

SUBMERSIBLE PRESSURE TRANSMITTER

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The new Submersible Pressure Transmitter ECL is based on Trafag's own thick-film-on-ceramic technology. Together with the inhouse developed high performance ASIC chip electronics it ensures a high level of accuracy over a wide temperature range.



Applications

- Process technology
- Water treatment



Features

- Good media compatibility
- Economical
- Cable PUR/PE or FEP
- Lightning protection integrated

06/2016

Data sheet H72328i

Technical Data

Measuring principle	Thick film on ceramic	Media temperature	-25°C ... +80°C (+70°C)
Measuring range	0 ... 0.1 to 0 ... 10 bar	Ambient temperature	-25°C ... +80°C (+70°C)
Output signal	4 ... 20 mA	Approval	GL, KRS
Accuracy @ 25°C typ.	± 0.3 % FS typ. Range 0...0.1 to 0...0.4 bar: ± 0.5 % FS typ.		

Subject to change

Ordering information/type code

8438 . XX					XX	XX	XX	XX	XX
Measuring range ¹⁾	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [bar]						
	0 ... 0.1	1.2	2	66					
	0 ... 0.16	1.2	2	67					
	0 ... 0.2	1.2	2	68					
	0 ... 0.4	1.2	2	69					
	0 ... 0.6	1.2	2	70					
	0 ... 1.0	2	3	71					
	0 ... 1.6	3.2	4.8	73					
	0 ... 2.5	5	7.5	75					
	0 ... 4	8	12	76					
	0 ... 6	12	15	77					
	0 ... 10	20	25	78					
Sensor	Relative pressure > 400 mbar, accuracy 0.3%				23				
	Relative pressure ≤ 400 mbar, accuracy: 0.5%				26				
Pressure connection	Type 1, female, M 10x1, 1.4404/1.4435					46			
	Type 2, male, M 22x1, 1.4404/1.4435					48			
Electrical connection	Cable: PUR ø 6 mm ^{2) 3)}						22		
	Cable: FEP ø 6 mm ^{2) 3)}						32		
	Cable: PE ø 6 mm ^{2) 3)}						42		
Output	Signal output	Load resistance	I (supply)	U (supply)					
	4 ... 20mA	(U _{supply} -9V) / 20mA		9 ... 30 VDC				19	
Accessories	O-Ring FKM								61
	O-Ring CR								62
	O-Ring EPDM								63

¹⁾ Extended overpressure as well as customized pressure ranges upon request

²⁾ Please specify cable length when ordering (cable lengths >50 m up to 120 m upon request)

³⁾ For level measurement applications on ships under certification GL (German Lloyd), the cable of such transmitters must be installed inside the tank only

Standard products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Supply [VDC]	Cable length
ECL0.2A	8438 68 2646 22 0000 0000 19 61 5M	0...0.2	2	9...30	5m
ECL0.5A	8438 21 2346 22 0000 0000 19 61 8M 01	0...0.5	2	9...30	10m

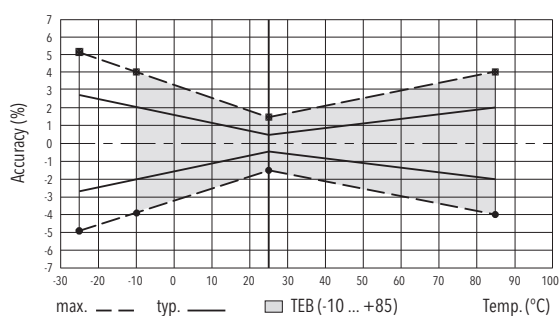
Specifications

Electrical Data	Output / supply voltage	4 ... 20 mA; 24 (9 ... 32) VDC
	Rise time	Typ. 1 ms/10...90 % nominal pressure
	Switch-on-delay	Max. 1.5 s
Environmental conditions	Media temperature	-25°C ... +80°C (+70°C)
	Ambient temperature	-25°C ... +80°C (+70°C)
	Protection	IP68 (25 bar; 250m)
	Vibration	6g (25...2000 Hz)
	Shock	50g/ 8 ms
EMC Protection	Emission	EN/IEC 61000-6-3
	Immunity	EN/IEC 61000-6-2
Mechanical Data	Sensor	Ceramic, Al ₂ O ₃ (96%)
	Housing / Pressure connection	1.4404/1.4435 (AISI316L)
	Sealing	FKM 70 Sh CR, EPDM
	Weight	~ 200 g

