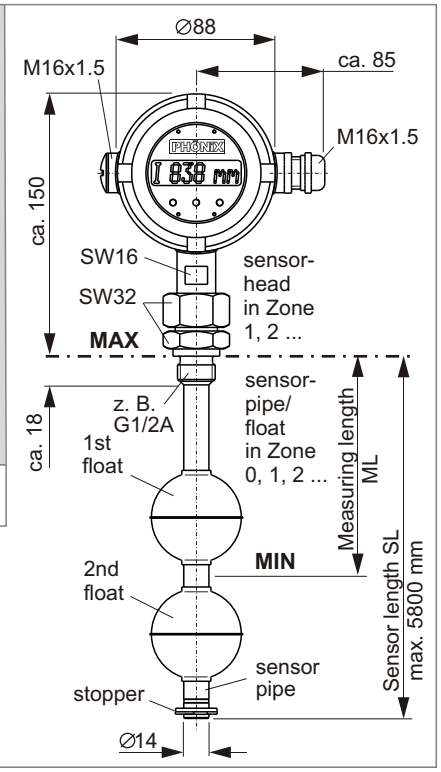
Float Level Meter MAGNODUL®

Magnetostrictive Level meter digital with high resolution
measuring of liquid level, interface with a magnetic float
2-wire circuit 4-20 mA sink
HART optional

Product group	746
Type	2XXX
Sheet: 1/1	Revision: 11
Date:	01/09

Execution
with one float



measures in mm

Field of application

Small to medium ranged levels. Well suited for aggressive media. Measuring of level and interface level (optional). Output analogue and/or digital.

Functional description

The Sensor itself is a magnetostrictive wire, which is passed by a short current pulse. From the float`s magnet position a torsional wave travels along the wire. The time of flight is proportional to the level height.

General Data

Resolution:	0.1 mm
Linearity:	±0.5 mm
Hysteresis:	0.5 mm
Weight:	ca. 1.5 kg + 5 g/cm

Design Data

Pressure:	see float table
Storage temperature:	-45...+85 °C
Operating temperature:	-60...+185 °C
Ambient temp. ...N/...D:	-25/-20...+85/+70 °C
Ambient temp. T4/T5/T6:	-20...+70/+70/+60 °C
Material all Sensor parts and housing:	SS,...
Measuring length ML:	100 up to 5800 mm

The sensor's pipe has to be erected in a way, that with consideration of vessel intrusions and liquid flow no bouncing against the vessel, bending or breaking of the pipe can be caused. This is of severe importance for sensor pipe length of more then 3 m.

Number of floats:	1 or 2
Ex-classification:	II 1/2 G Ex ib IIC T4, T5, T6
U_o/P_o:	30 V/1 W
L_i/C_i:	< 0,3 mH/10 nF

Electrical Data

Supply voltage:	13...30 VDC
Output current:	4...20 mA (Namur)
Digital port:	HART (optional)
Cable gland:	M16x1.5; if Ex blue
Wire cross section max.:	1.5 mm^2
Cable length:	max. 500 m with 0.5 mm^2
Ingress protection EN 60529:	IP67

Certificates

EC-Examination Certificate: ZELM 07 ATEX 0339

All length-dependent information relates to the measurement system without the float.

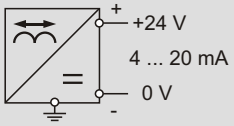
Subject to alterations

Float table

Shape	Density	Pressure	Material	Dimensions HxDxd [mm]	Ordering no.
Cylinder	> 0.75	PN 16	1.4571	43x43x15.5	SZ0431504444
Cylinder	0.5	PN 64	3.7025/35	156x56x16	SZ1561605664
Sphere	> 0.65	PN 25	1.4571	52x52x15.5	SK0521505354
Sphere	> 0.8	PN 40	1.4571	52x52x15	SK0521505254
Sphere	> 0.75	PN 50	3.7025/35	52x53x13.7	SK052150539

Floats for other densities, Interface or higher press. are available on req.

Connection diagram



Ordering no.

7 4 6 . 2 X X X 0 X - X X X X — Sensor length SL in mm e. g. 0600 = 600 mm

Sensor execution	One-pipe system	0
	Double-pipe-System	2
interface	4...20 mA	0
	HART (4...20 mA)	H
Operation area	Standard	1
	Ex i	2

N	Normal	Variant
D	Display	

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