

EX 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 EX Submersible Pressure Transmitter EXL is based on the ECL submersible pressure transmitter with Trafag's own thick-film-on-ceramic sensor technology. The intrinsic safety design is certified for applications in Ex-Zones 0, 1, 2 (gas) and mining.



Applications

- Ex Zone 0, 1, 2 / Gas
- Ex Underground Mining



Features

- II 1G Ex ia IIC T4/T6 Ga
I M1 Ex ia I Ma
- Good media compatibility
- PUR/PE or FEP cable
- EMC protection, IEC 61000

Technical Data

Measuring principle	Thick film on ceramic	Accuracy @ 25°C typ.	± 0.3 % FS typ. ± 0.5 % FS typ.
Measuring range	0 ... 0.2 to 0 ... 25 bar	Media temperature	T4: -20 ... +70°C T6: -20 ... +65°C
Output signal	4 ... 20 mA	Approval	GL, KRS Ex ATEX/IECEx, EN 60079-0/ EN 60079-11/EN 60079-26/ EN 50303

07/2014

Data sheet H72330d

Subject to change

Ordering information/type code

				8432 . XX . XX . XX . XX . XX
Measuring range ¹⁾	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [bar]	
	0 ... 0.2	2	3	68
	0 ... 0.4	2	3	69
	0 ... 0.6	2	3	70
	0 ... 1.0	3.2	4.8	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
0 ... 16	32	40	79	
0 ... 25	50	75	80	
Sensor	Relative pressure			23
	Relative pressure, accuracy: 0.5% (≤ 1 bar)			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 with shield: PUR \varnothing 6 mm, 5x0.22mm ^{2 2) 3)}			22
	Cable with shield: FEP \varnothing 6 mm, 5x0.22mm ^{2 2) 3)}			32
	Cable with shield: PE \varnothing 6 mm, 5x0.22mm ^{2 2) 3)}			42
Output	Output	Load resistance	I (supply)	U (supply)
	4 ... 20mA	(U _{supply} -10V) / 20mA		10 ... 30 VDC
Accessories	O-Ring FKM			61
	O-Ring EPDM			63
	Zener barrier 28V/93mA; R \approx 300 Ω ; Ordering no F90138			

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

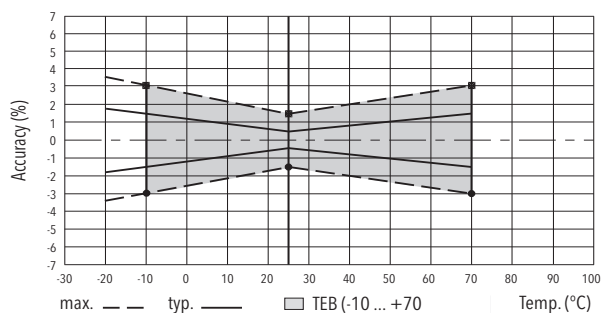
²⁾ Please specify cable length when ordering (cable lengths > 50m upon request)

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

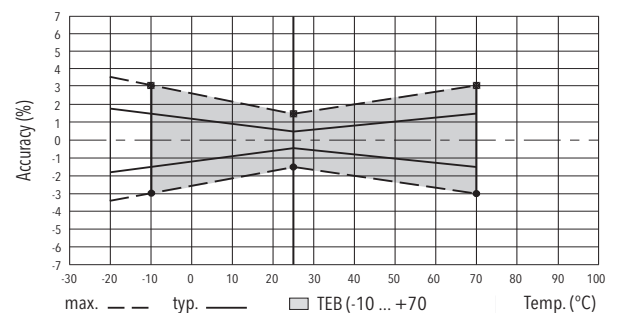
Specifications		
Electrical Data	Output / supply voltage	4 ... 20 mA; 24 (10 ... 30) VDC
	Rise time	typ. 1 ms/ 10...90% nominal pressure
	Switch-on-delay	max. 1.5 s
Environmental Conditions	Media temperature	T4: -20 ... +70°C T6: -20 ... +65°C
	Ambient temperature	T4: -20 ... +70°C T6: -20 ... +65°C
	Protection	IP68 (25 bar; 250m)
	Vibration	10g (50...2000 Hz)
	Shock	50 g / 3 ms
EMC Protection	Emission	IEC 61000-6-4
	Immunity	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
	Weight	~ 200 g

