

Float Level Gauge

Level sensor using a magnetic float to operate reed switches in a resistive chain to give a dis-continuous output
3-wire resistance transmitter or
2-wire 4-20 mA transmitter with integrated R/I-converter, HART
Materials in contact with media hermetically sealed

Product group **746**

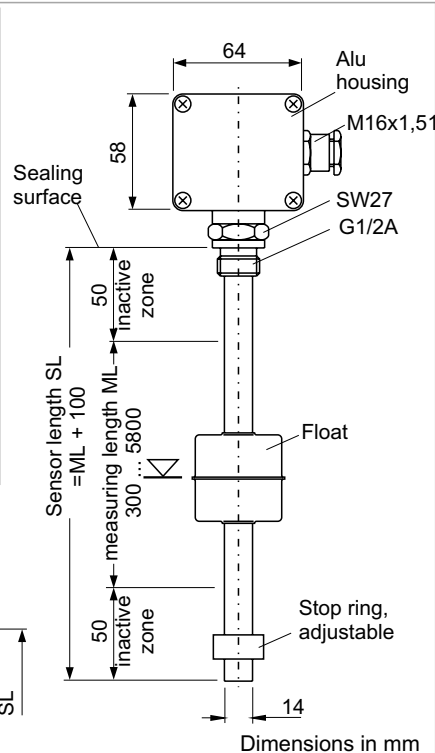
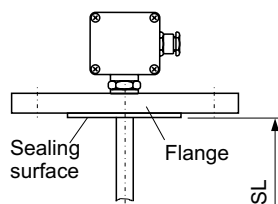
Type **1XXX**

Sheet: 1/1 Revision: 5

Date: 08/03



Example picture:
Flange mounted
Cylindric float



Field of Application

This level sensor is for measuring liquid level or interface dis-continuously. It only can be used vertically. Depending on the float material used (1.4571, Titanium) it can be used for a broad range of applications. The Ex-proof versions can be used in Zone 1 and Zone 2, the R-transmitter type 1XX2.2 only in combination with Zener-barriers.

General Data

Resolution: .115X.X: 15 mm, .110X.X: 10 mm
Hysteresis: < 22 mm
Linearity of R/I-converter: .1XX2.7: ±0,15 %
.1XX1.7: ±0,1 %
Temperature coefficient: <0,015 %/°C
Measuring length ML: 300...5800 mm
Connection: Thread G1/2A
or flanges from DN50 DIN/2" ANSI
Housing material, dimension: Alu, 64x58x37 mm
Diameter slide tube: 14 mm
Weight: G1/2A: ca. 0,8 kg + 7 g/cm

Design Data

Pressure: see Float selection table, max. 6,4 MPa
Temperature Ambient: -40 to +80 °C
Temperature Media: -40 to +125 °C
Material in contact with media: 1.4571...
Ex-classification: .1XX2.7: II 1G EEx ia IIC T6...T1
U/I/P: 28 V/120 mA/0,84 W
L/C: 10 H/ 1 nF

Electrical Data

Cable gland: M16x1,5 (for Ex blue)
Ingress protection EN 60529: IP 65

R-transmitter .1XXX.2

Total resistance R: .1151.2: 6,6 k /m
.1101.2: 10 k /m

Ex i (.1XX2.2 + Zener barrier): 40 - 100 k

R/I-converter

	.1XX1.7	.1XX2.7
Supply voltage	8...36 VDC	8..28 VDC
Supply current	4...20 mA	4...20 mA
max. burden at 24 V	800	695 W
setting range	0 % 100 %	4...20 mA 20...4 mA

Certificates

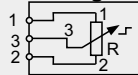
2-wire transmitter: DEMKO 99 ATEX 127088
Hart transmitter: DEMKO 99 ATEX 126965
Subject to alterations

Float selection table

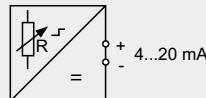
Shape	Density	Press. [MPa]	Material	Dimension HxDxD [mm]	Ordering no.
Cylinder	> 0,75	ANSI 150	1.4571	43x43x15,5	SZ0431504444
Cylinder	0,5	ANSI 300	3.7025/35	156x56x16	SZ1561605664
Ball	> 0,65	ANSI 150	1.4571	52x52x15,5	SK0521505354

Floats for lower densities, interface measurement or higher pressures on request

Connection diagram



Type 746.1XXX.2
3-wire R-Transmitter



Type 746.1XX1.7 Std./ .1XX2.7 Ex
2-wire R/I-converter

Ordering no.

7 4 6 . 1 X X X . X - X X X X

Resolution
10=10 mm
15=15 mm

1=Standard
2=EEx ia IIC

Sensor length [mm]
e. g. 0600 = 600 mm

2=3-wire R-Transmitter
7=2-wire R/I-converter int.
H=HART transmitter

Accessories

Zener barrier	745.1040
Transmitter feed circuit	745.1050/51

PHÖNIX

Messtechnik GmbH
Salzschlirfer Straße 13
D-60386 Frankfurt/M.
Tel. +49/69/41 67 42 -20
Fax +49/69/41 67 42 - 29
sales@phoenix-mt.com
www.phoenix-mt.com

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