

## Remote control

Electronic Remote control for magnetically operated reed switches in level sensors  
3-wire resistance transmitter or  
2-wire 4-20 mA transmitter with integrated R/I-converter  
HART

Product group **745**

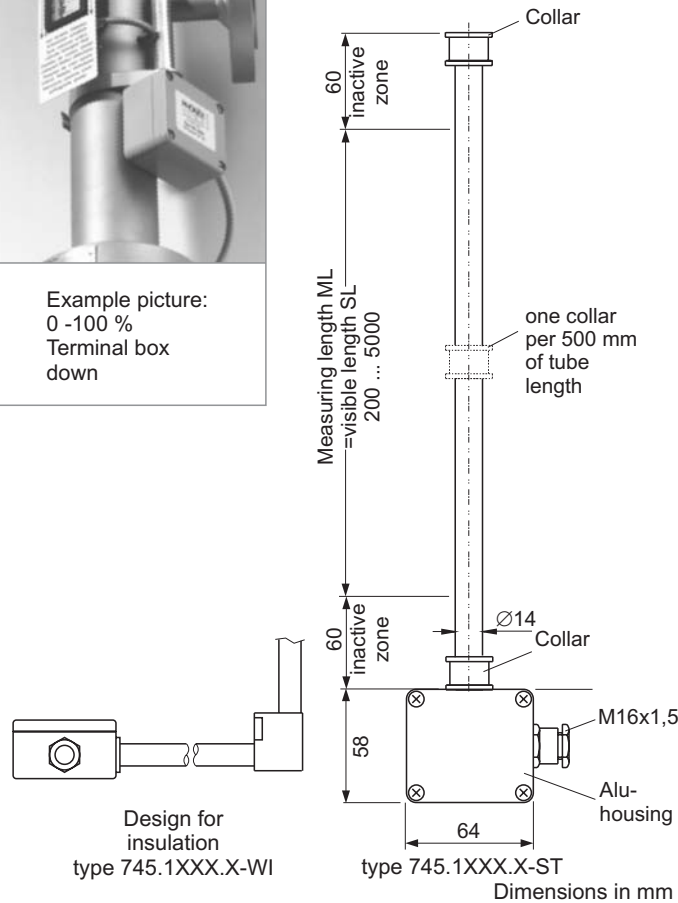
Type **1XXX**

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Date: 09/05



Example picture:  
0 - 100 %  
Terminal box  
down



## Field of Application

This Remote control is for measuring level discontinuous at PHÖNIX magnetic level gauges and mounted externally. It is an accessory to a local indicator. Ex-proof types can be used in Zone 1 (R-transmitter type 1XX2.2 only in combination with Zener-barriers).

## General Data

Resolution: .115X.X: 15, .110X.X: 10, .105X.X: 5\*) mm  
Hysteresis 15/10/5 \*) mm:  
Linearity of R/I-converter:  
Temperature coefficient:  
Measuring length ML:  
Fixture:

< 22/22/2,5 mm  
.1XX2.7: ± 0,15 %  
.1XX1.7: ± 0,1 %  
< 0,015 %/°C  
200...5000 mm collar  
Ordering no. see page 2  
Housing material, dimension: Alu, 64x58x37 mm  
Diameter Sensor pipe: 14 mm  
Weight: ca. 0,8 kg + 7 g/cm collar  
\*) 5 mm resolution for all PHÖNIX Magnetic Level Gauges except type 710.110

## Design Data

Temperature Ambient/T4/T6: -40 to +85/85/60 °C  
Temperature media in the tube: < 400 °C \*)  
Ex-classification: .1XX2.7: II 1G EEx ia IIC T4/T6  
U/I/P/L/C; 28 V/120 mA/0,84 W/ 10 H/ 1 nF  
\*) Above 150 °C insulation between tube and sensor is needed, above 120 °C sensor may not be included in the insulation!

## Electrical Data

Cable gland: M16x1,5 (for Ex blue)  
Ingress protection EN 60529: IP 67

## R-transmitter .1XXX.2

Total resistance R  
- .1051.2 / .1101.2 / .1151.2: ca. 1 kΩ/m  
- Ex i (.1XX2.2 + Zener barrier): 40 - 100 kΩ

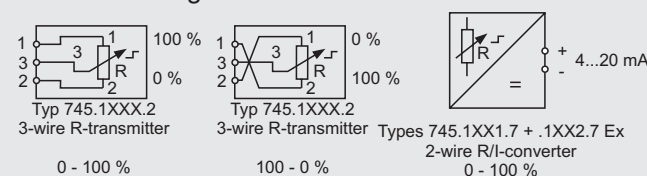
## R/I-converter

	.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 Ω	695 Ω
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

## Connection diagram



## Ordering no.

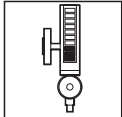
7 4 5 . 1 X X X . X - X X X - X X X X - Measuring ML[mm]

Resolution	5 mm	0 5	Media temperature
	10 mm	1 0	
	15 mm	1 5	
Version	Standard	1	Form
	Ex	2	
Transmitter	without	2	S T W I bent
	2-wire, 4...20 mA	7	
	2-wire, HART	H	

