

● Characteristics

2 - TRANSDUCER - LEVEL PROBE -



Ranges:	0...0,1 bar up to 0...25 bar
Output:	4...20 mA
Accuracy:	20% of span (conductivity)
Temperature range:	-10...+85 °C maximum with FEP-cable
Material casing:	CrNi steel 316L
Electrical connection:	Fixed cable, open end, 15 m (standard)
Protection:	IP68
Pressure connection:	CrNi: 1/2" B
Immersion depth:	300 m maximum with PUR-cable

● Technical Data

Input	
Relative pressure:	0...0,1 up to 0...25 bar
Ranges:	see table page 2
Overpressure safety:	see table page 2
Burst pressure:	see table page 2
Pt100:	4-wire
	Measurement range: -50...85 °C
Conductivity sensor:	electronic
	Measurement range: 0...1000 µS/cm

Output

Analog:	4...20 mA:	2-wire
	Load:	maximum (auxiliary energy - 10 V) / 0,02 A - (cable length in m x 0,14 Ω)

Performance

Accuracy:	Conductive measurement:	< 20% of span
	Measurement ranges < 0,25 bar:	≤ ±0,5% of span
	Measurement ranges ≥ 0,25 bar:	≤ ±0,25% of span
Error of measurement:	Measurement ranges ≤ 0,25 bar:	≤ ±0,4% of span/10 K
	Measurement ranges > 0,25 bar:	≤ ±0,2% of span/10 K

Including non-linearity, hysteresis, zero point and full scale error (corresponds to error of measurement per IEC 61298-2)

Non-linearity:	< ±0,2% of span (BFSL per IEC 61298-2)
Non-repeatability:	< ±0,1% of span
1-year stability:	< ±0,2% of span (at reference conditions)
Span coefficient:	≤ ±0,2% of span/10 K

Reference conditions:	Temperature:	15...25 °C	Fitting position: Calibrated in vertical fitting position, with process connection below
	Air pressure:	860...1.060 mbar	
	Humidity:	45...75% rH	
	Auxiliary energy:	24 VDC	

● Applications

The immersion probe PT-HL-T-C uses two transmitters for combined pressure and conductivity measurement. In addition, the temperature of the medium is measured via an integrated Pt100. The immersion probe is suitable for numerous applications in industrial level measurement.



● Technical Data (Continued)

Supply

Voltage:	10...30 VDC
Short-circuit strength:	S+ against U-
Reverse voltage protection:	U+ against U-
Insulation voltage:	500 VDC
Electrical protection:	Option: lightning protection 1,5 J as per EN 61000-4-5

Environmental Conditions

Temperature medium:	PUR-cable:	-10...+50 °C
	Option FEP-cable:	-10...+85 °C
Storage temperature:		-30...+80 °C
Ambient temperature:		-10...+50 °C
Submergence:	with PUR-cable:	up to 300 m
	with FEP-cable:	up to 100 m
CE-Conformity:	EMC guide line:	2014/30/EU EN 61326: Emission (group 1, class B) and noise immunity for industrial application

