

EX PRESSURE TRANSMITTER

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The intrinsically safe EX pressure transmitter EXNA 8854 is certified to ATEX and IECEx for applications in Ex-Zones 0, 1, 2 (gas), 20, 21, 22 (dust) and mining. Due to the wide range of variants and pressure ranges from 0.1 to 1000 bar it can be configured for almost any application appropriately.



Applications

- Ex Zone 0, 1, 2 / Gas
- Ex Zone 20, 21, 22 / Dust
- Ex Underground Mining

Features

- Ex ATEX / IECEx
- Pressure ranges from 100 mbar
- Versions with frontal flush diaphragm
- Media temperature to 150°C
- EMC protection, IEC 61000

02/2019

Data sheet H72334d

Technical Data			
Measuring principle	Piezoresistive	Ambient temperature	T3: -40°C ... +125°C T4: -40°C ... +85°C T6: -40°C ... +50°C
Measuring range	0 ... 0.1 to 0 ... 1000 bar	Approval / conformity	DNV-GL Ex according to standards, IEC/EN 60079-0 / -11/-26, EN 50303
Output signal	4 ... 20 mA	Type of protection	Ex II 1G Ex ia IIC T3 ... T6 Ga II 1D Ex ia IIIC T145°C Da I M1 Ex ia I Ma
Media temperature	T3: -40°C ... +150°C T4: -40°C ... +100°C T6: -40°C ... +50°C		

Subject to change

Ordering information/type code

				8854 . XX	XX	XX	XX	XX	XX
Measuring range ¹⁾	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [bar]						
	0 ... 0.1	3	200	66	0 ... 16	48	200	79	
	0 ... 0.16	3	200	67	0 ... 25	75	200	80	
	0 ... 0.2	3	200	68	0 ... 40	120	850	81	
	0 ... 0.4	3	200	69	0 ... 60	180	850	82	
	0 ... 0.6	3	200	70	0 ... 100	300	850	83	
	0 ... 1	3	200	71	0 ... 160	480	850	85	
	0 ... 1.6	4.8	200	73	0 ... 250	750	850	74	
	0 ... 2.5	7.5	200	75	0 ... 400	850	1500	84	
	0 ... 4	12	200	76	0 ... 600	850	1500	86	
	0 ... 6	18	200	77	0 ... 1000	1500	1500	88	
	0 ... 10	30	200	78					
	Sensor	Type 02 relative (Accuracy NLH BSL ± 0.25 % FS)							
Type 02 absolute (Accuracy NLH BSL ± 0.25 % FS)								A2	
Type 01 relative (Accuracy NLH BSL ± 0.1 % FS) ⁶⁾								P1	
Type 01 absolute (Accuracy NLH BSL ± 0.1 % FS) ⁶⁾								A1	
Pressure connection	1/4" NPT male								30
	1/2" NPT male								39
	G1/4" female								10
	G1/4" male								15
	G1/2" male								21
	G1/2" male, frontal membrane								31
	G1/2" male, flush membrane								32
Electrical connection	Male electrical plug EN 175301-803-A, Mat. plastic								05
	Male electrical plug Binder 723, 5-pole, Metal								14
	Male electrical plug MIL-C 26482, 6-pole, Metal								02
	Male electrical plug M12x1, 4-pole, metal								32
	PUR cable, length ... mm (IP67) ⁵⁾								22
	FEP cable, length ... mm (IP67)								39
Output signal	Signal output	Load resistance	I (supply)	U (supply)					
	4 ... 20 mA	(U _{supply} -9 V) / 20 mA		9 ... 28 VDC	19				
Accessories	Special oil filling: Anderol								94
	Female electrical connector EN 175301-803-A (DIN43650-A)								58
	Female electrical connector Binder 723, 5-pole, metal								37
	Female electrical connector MIL-C 26482, 6-pole, metal								32
	Temperature class T3								T3
	Temperature class T4								T4
	Temperaturklasse T6								T6
	Pressure peak damping element ²⁾								DE
	Titanium (Material pressure connection and housing)								Ti
	Zener barrier 28V/93mA; R ≈ 300Ω: Ordering code F90138								