## PHÖNIX

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# PHÖNIX



## Remote control

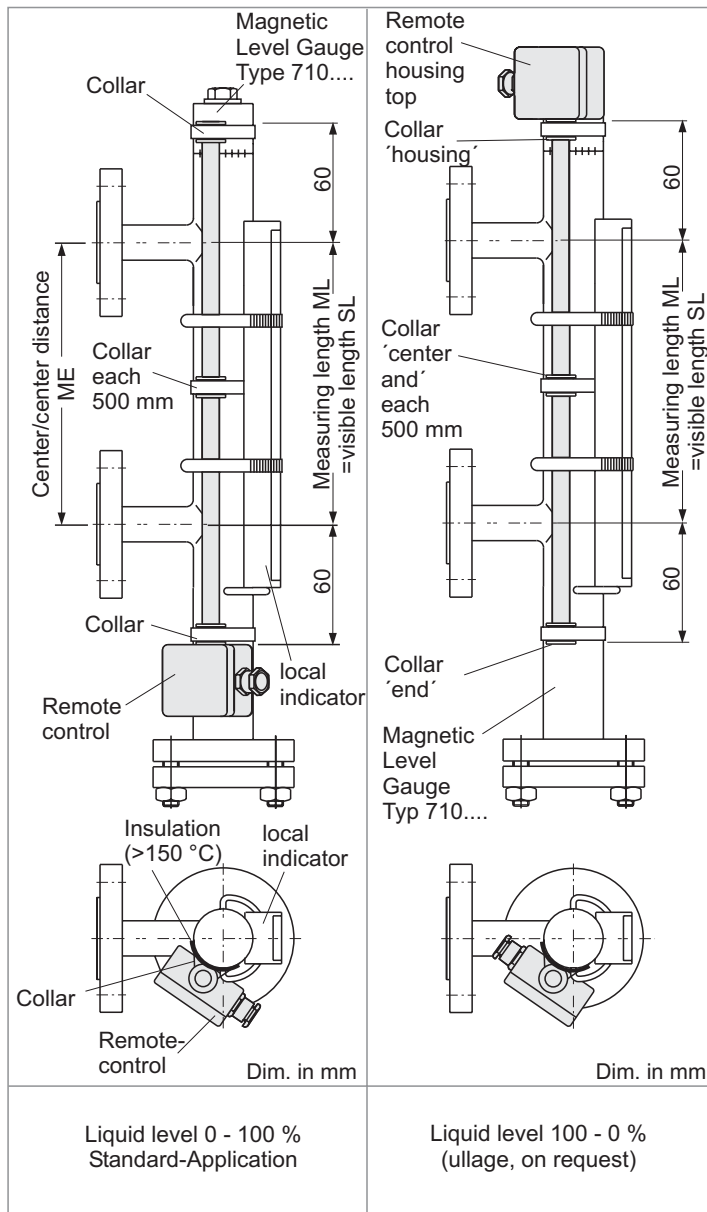
Application hints

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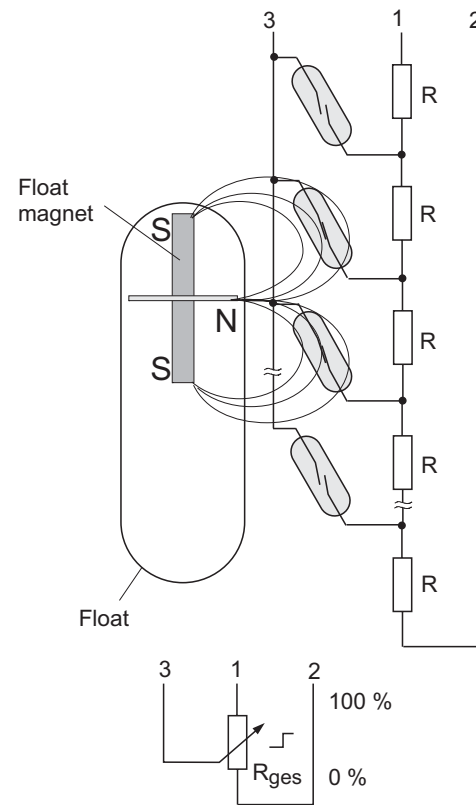
Date: 09/05



## Functional description

The remote Control is actuated by the magnetic field of a magnet in a float. The circuit is equivalent to a 3-wire potentiometer-pickoff.

Corresponding to the float's position within the magnetic gauge tube the Reed-switches are actuated accordingly by the magnetic field. Those are tapering without interruption the resistor-chain potentiometer. So the signal is dis-continuous and proportional to the liquid level within the gauge tube.



Equivalent circuit

Subject to alterations

### Ordering no.

Mounting accessories	Collar for 710.104/2XX	171546
	Collar for 710.100/103	171546
	Collar for 710.110/120/106/130/100.3	171553
	Insulation for media temperature >150 ≤250 °C	GEW50GQ03
	Insulation for media temperaturer >250 °C	59456008GL
Elektrical accessories	Zener barrier	745.1040
	Feed circuit	745.105X

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