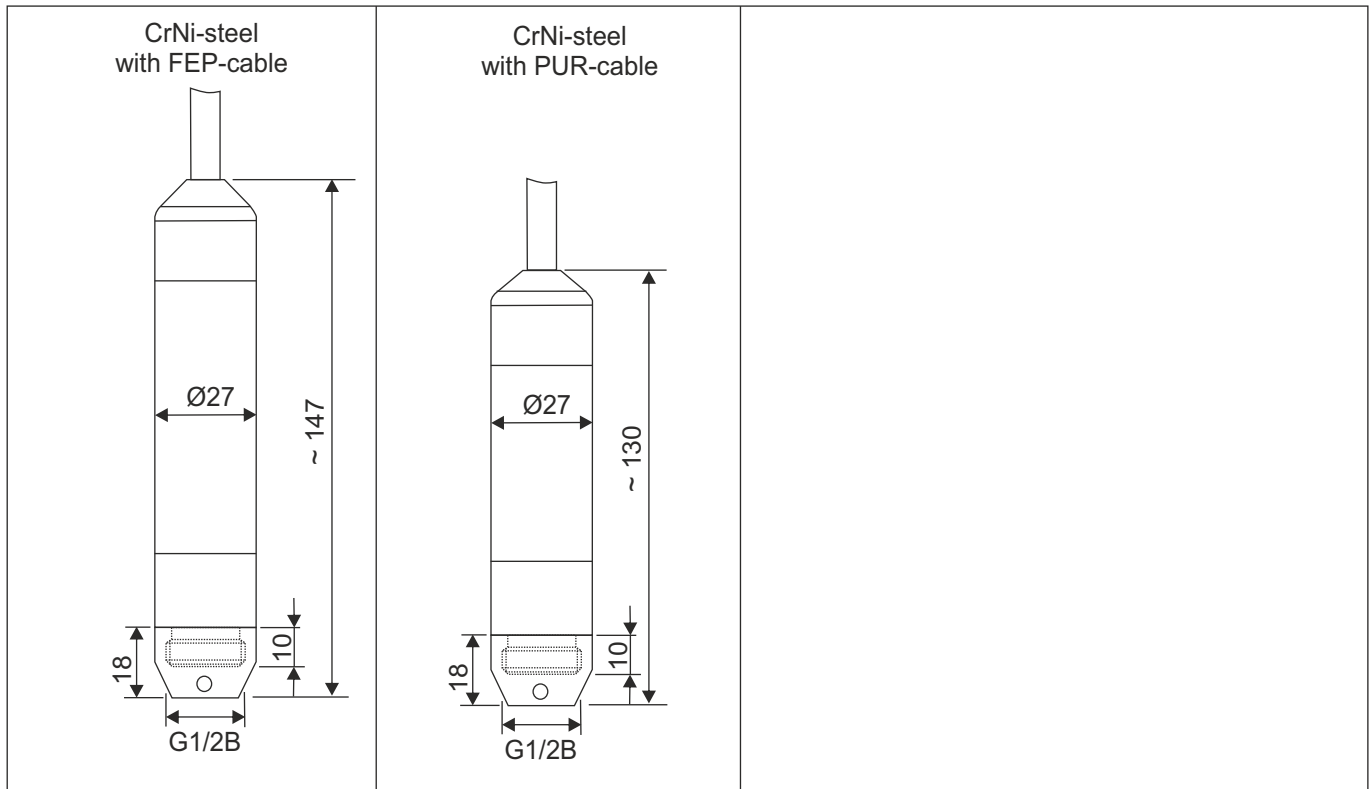
Mechanics

Material:	Cable:	PUR Option: FEP
	Casing:	CrNi-steel 316L
	Cap:	Plastic PA Option: CrNi-steel 316L
Transmission fluid:		synthetic oil (internal)
Pressure connection:	CrNi-steel:	G 1/2 B outside
Electrical connection:		see page 3
Protection class:		IP68 (as per IEC 60529)
Weight:	Probe:	approx. 200 g
	Cable:	80 g per meter
Cable tension force:	FEP-cable:	up to 350 N without strain relief up to 500 N with strain relief
	PUR-cable:	up to 350 N without strain relief up to 1 kN without strain relief

Pressure Table

Measurement range	0,1	0,16	0,25	0,4	0,6	1	1,6	2,5
Overload limit	1	1,5	2	2	3	5	8	8
Bursting pressure	2	2	2,4	2,4	4	6	10	10
Measurement range	4	6	10	16	25			
Overload limit	10	10	10	16	25			
Bursting pressure	10	10	10	16	25			

● **Dimensions (in mm)**

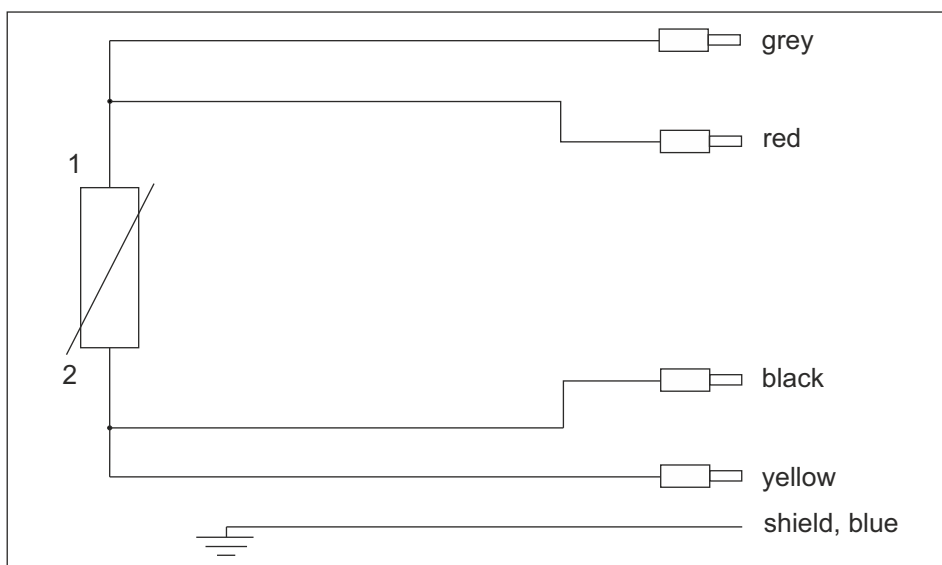


● **Electrical Connection**

Cable		FEP	PUR
4...20 mA (2-wire)		U+ = brown (1) U- = green (2)	U+ = brown (1) U- = green (2)
Cable shield	mounted on casing	grey	grey
Cable length		variable	variable
Maximum submergence		100 m	300 m
Maximum tension force		500 N	1 kN
Protection class	as per IEC 60529	IP 68	IP 68

The level probe is mechanically attached via the connection cable without additional strain relief.

Pt100-Element, 4-Wire



● **Order Code**

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Pressure type:	Relative pressure	0										
Temperature meas.:	PT100, 4-wire	0										
Conductivity meas.:	0...1000 µS/cm	0										
Output:	0...20 mA, 2-wire	0										
Supply:	10...30 VDC								0			
	10...30 VDC with 1,5 J lightning protection								1			
Material:	CrNi-steel									0		
Cable type:	FEP										0	
	PUR										1	

Cable length:	1,5 m	A50
	3 m	C00
	5 m	E00
	10 m	J00
	15 m	O00
	20 m	T00
	25 m	Y00
	30 m	Z01
	40 m	Z03
	50 m	Z05
	60 m	Z07
	80 m	Z11
	100 m	Z15
	200 m	Z35
300 m	Z55	

Pressure range:	0,1 bar	A1
	0,16 bar	A2
	0,25 bar	A3
	0,4 bar	A4
	0,6 bar	A5
	1 bar	B1
	1,6 bar	B2
	2,5 bar	B3
	4 bar	B4
	6 bar	B5
	10 bar	C1
	16 bar	C2
	25 bar	C3