

# 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 or with flush diaphragm
- Media temperature to 150°C
- EMC protection, IEC 61000

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		

04/2022

Data sheet H72334e

Subject to change

## Ordering information/type code

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

<sup>1)</sup> Customized pressure ranges upon request

<sup>2)</sup> Only with pressure connection 30, 39, 15, 21

<sup>3)</sup> P2/A2 ≤ 120 bar

<sup>4)</sup> P1/A1 ≤ 270 bar

<sup>5)</sup> ≤ +50°C

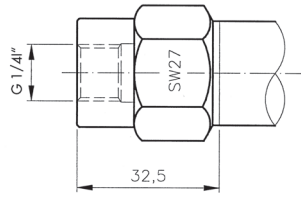
<sup>6)</sup> ≤ 600 bar

Specifications		
<b>Electrical Data</b>	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
<b>Environmental conditions</b>	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 <sup>1)</sup>	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
	<b>EMC Protection</b>	Emission
Immunity		IEC 61000-4-2: 8 kV K./15 kV L.
<b>Mechanical Data</b>	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 connector	See ordering information
	Weight	~ 220 g
	Mounting torque	25 Nm

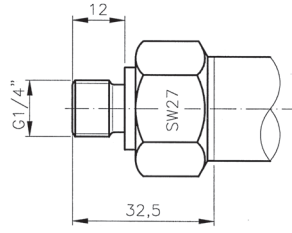
<sup>1)</sup> Provided female electrical plug is mounted according to instructions

Accuracy						
		Sensor 01 (P1/A1) NLH ± 0.1 %				
<b>Pressure measuring range</b>	[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 @ +25°C		< 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 %				
<b>Pressure measuring range</b>	[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 @ +25°C		< 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

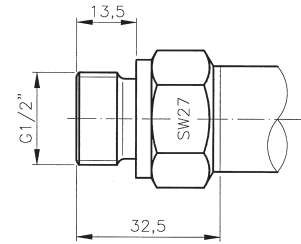
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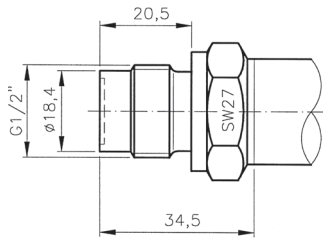
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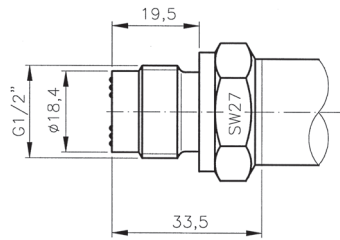
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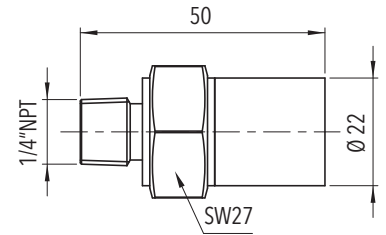
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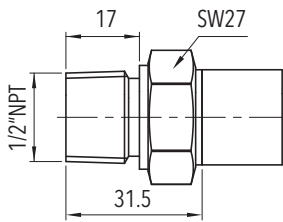
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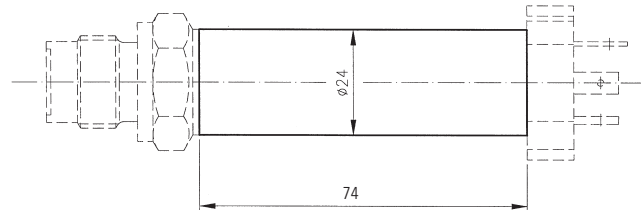
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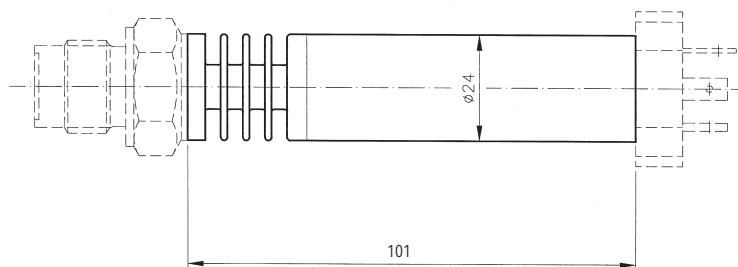


