

EX PRESSURE TRANSMITTER

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature.



Applications

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


Features

- Ex SEV 11 ATEX 0145 X
- Pressure ranges from 100 mbar
- Versions with frontal flush diaphragm
- Media temperature to 150°C
- Option: Lightning protection (IEC 61000-4-5), 10kA (8/20 μs)

02/2019

Data sheet H72227k

Technical Data

Measuring principle	Piezoresistive	Ambient temperature	T3/T4: -25°C ... +85°C T6: -25°C ... +55°C
Measuring range	0 ... 0.1 to 0 ... 1000 bar	Approval / conformity	GL, KRS
Output signal	4 ... 20 mA	Type of protection	 II 1G Ex ia IICT3 ... T6 Ga II 1D Ex ia IICT125°C Da I M1 Ex ia I Ma
Media temperature	T3: -25°C ... +150°C T4: -25°C ... +100°C T6: -25°C ... +55°C		

Subject to change

Ordering information/type code

		XXXX	XX	XX	XX	XX	XX	XX	
Custom build code	Relative pressure	8852							
	Absolute pressure	8853							
Measuring range ¹⁾	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [bar]		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	850	84	
	0 ... 4	12	200	76	0 ... 600	850	850	86	
	0 ... 6	18	200	77	0 ... 1000	1500	1500	88	
	0 ... 10	30	200	78					
	Sensor	Type 05 (Accuracy NLH: $\pm 0.5\%$ FS) ²⁾							P5
		Type 02 (Accuracy NLH: $\pm 0.25\%$ FS) ²⁾							P2
Type 01 (Accuracy NLH: $\pm 0.1\%$ FS) ²⁾								P1	
Pressure connection	G1/4" female							10	
	G1/4" male							15	
	G1/4" male (Manometer)							20	
	G1/2" male							21	
	G1/2" male, frontal membrane							31	
	G1/2" male, flush membrane							32	
	G1/2" male (Manometer)							11	
Electrical connection	Male electrical plug: MIL-C 26482 (Mat.: Al), IP 40							02	
	Male electrical plug: DIN43650-A, Mat.: PA, IP65							04	
	Male electrical plug: Binder 723, Mat.: Zn, IP67							14	
	Male electrical plug M12x1, 4-pole, metal							32	
	Cable PUR: length ... (mm) IP67							22	
	Cable FEP: length ... mm (IP67)							39	
Output signal	4 ... 20 mA							19	
	4 ... 20 mA with lightning protection (Surge)							09	
Accessories	Female electrical connector EN 175301-803-A (DIN43650-A)							58	
	Female electrical connector: Binder 723							37	
	Female electrical connector: MIL-C 26482, 6-pole, Metal, Zone 0,1,2 (Ga)							32	
	Special oil filling: Anderol							94	
	Temperature class T3							T3	
	Temperature class T4							T4	
	Temperaturklasse T6							T6	
	Titanium (Material pressure connection and housing)							Ti	

¹⁾ Customized pressure ranges upon request

²⁾ Accuracy NLH see table



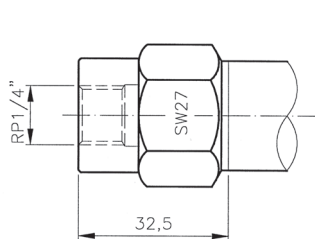
Identical construction with other specifications:
Data sheet No. H72230

Specifications		
Electrical Data	Output / supply voltage	4 ... 20 mA / 10 ... 30 VDC
	Load	$R_L \leq (U_S - 9V) / 20 \text{ mA}$
	Rise time	Typ. 1 ms / 10 ... 90 % nominal pressure
Environmental conditions	Media temperature	T3: -25°C ... +150°C T4: -25°C ... +100°C T6: -25°C ... +55°C
	Ambient temperature	T3/T4: -25°C ... +85°C T6: -25°C ... +55°C
	Protection ¹⁾	Min. IP65
	Humidity	Max. 95 % relative
	Vibration	6 g (25...2000 Hz)
	Shock	50 g / 1 ms
EMC Protection	Emission	EN/IEC 61000-6-3
	Immunity	EN/IEC 61000-6-2
Mechanical Data	Sensor (wetted parts)	1.4435 (AISI316L)
	Pressure connection (wetted parts)	1.4435 (AISI316L)
	Housing	1.4435 (AISI316L)
	Sealing	FKM 70 Sh (Viton)
	Male electrical plug	See ordering information
	Weight	~ 220 g
	Mounting torque	25 Nm

