



Fill level measurement



Type:

Hydrocont® M / ExM

Pegelsonde 22 mm Durchmesser, Kompakte hydrostatische Füllstandsmessung von Wasser und Abwasser, optional mit Temperaturmessung; 4...20 mA mit trockener kapazitiver Messzelle, mit Überspannungsschutz

Description

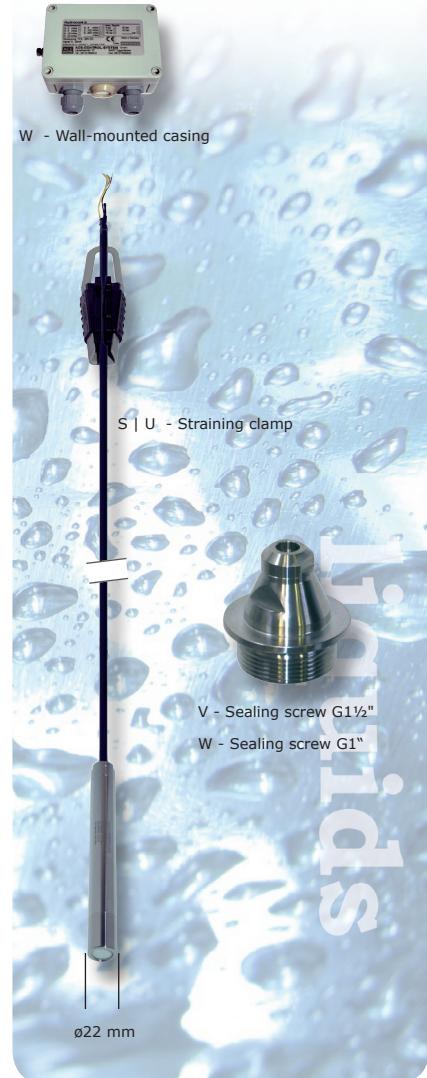
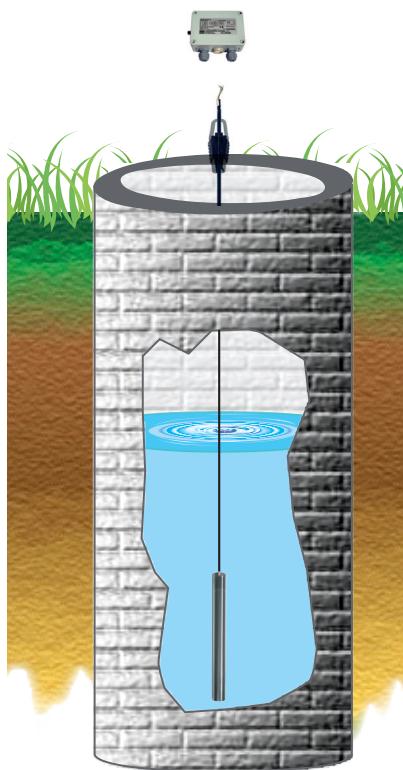
The filling level sensor Hydrocont® M with integrated analogue evaluation electronic is a compact transmitter for continuous measuring of fill levels and temperatures in liquid media.

This includes e.g. the measurement of levels in reservoirs, clarification basins, deep wells etc., but also the fill level measurement in closed containers.

For applications, where food or drink water suitability is necessary, a corresponding variant can be ordered.

The excellent characteristics like highest strength against pressure and pressure blows, high resistance against chemicals and corrosion, very good insensitiveness against temperature shocks and EM interference, highest accuracy and long term stability and also low influence of temperature makes it possible to use the sensor in various applications with liquid media like water, waste water, solvents, oil, sludge, grease, cleaning agents, etc.

Besides the level measurement it is possible to get the temperature of the medium by an integrated Pt100 resistor in parallel with this sensor.



Application

- Continuous fill level measurement in reservoirs, clarification basins, deep wells and boreholes
- Various materials selectable for sensor, cable and gaskets, therefore the use in various media is possible

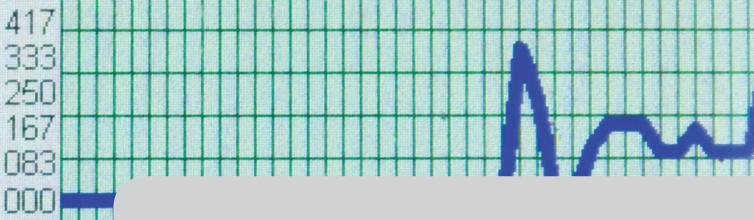
Your benefits

- Slim construction design, 22mm diameter
- **Very stable special cable** with steel mesh and pressure compensation capillary
- No elongation of the cable also at high depths slopes
- Food and drinking water suitable materials
- High-precision dry capacitive ceramic measuring cell

