



LC



LCT



LC



LM max

L0

Total length  
L0 (mm)

Measuring length  
LM (mm)

Liquid under control: .....

Specific gravity: .....

Maximum pressure: .....

Maximum temperature: .....

Approvals:



Measuring resolution:

5 mm

10 mm

20 mm

Process connection:

Threaded: .....

Flanged: .....

Material:

Brass

AISI-316

PVC

PP

PVDF

Electrical output:

3-wires potentiometer



2-wires potentiometer

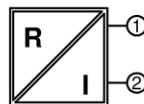


Calibrated potentiometer

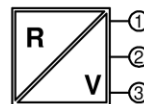
Empty tank = .....ohm

Full tank = .....ohm

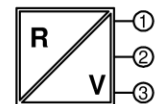
4 ÷ 20 mA output



0.5 ÷ 4.5 V output



1 ÷ 5 V output



0 ÷ 5 V output



0 ÷ 10 V output