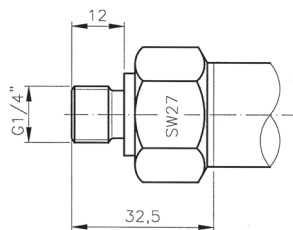
¹⁾ Provided female connector is mounted according to instructions

Accuracy						
Range	[bar]	0.1 ... 0.5	0.5 ... 2	2 ... 25	25 ... 600	> 600
Accuracy NLH (BSL through 0) P5	[± % FS]	0.5	0.5	0.5	0.5	0.5
Accuracy NLH (BSL through 0) P2	[± % FS]	0.25	0.25	0.25	0.25	0.25
Accuracy NLH (BSL through 0) P1	[± % FS]	-	0.1	0.1	0.1	-
Temperature coefficient zero point 0 ... +70°C	[± % FS/K]	0.06	0.03	0.015	0.015	0.015
Temperature coefficient zero point Option -25 ... +85°C	[± % FS/K]	0.08	0.04	0.02	0.02	0.02
Temperature coefficient span 0 ... +70°C	[± % FS/K]	0.015	0.015	0.015	0.015	0.015
Temperature coefficient span Option -25 ... +85°C	[± % FS/K]	0.02	0.02	0.02	0.02	0.02
Long-term drift	[1 year]	< 4 mbar	< 4 mbar	< 0.2 % FS	< 0.2 % FS	< 0.2 % FS
Repeatability	[± % FS]	0.05	0.05	0.05	0.05	0.05