Specials



Order code. page |04|



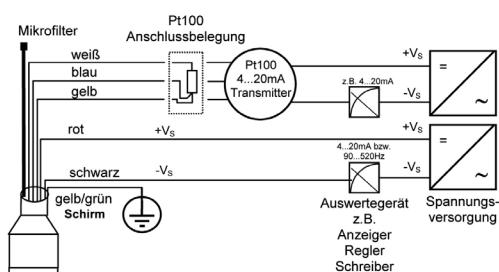
Technical data

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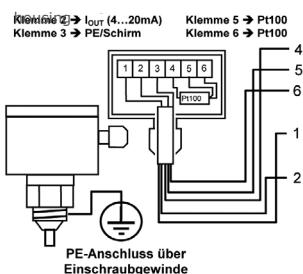
Output:	Signal 4...20 mA, 2-wire	
Residual ripple:	$\leq 2 \text{ Vss}$ (Condition: within the permitted supply voltage range)	
Permitted supply voltage:	Output signal 4...20mA: 11 V up to 45 V DC Output signal 10...10 V: 14...30 V DC at Ex-Variation 12,5 V up to 25,2 V DC	
Temperaturmesswiderstand:	Pt100 Class B 0°C - Abweichung +/- 0,30 K Endpunktabweichung +/- (0,30 K + 0,005 K je K DT0°C) (optional im Wall-mounted casing integrierter Pt100 - Transmitter Type e.g. KTM, der gemäß Kandenspezifikation abgeglichen ist)	
Measuring accuracy		
Temperature deviation:	$\leq 0,15\%$ / 10 K of the nominal range	
Deviation in characteristics:	$\leq 0,1\%$ / 0,25% of the nominal range (depending on the order code)	
Calibration deviation:	$\leq 0,05\%$ of the nominal range	
Long term drift:	$\leq 0,15\%$ / year of the nominal range	
Influence of supply voltage:	$\leq 0,02\%$ / 10 V of the nominal range	
Resolution:	infinite, because analog measurement electronics	
Material		
Membrane:	Ceramic Al_2O_3 96%	
Material slopes sensor:	Steel 1.4404	
Sealing screw:	Steel 1.4404	
Gaskets:	FPM (Viton®) / EPDM / Neoprene®	
Connection housing:	Polyacetal POM (Delrin), screw-in thread aus Steel 1.4404	
Wall-mounted casing:	PC / PS	
Extension cable:	PE / PUR	
Environmental conditions		
Permitted filling temperature:	-20°C...+70°C	
Protection:	Material slopes sensor Sealing screw / Connection housing Wall-mounted casing	IP68 IP67 IP65

Connection

Connection im Non-Ex-Area



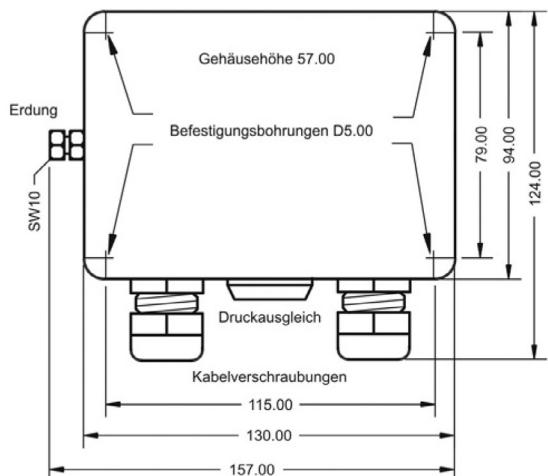
Connection Type A Terminal



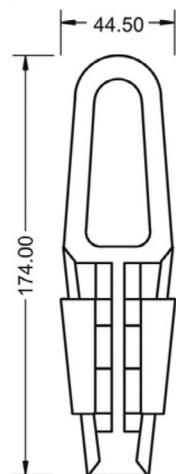
In use



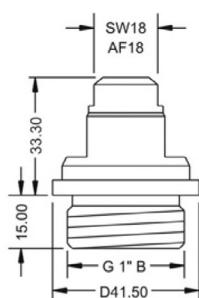
Wandaufbaugehäuse 130 x 98mm



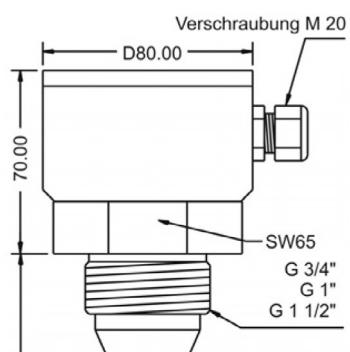
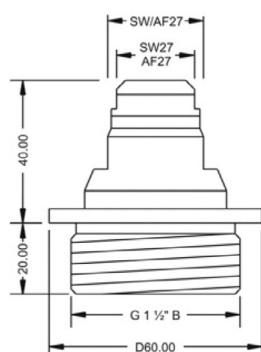
Seilspannklemme D8mm



