

ELECTRONIC PRESSURE SWITCH

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The Electronic Pressure Switch EPN-S is based on the well-proven EPN transmitter family. It stands for reliable accuracy over a wide temperature range and excellent long-term stability even in harshest environments in the shipbuilding and railway industry. The switchpoint is factory set or can be programmed on site using Trafag's Sensor Communicator SC.



Applications

- Shipbuilding
- Engine manufacturing
- Railways
- Machine tools
- Hydraulics
- HVAC



Features

- Rugged design for harsh environments
- Wide temperature range
- Excellent long-term stability
- Very compact design
- Switchpoint factory set or programmable on site with Trafag's Sensor Communicator SC

Technical Data

Measuring principle	Thin film on steel	Accuracy @ 25°C typ.	±0.5% FS typ. (Switchpoint)
Measuring range	0 ... 2.5 to 0 ... 600 bar 0 ... 30 to 0 ... 7500 psi	Media temperature	-40°C ... 125°C
Output signal	Transistor (open source)	Approval	GL

07/2014

Data sheet H72333e

Subject to change

Ordering information/type code

				8320 . XX . XX . XX . XX . XX . XX				
Measuring range ¹⁾	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [bar]	Pressure measurement range [psi]	Over pressure [psi]	Burst pressure [psi]		
	0 ... 2.5	5	100	0 ... 30	30	720	G5	
	0 ... 4	8	100	0 ... 50	115	860	G6	
	0 ... 6	12	100	0 ... 100	170	1450	G7	
	0 ... 10	20	200	0 ... 150	290	2900	G8	
	0 ... 16	32	200	0 ... 250	464	2900	G9	
	0 ... 25	50	300	0 ... 400	725	4350	H0	
	0 ... 40	80	300	0 ... 500	1160	4350	H1	
	0 ... 60	120	500	0 ... 1000	1740	5800	H2	
	0 ... 100	200	500	0 ... 1500	2900	7250	H3	
	0 ... 160	320	1000	0 ... 2000	4640	10850	H5	
	0 ... 250	500	1000	0 ... 3000	7250	14500	G4	
	0 ... 400	800	1500	0 ... 5000	11600	21750	H4	
	0 ... 600	1000	2000	0 ... 7500	14500	29000	H6	
Sensor	Relative pressure						23	
Pressure connection	G1/4" male (O-Ring)						17	
	1/4"NPT male						30	
	G1/2" male (DIN3852-A) ²⁾						21	
	M14x1.5 male (DIN3852-A) ²⁾						22	
	1/2"NPT male ²⁾						51	
Electrical connection	Male electrical plug: EN 175301-803-A (DIN43650-A)						04	
	Cable with shield: Material: FDR 25 (Raychem) 4 x 0.5mm ² (Cable length see "Accessories")						78	
Output	1 Transistor out: Switchpoint "ON": ...(bar)/Switchpoint "OFF": ...(bar)/Delay time: Standard 5 (ms)/... (ma) Range: 5...10000 (ms)						T1	
Accessories	Pressure peak damping element ø 0.4 mm						44	
	Pressure peak damping element ø 1.0 mm						40	
	Female electrical connector EN 175301-803-A (DIN43650-A), NBR, -40...90°C						58	
	🚂 Railways execution (500 VAC/DC), with shielded cable only						11	
	Higher operating temperature: -40...+125°C						67	
	Cable length 1.5 m						1M	
	Cable length 3.0 m						3M	
	Cable length 5.0 m						5M	

¹⁾ Customized pressure ranges upon request

²⁾ Please ask us

Programming device Sensor Communicator SC

Ordering No.

