

Float Level Meter MAGNODUL®

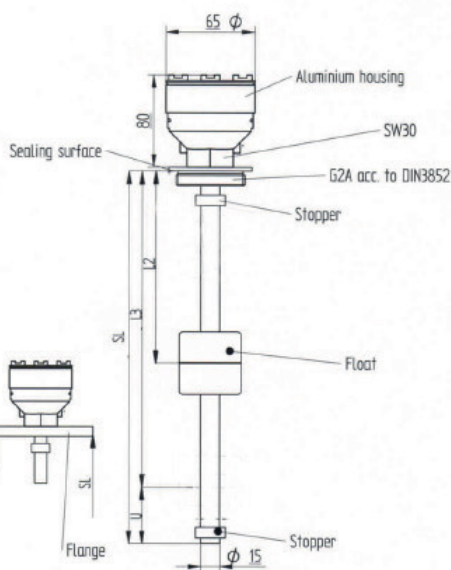
Magnetostrictive Level meter with high resolution for analogue measuring of liquid levels, driven by a magnetic float
Top-mounted design
2-wire circuit 4-20 mA sink
Ex-certification for zone 0

Product group **746**

Type **200X**

Sheet: 1/1 Revision: 9

Date: 04/22



Dimensions in mm

Field of application

Small to medium ranged levels. Well suited for aggressive media, as all materials in contact with media are made of stainless steel. Level measuring between MIN and MAX with 4 to 20 mA or ullage between MAX and MIN with 4 to 20 mA. Type 746.2002 can be used in Ex Zone 0 and Zone 1.

Functional description

The Sensor itself is a magnetostrictive wire, which is passed by a short current pulse. From the float magnet's location a torsional wave travels through the wire, whose propagation time is proportional to the level height.

General Data

Accuracy *)**): $\leq 0,05\%$ of ML + 1,5 mm
Resolution: $< 0,1$ mm
Linearity *)**): $\leq 0,08\%$ of ML + 1,0 mm
Hysteresis: ≤ 1 mm
Temperature coefficient: 0,015 % of ML/K
Connection: G1/2A, DIN 910

Innage/ullage function: factory set innage
Weight: appr. 1,5 kg + 5 g/cm

*) for ML ≥ 400 mm, higher precision for ML < 400 mm on request **) at 20 °C

Design Data

Pressure: see float table
Operating temperature: -60 to +180 °C
Storage temperature: -45 to +85 °C
Ambient temperature Type 746.2001: -25 to +85 °C
Type 746.2002 T6/T5/T4: -25 to +45/60/85 °C
Material all Sensor parts and housing: 1.4571
Measuring length ML: 200 to 5800 mm
Ex-classification: II 2 G EEx ia IIC T6/T5/T4
U_i/I_i/P_i: 30 V/100 mA/1 W
L_i/C_i: $\leq 0,3$ mH/ < 10 nF

Electrical Data

Supply voltage: 11,5 to 30 VDC
Supply current 2-wire: 4 to 20 mA
burden: $R = (U - 11,5 \text{ V}) / 0,02 \text{ A}$
Cable gland: M16x1,5 (for Ex blue)
Wire cross section max.: 1,5 mm²
Cable length: max. 2000 m for wires 0,5 mm²
Ingress protection EN 60529: IP65

Certificates

EC-Type Examination Certificate:
ZELM 03 ExNB ATEX 0132

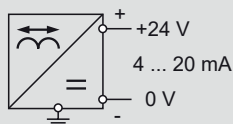
Subject to alterations

Float table

Shape	Density	Pressure	Material	Dimensions HxDxD [mm]	Ordering no.
Cylinder	$> 0,75$	PN 16	1.4571	43x43x15,5	SZ0431504444
Cylinder	$\geq 0,5$	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	0	0	X	-	X	X	X	X		Sensor length SL in mm e. g. 0600 = 600 mm
Version		Standard		1										
		Ex		2										

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