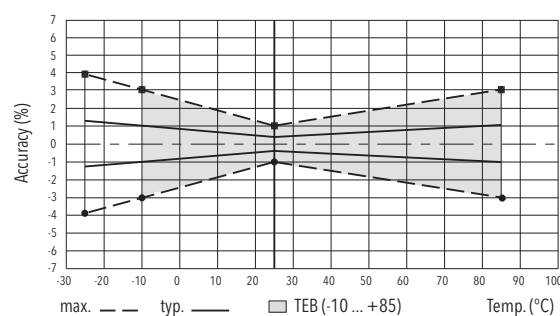
Accuracy

		Measuring accuracy 0.3% Ordering No. 23	Measuring accuracy 0.5% Ordering No. 26
TEB @ -10...+80°C	[% FS typ.]	± 1.0	± 2.0
Accuracy @ +25°C	[% FS typ.]	± 0.3	± 0.5
NLH @ +25°C (BSL)	[% FS typ.]	± 0.2	± 0.3
TC zero point and span	[% FS/K typ.]	± 0.02	± 0.02
Long term stability 1 year @ +25°C	[% FS typ.]	± 0.2	± 0.2

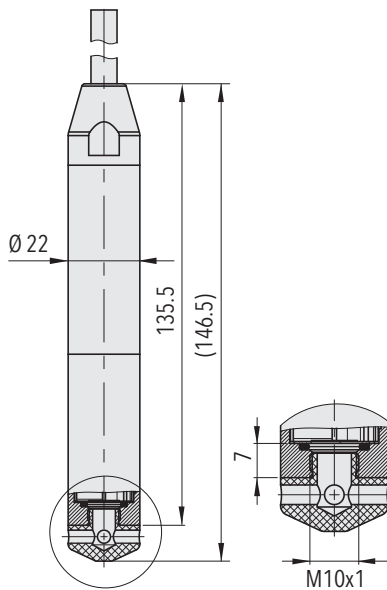
Measuring accuracy 0.5%



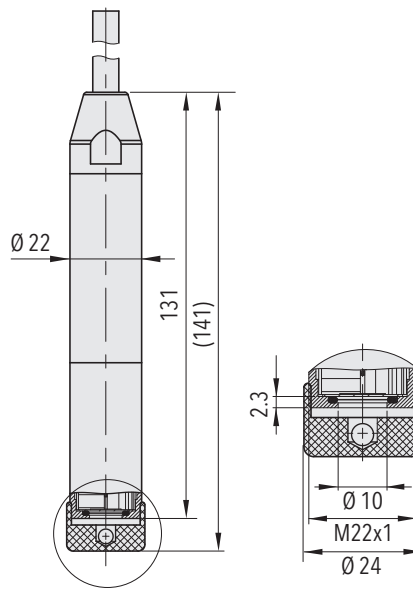
Measuring accuracy 0.3%



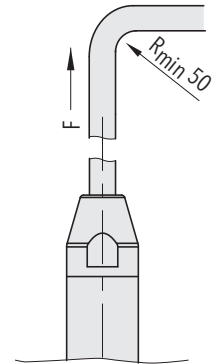
Dimensions



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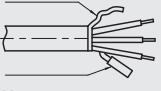
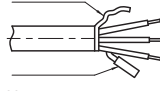
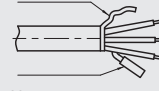
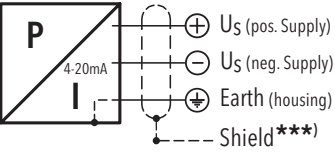


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F = max. 12 kg (120 N)

Electrical Connection

Protection / electrical connection			
Output signal	IP68 (25 bar; 250m)	IP68 (25 bar; 250m)	IP68 (25 bar; 250m)
	Cable PUR Ø 6 mm (5x0.22mm²) 22	Cable FEP Ø 6 mm (5x0.22mm²) 32	Cable PE Ø 6 mm (5x0.22mm²) 42
	Shield  Venting	Shield  Venting	Shield  Venting
	white brown yellow (green = not connected) (red = not connected)	white brown yellow (green = not connected) (red = not connected)	white brown yellow (green = not connected) (red = not connected)
	 8438.XX.XXXX.XX.19		
Temperature range	-25 ... +70°C	-25 ... +80°C	-25 ... +70°C

Any manipulation on the ventilation tube will result in warranty loss

***) For all cable versions

Additional information

Documents

Data sheet	www.trafag.com/H72328
Instructions	www.trafag.com/H73328
Flyer	www.trafag.com/H70641