

# 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
- PUR/PE or FEP cable
- EMC protection, IEC 61000
- For OEM use

## Technical Data

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

07/2014

Data sheet H72328e

Subject to change

## Ordering information/type code

				8438	XX	XX	XX	XX	XX
<b>Measuring range</b> <sup>1)</sup>	<b>Pressure measurement range [bar]</b>	<b>Over pressure [bar]</b>	<b>Burst pressure [bar]</b>						
	0 ... 0.1	2	3	66					
	0 ... 0.16	2	3	67					
	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						
<b>Sensor</b>	Relative pressure > 400 mbar, accuracy 0.3%			23					
	Relative pressure ≤ 400 mbar, accuracy: 0.5%			26					
<b>Pressure connection</b>	Type 1, female, M 10x1, 1.4404/1.4435			46					
	Type 2, male, M 22x1, 1.4404/1.4435			48					
<b>Electrical connection</b>	Cable: PUR ø 6 mm <sup>2) 3)</sup>			22					
	Cable: FEP ø 6 mm <sup>2) 3)</sup>			32					
	Cable: PE ø 6 mm <sup>2) 3)</sup>			42					
<b>Output</b>	<b>Output</b>	<b>Load resistance</b>	<b>I (supply)</b>	<b>U (supply)</b>					
	4 ... 20mA	(U <sub>supply</sub> -9V) / 20mA		9 ... 30 VDC					19
<b>Accessories</b>	O-Ring FKM								61
	O-Ring CR								62
	O-Ring EPDM								63

<sup>1)</sup> Extended overpressure as well as customized pressure ranges upon request

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

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

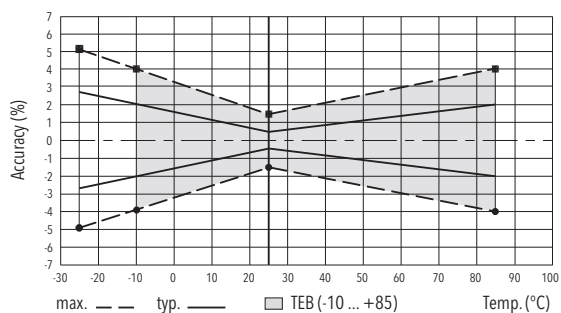
## Standard products (extra short lead time)

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

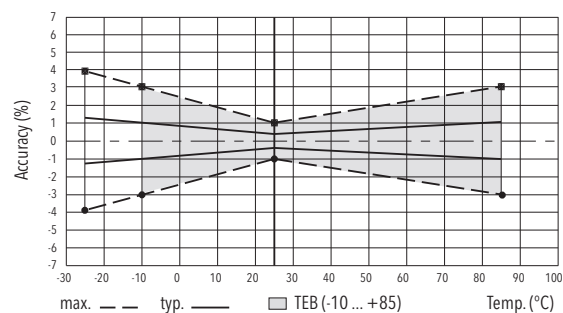
Specifications		
<b>Electrical Data</b>	Output / supply voltage	4...20 mA: 24 (9...32) VDC
	Rise time	typ. 1 ms/10...90% nominal pressure
	Switch-on-delay	Max. 1.5 s
<b>Environmental Conditions</b>	Media temperature	-25°C ... 80°C (70°C)
	Ambient temperature	-25°C ... 80°C (70°C)
	Protection	IP68 (25 bar; 250m)
	Vibration	6g (25...2000 Hz)
	Shock	50g/ 8 ms
<b>EMC Protection</b>	Emission	EN/IEC 61000-6-3
	Immunity	EN/IEC 61000-6-2
<b>Mechanical Data</b>	Sensor	Ceramic, Al <sub>2</sub> O <sub>3</sub> (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

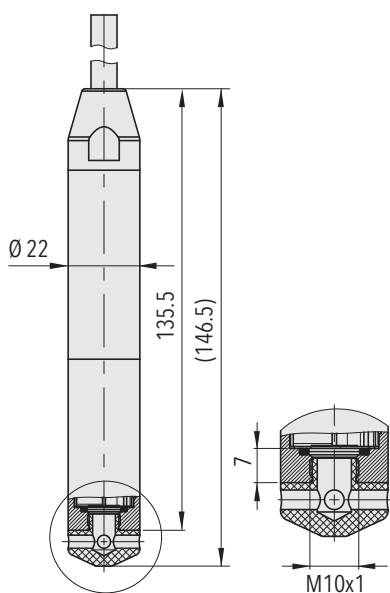
## Measuring accuracy 0.5%



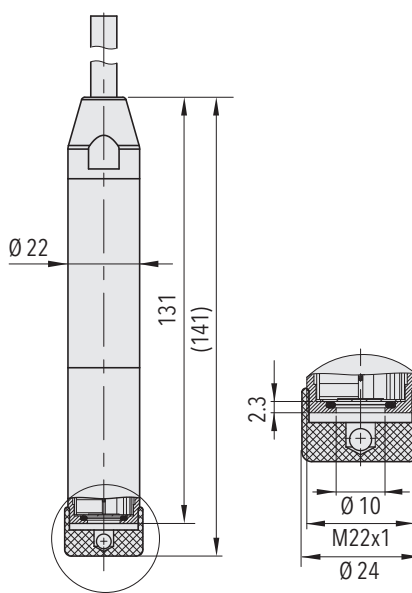
## Measuring accuracy 0.3%



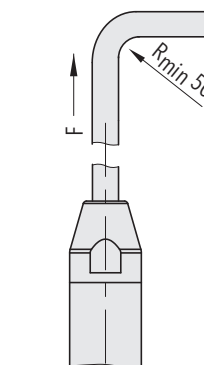
## Dimensions



8438.XX.XX46.XX.XX.XX


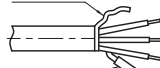
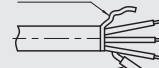
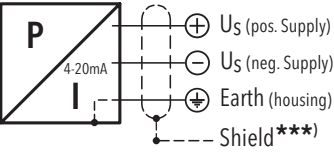


8438.XX.XX48.XX.XX.XX



F = max. 12 kg (120 N)

## Electrical Connection

Protection / electrical connection			
	IP68 (25 bar; 250m)	IP68 (25 bar; 250m)	IP68 (25 bar; 250m)
	Cable PUR Ø 6 mm (5x0.22mm <sup>2</sup> ) <b>22</b>	Cable FEP Ø 6 mm (5x0.22mm <sup>2</sup> ) <b>32</b>	Cable PE Ø 6 mm (5x0.22mm <sup>2</sup> ) <b>42</b>
	Shield  Venting	Shield  Venting	Shield  Venting
Output signal	 <b>8438.XX.XXXX.XX.19</b>	white brown yellow (green = not connected) (red = not connected)	white brown yellow (green = not connected) (red = not connected)
	Temperature range	-25 ... +70°C	-25 ... +80°C

Any manipulation on the ventilation tube will result in warranty loss

\*\*\*) For all cable versions

### Additional information

#### Documents

Data sheet	<a href="http://www.trafag.com/H72328">www.trafag.com/H72328</a>
Instructions	<a href="http://www.trafag.com/H73328">www.trafag.com/H73328</a>
Flyer	<a href="http://www.trafag.com/H70641">www.trafag.com/H70641</a>