Accuracy			
		Measuring accuracy 0.3% Ordering No. 23	Measuring accuracy 0.5% Ordering No. 26
TEB @ -10...+80°C	[% FS typ.]	± 0.75	± 1.5
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

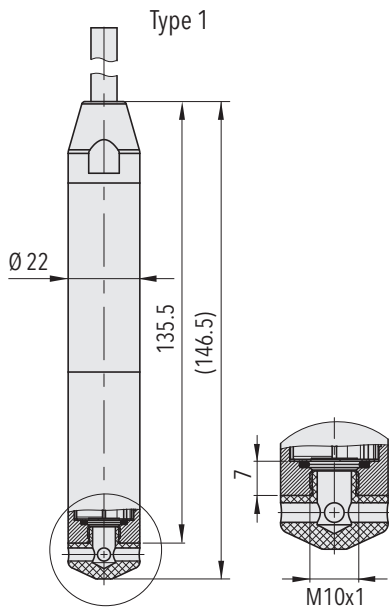
Measuring accuracy 0.5%



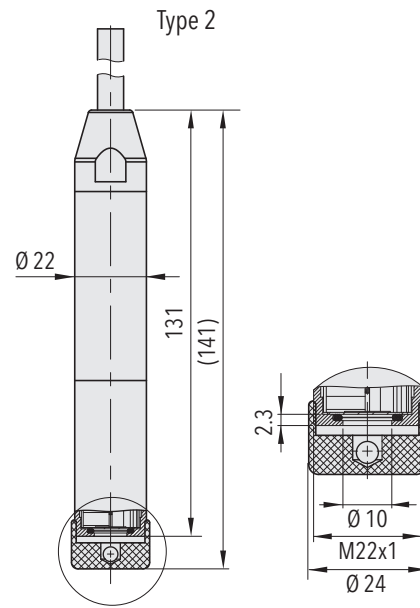
Measuring accuracy 0.3%



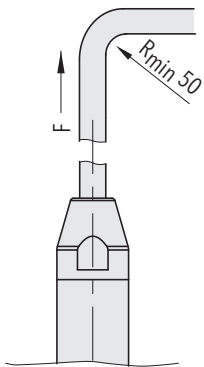
Dimensions



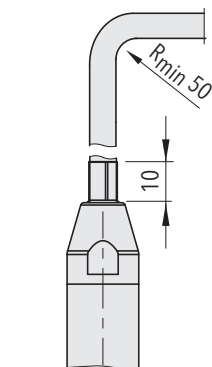
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8432.XX.XX48.XX.XX.XX

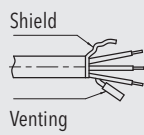
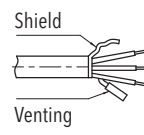
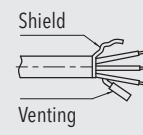
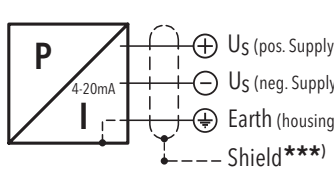