¹⁾ Customized pressure ranges upon request

²⁾ Only with pressure connection 30, 39, 15, 21

³⁾ P2/A2 ≤ 120 bar

⁴⁾ P1/A1 ≤ 270 bar

⁵⁾ ≤ +50°C

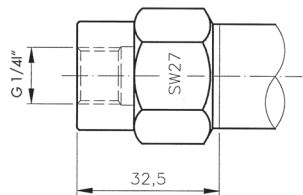
⁶⁾ ≤ 600 bar

Specifications		
Electrical Data	Zener barrier	28V/93 mA/0.65 W
	Output / supply voltage	4 ... 20 mA; 9 ... 28 VDC
	Rise time	Typ. 1 ms / 10 ... 90 % nominal pressure
Environmental conditions	Media temperature	T3: -40°C ... +150°C T4: -40°C ... +100°C T6: -40°C ... +50°C
	Ambient temperature	T3: -40°C ... +125°C T4: -40°C ... +85°C T6: -40°C ... +50°C
	Protection ¹⁾	Min. IP65
	Humidity	Max. 95 % relative
	Vibration	EN 60068-2-6: 10 g (4...2000 Hz)
	Shock	EN 60068-2-27: 100 g/ 6 ms
	EMC Protection	Emission
	Immunity	IEC 61000-4-2: 8 kV K./15 kV L.
Mechanical Data	Sensor (wetted parts)	1.4435 (AISI316L) or titanium
	Pressure connection (wetted parts)	1.4435 (AISI316L) or titanium
	Housing	1.4435 (AISI316L) or titanium
	Sealing	FKM 70 Sh; EPDM / Kalrez
	Male electrical plug	See ordering information
	Weight	~ 220 g
	Mounting torque	25 Nm

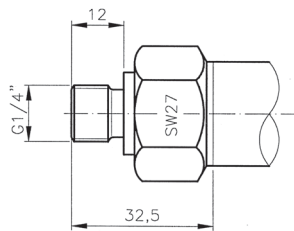
¹⁾ Provided female connector is mounted according to instructions

Accuracy						
		Sensor 01 (P1/A1) NLH ± 0.1 %				
Pressure measuring range	[bar]	0.1 ... 0.5	0.5 ... 2	2 ... 100	100 ... 600	> 600
NLH @ +25°C (BSL through 0)	[% FS typ.]	± 0.1	± 0.1	± 0.1	± 0.1	-
TEB @ 0 ... +70°C	[% FS typ.]	± 0.8	± 0.3	± 0.3	± 0.3	± 0.3
TEB @ -25 ... +100°C	[% FS typ.]	± 1.3	± 0.75	± 0.75	± 0.75	± 0.75
Long term stability 1 year		< 4 mbar	< 4 mbar	< 0.2 % FS	< 0.2 % FS	< 0.2 % FS
Repeatability	[% FS typ.]	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05
		Sensor 02 (P2/A2) NLH ± 0.25 %				
Pressure measuring range	[bar]	0.1 ... 0.5	0.5 ... 2	2 ... 100	100 ... 600	> 600
NLH @ +25°C (BSL through 0)	[% FS typ.]	± 0.25	± 0.25	± 0.25	± 0.25	± 0.25
TEB @ 0 ... +70°C	[% FS typ.]	± 1.0	± 0.7	± 0.7	± 0.7	± 0.7
TEB @ -25 ... +100°C	[% FS typ.]	± 2.0	± 1.0	± 1.0	± 1.0	± 1.0
Long term stability 1 year		< 4 mbar	< 4 mbar	< 0.2 % FS	< 0.2 % FS	< 0.2 % FS
Repeatability	[% FS typ.]	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05

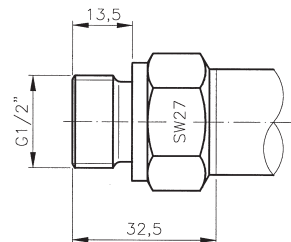
Dimensions



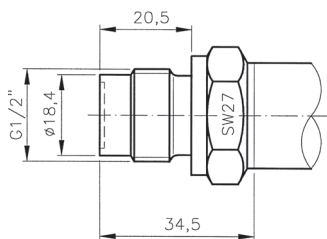
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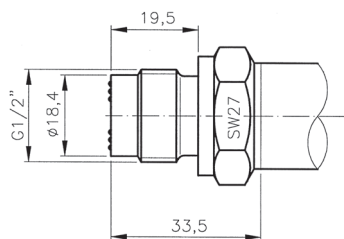
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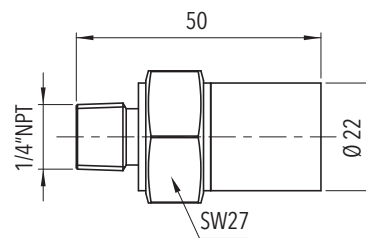
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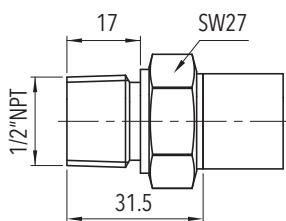
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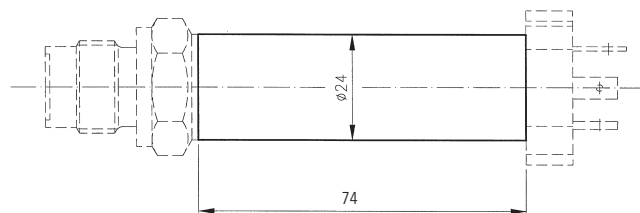
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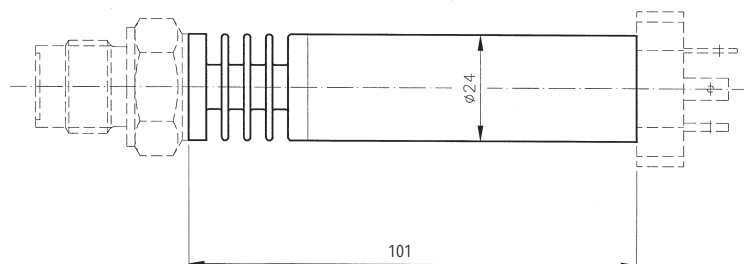