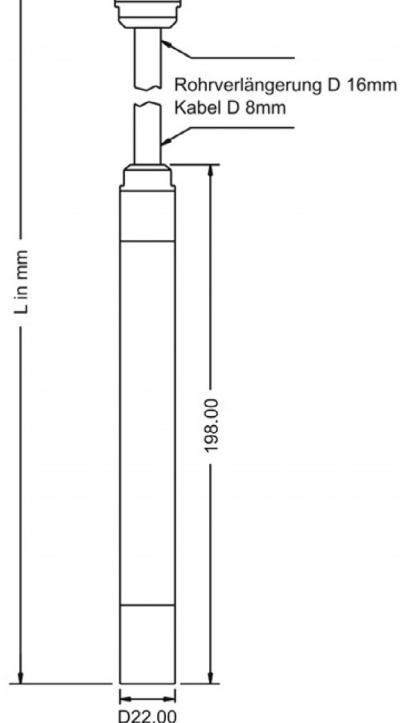
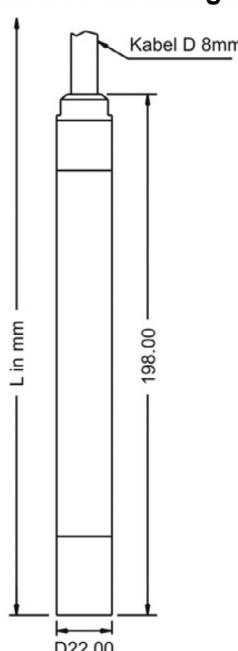
Verschlusseschraube G 1"



Verschlusseschraube G 1 1/2"



Sensor – ohne Anschlussgehäuse



Order code

Type		
M	Standard	
Ex0M II 1/2 G Ex ia IIC T4 for Ex zone 0		
Ex1M II 2 G Ex ib IIC T4 for Ex zone 1		
Variant wall installation housing		
W	Wall installation housing	
0	Without wall installation housing	
Put-in device / process connection		
0	Without put-in device	
S	Cable clamp fixing CrNi-steel, hot galvanized	
U	Cable clamp fixing CrNi-steel	
W	Screw plug G 1" ISO228-1 steel 1.4404 (AISI 316L) / 1.4571 (AISI 316Ti)	
T	Screw plug G 1½" ISO228-1 steel 1.4404 (AISI 316L) / 1.4571 (AISI 316Ti)	
G	Connection housing G 1½" ISO288-1 steel 1.4404 (AISI 316L) / 1.4571 (AISI 316Ti)	
8	Connection housing G ¾" ISO288-1 steel 1.4404 (AISI 316L) / 1.4571 (AISI 316Ti)	
9	Connection housing G 1" ISO288-1 steel 1.4404 (AISI 316L) / 1.4571 (AISI 316Ti)	
Variant sensor		
S	Standard	
T	Food and drink water suitability of all medium contacting materials	
R	Tube prolongation Ø 16mm only for connection housing – type G / 8 / 9	
Transmitter electronic		
0	2-wire-technology 4...20mA	
B	3-wire-technology 0...10 VDC	
Measure range in bar		
8	0...100 mbar	
0	0...200 mbar	
1	0...400 mbar	
6	0...600 mbar	
2	0...1000 mbar	
3	0...2000 mbar	
4	0...4000 mbar	
9	0...5000 mbar	
7	0...6000 mbar	
5	0...10000 mbar	
Z	0...20 bar	
Measure range in m water column		
A	0...1 m water column	
B	0...2 m water column	
C	0...4 m water column	
M	0...5 m water column	
D	0...6 m water column	
E	0...10 m water column	
F	0...20 m water column	
L	0...25 m water column	
G	0...40 m water column	
J	0...50 m water column	
K	0...60 m water column	
H	0...100 m water column	
Y	Special measuring range	
Accuracy measuring system		
0	0,25% ceramic AL2O3 96%	
K	0,1% Linearization protocol ceramic AL2O3 96%	
Over voltage protection		
0	Without over voltage protection	
P	Integrated over voltage protection not for Ex zone 0 – type Ex0M	
Temperature sensor		
0	Without temperature sensor	
1	Integrated temperature sensor Pt100 not for Ex0M / Ex1M	
2	Integrated temperature sensor Pt100 not for Ex0M / Ex1M With an installed Pt100 transmitter in the wall installation housing	
Material probe (medium contact)		
1	Steel 1.4404 (AISI 316L) / 1.4571 (AISI 316Ti)	
Material gaskets (medium contact)		
1	FPM fluorelastomere (Viton®)	
2	CR chloroprene-rubber (Neopren®)	
3	EPDM ethylene-propylene-dienmonomere for food applications	
Materials probe prolongation		
A	PE polyethylene	
B	PUR polyurethane	
D	Tube Ø 16mm	
Sensor length		
1	measure in mm (inclusive process connection)	

Bestellschlüssel

Hydrocont

1

mm

Stand 01/2017