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8432.XX.XXXX.32/42.XX.XX

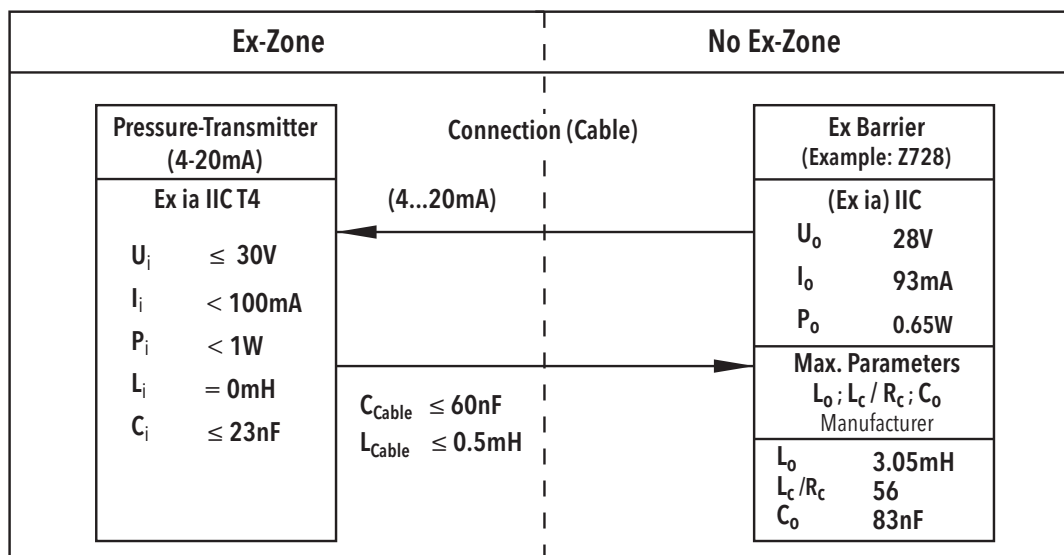
Electrical Connection

				Protection / electrical connection		
				IP68 (25 bar; 250m)	IP68 (25 bar; 250m)	IP68 (25 bar; 250m)
				Cable PUR Ø 6 mm (5x0.22mm ²) 22	Cable FEP Ø 6 mm (5x0.22mm ²) 32	Cable PE Ø 6 mm (5x0.22mm ²) 42
						
Output signal	 <p>8432.xx.XXXX.xx.19</p>	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)		
		Temperature range	-20 ... +70°C	-20 ... +70°C	-20 ... +70°C	

Any manipulation on the ventilation tube will result in warranty loss

***) For all cable versions

Ex-Barrier



Additional information

Documents

Data sheet	www.trafag.com/H72330
Instructions	www.trafag.com/H73329
Flyer	www.trafag.com/H70658

Additional specifications

Electrical Data	Internal capacity (Ci)	≤ 23nF
	Internal inductance (Li)	< 10μH
	Resistance of insulation	> 10 MΩ, 500 VDC
	Dielectric strength	500 VAC, 50 Hz
	Output signal	ca. 24 mA (Overload)
Environmental Conditions	Storage temperature	-20 ... +70°C

Accuracy

		Measuring accuracy 0.3% Ordering No. 23	Measuring accuracy 0.5% Ordering No. 26
TEB @ -10...+80°C	[% FS max.]	± 2.0	± 3.0
Accuracy @ +25°C	[% FS max.]	± 1.0	± 1.5
NLH @ +25°C (BSL)	[% FS max.]	± 0.3	± 0.5
NLH @ +25°C (BSL through 0)	[% FS typ.]	± 0.2	± 0.3
NLH @ +25°C (BSL through 0)	[% FS max.]	± 0.3	± 0.5
Repeatability	[% FS typ.]	± 0.05	± 0.05
TC zero point and span	[% FS/K max.]	± 0.05	± 0.05
Long term stability 1000h @ 85°C	[% FS typ.]	± 0.3	± 0.3
	[% FS max.]	± 0.6	± 0.6
Temperature hysteresis	[% FS typ.]	± 0.3	± 0.5
	[% FS max.]	± 1.0	± 1.5
Deviation of zero signal and final value @ 25°C	[% FS typ.]	± 0.2	± 0.3
	[% FS max.]	± 0.5	± 1.0
Position sensitivity	[% FS max.]	< 0.05	< 0.05