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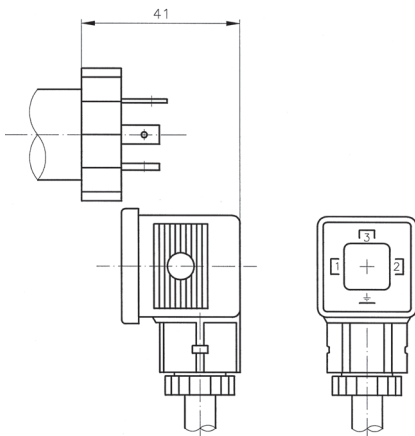
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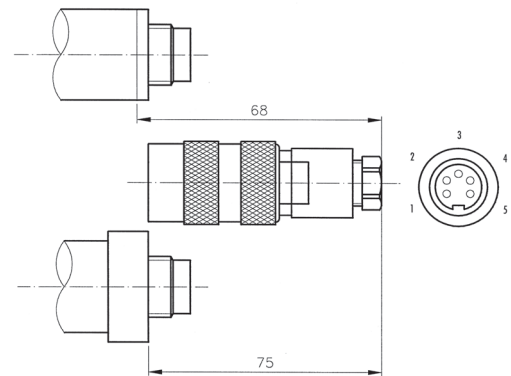


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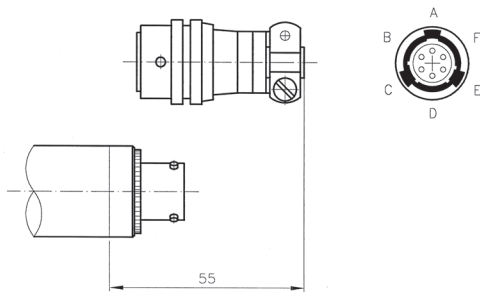
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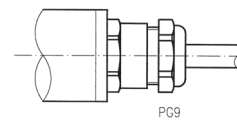
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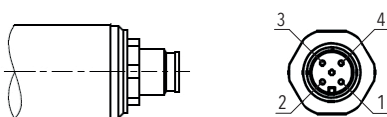
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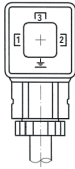
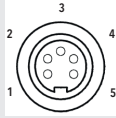
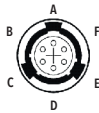
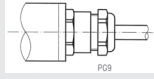
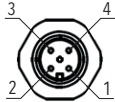


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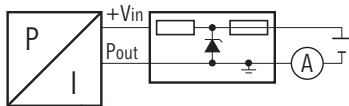


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## Electrical connection

Protection IP65					
<b>Version</b>	Industrial standard EN175301-803A	Binder 723	MIL-C 26482	Cable	M12x1 4-pole
<b>Electrical connection</b>	<b>05</b> 	<b>14</b> 	<b>02</b> 	<b>22/39</b> 	<b>32</b> 
<b>4 ... 20 mA</b>					
+ V <sub>in</sub>	1	3	A	white	4
P <sub>out</sub>	2	1	C	yellow	3
⊖ EP	3	5	F	grey	1
<b>For Ex zones</b>	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<sub>o</sub> 28 V  
I<sub>o</sub> 93 mA  
P<sub>o</sub> 0.65 W

Marking	
<b>For Ex zones</b>	<b>Marking</b>
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		
<b>Documents</b>	Data sheet	<a href="http://www.trafag.com/H72334">www.trafag.com/H72334</a>
	Instructions	<a href="http://www.trafag.com/H73227">www.trafag.com/H73227</a>
	Flyer	<a href="http://www.trafag.com/H70679">www.trafag.com/H70679</a>