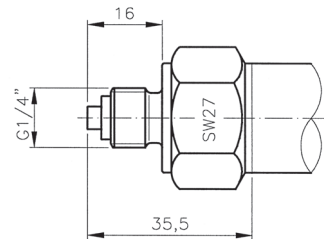
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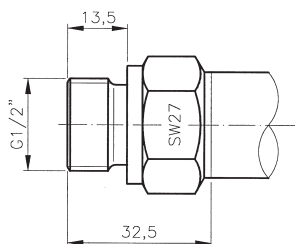
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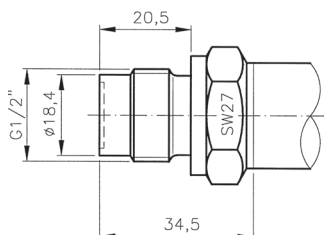
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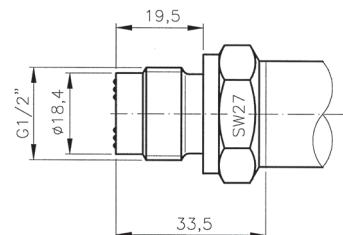
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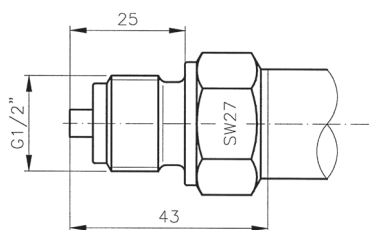
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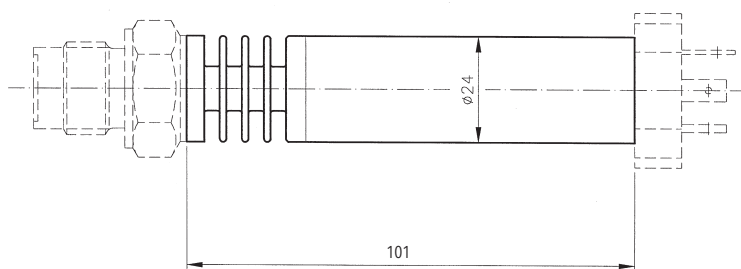
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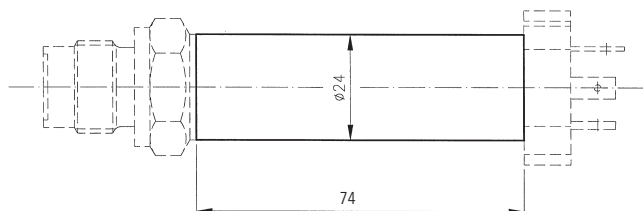
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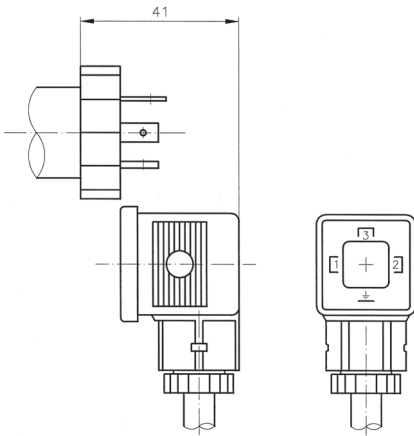
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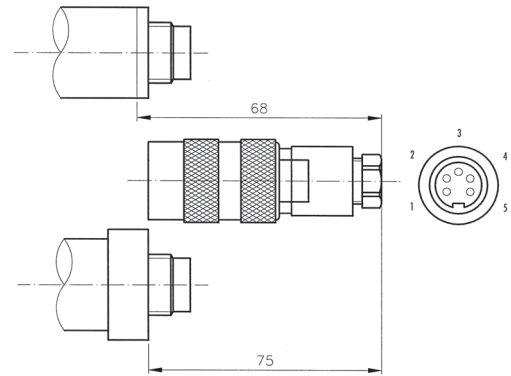
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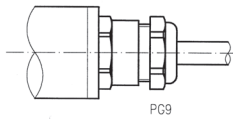
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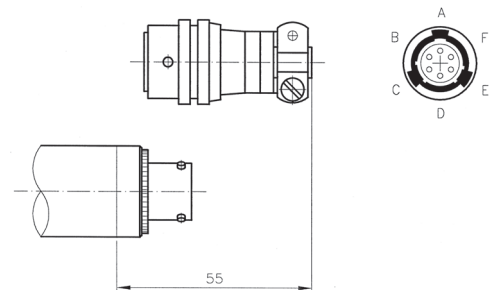
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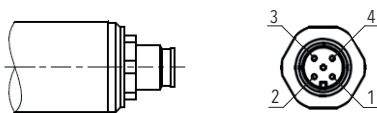
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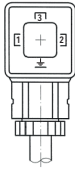
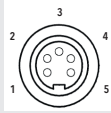

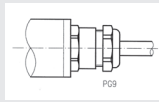
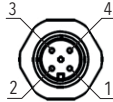


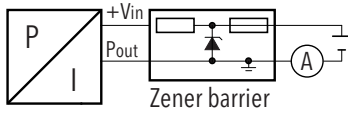
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Electrical connection

Protection IP65					
Version	Industrial standard EN175301-803A	Binder 723	MIL-C 26482	Cable	M12x1 4-pole
Electrical connection	04 	14 	02 	22/39 	32 
4 ... 20 mA + V _{in} P _{out} ⊖ EP	1 2 3	3 1 5	A C F	white yellow grey	4 3 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



Marking	
For Ex zones	Marking
0, 1, 2, 20, 21, 22 M1, M2	Ⓜ II 1G Ex ia IICT3 ... T6 Ga II 1D Ex ia IICT125°C Da I M1 Ex ia I Ma
1, 2 20, 21, 22 M2	Ⓜ II 2G Ex ia IICT3 ... T6 Gb II 1D Ex ia IICT125°C Da I M2 Ex ia I Mb

Additional information		
Documents	Data sheet	www.trafag.com/H72227
	Flyer	www.trafag.com/H70685