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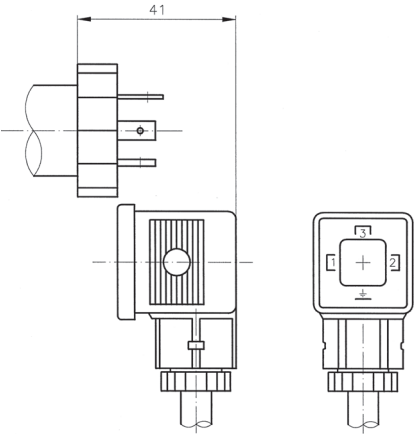
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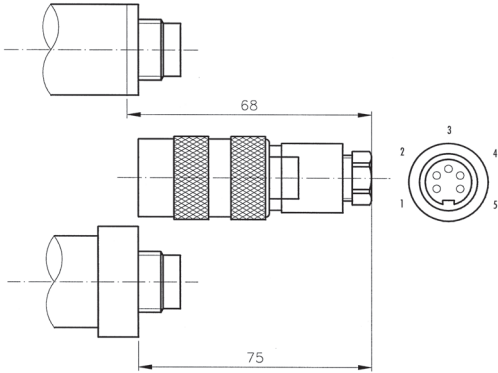


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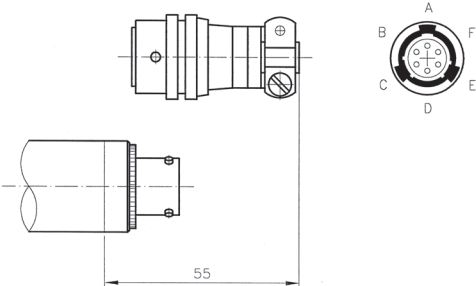
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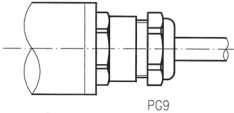
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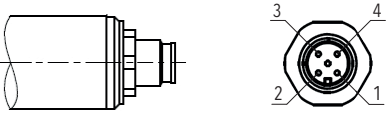
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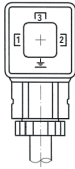
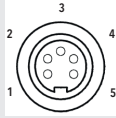
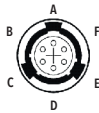
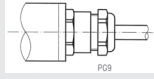
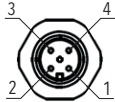


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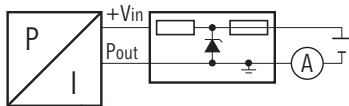


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Electrical connection

Protection IP65					
Version	Industrial standard EN175301-803A	Binder 723	MIL-C 26482	Cable	M12x1 4-pole
Electrical connection	05 	14 	02 	22/39 	32 
4 ... 20 mA					
+ V _{in}	1	3	A	white	4
P _{out}	2	1	C	yellow	3
⊖ EP	3	5	F	grey	1
For Ex zones	1, 2 20, 21, 22	0, 1, 2 20, 21, 22	0, 1, 2 20, 21, 22	0*, 1, 2 20, 21, 22	1, 2 20, 21, 22

* **Attention!** Additional measure against static charges are required for Zone 0 to 20 for these cables (laid with earthed metal braid, metal hose or metal pipe).



U_o 28 V
I_o 93 mA
P_o 0.65 W

Marking	
For Ex zones	Marking
0, 1, 2, 20, 21, 22 M1, M2	 II 1G Ex ia IICT3 ... T6 Ga II 1D Ex ia IICT145°C Da I M1 Ex ia I Ma
1, 2 20, 21, 22 M2	 II 2G Ex ia IIBT3 ... T6 Gb II 1D Ex ia IICT145°C Da I M2 Ex ia I Mb

Additional information		
Documents	Data sheet	www.trafag.com/H72334
	Instructions	www.trafag.com/
	Flyer	www.trafag.com/H70679