- Sensor Communicator SC: F88030
- Programming cable with connector EN 175301-803A: F88049

Manual see

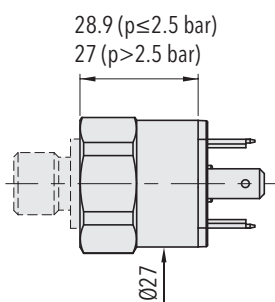
- Sensor Communicator SC: www.trafag.com/H73699



Specifications		
Accuracy	Accuracy @ 25°C typ.	±0.5% FS typ. (Switchpoint)
	Temperature dependence switching point	Switchpoint @ +25°C: ±0.5% FS typ. Switchpoint @ -25 ... +85°C: ±1.0% FS typ. Switchpoint @ -40 ... +125°C: ±1.3% FS typ. (Accessory 67: higher operating temperature -40 ... 125°C)
	Long term stability 1 year typ.	≤ ± 0.15 % FS typ.
Electrical Data	Supply voltage	24 (9 ... 32) VDC
	Current consumption	≤ 15 mA
	Short-circuit strength	integrated
	Inverse-polarity protection	integrated
	Resistance of insulation	> 10 MΩ, 250 VDC 🔌 > 10 MΩ, 500 VDC
	Dielectric strength	250 VAC, 50 Hz 🔌 500 VAC, 50 Hz
Environmental Conditions	Media temperature	-40°C ... +125°C
	Ambient temperature	Standard: -25 ... +85°C Option (Ordering no. 67): -40 ... +125°C
	Protection	Electrical connection 04: IP65 (IP67) Electrical connection 78: IP69K
	Humidity	Max. 95% relative
	Vibration	15g (50...2000 Hz)
	Shock	50g/ 11 ms
EMC Protection	Emission	EN/IEC 61000-6-3
	Immunity	EN/IEC 61000-6-2
Mechanical Data	Sensor	1.4542 (AISI630)
	Housing / Pressure connection	1.4542 (AISI630) / 1.4301 (AISI304)
	Sealing	FKM 70 Sh
	Male electrical plug	See ordering information
	Weight	~ 85...110 g
	Mounting torque	25 Nm

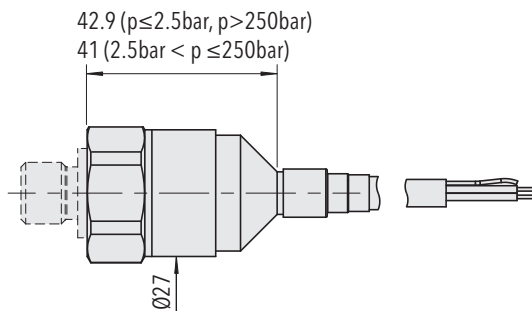
Output	
Output signal	1 transistor (open source)
Switchpoint setting	Factory set or programmable on site with Trafag's Sensor Communicator SC
Adjustment range	0...100% FS
Switching hysteresis	≥ 1% FS
Switching current	≤ 0.5 A @ -40...+85°C ≤ 0.4 A @ +85...+125°C (only with accessory 67: Higher operating temperature -40...125°C)
Switch resistance	≤ 3Ω
Delay time	Standard adjustment: 5ms Adjustable with Trafag Sensor Communicator (only electrical connection 04): 5ms...10s

Dimensions



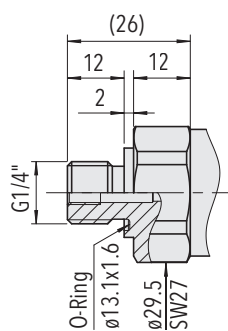
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Switchpoint factory set or programmable on site with Trafag Sensor Communicator SC

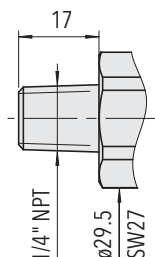


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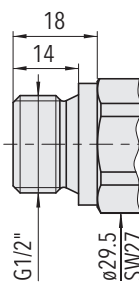
Switchpoint factory set



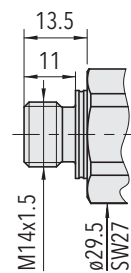
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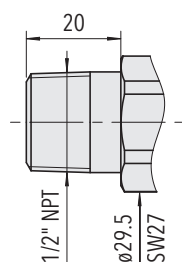
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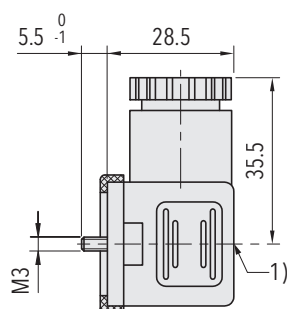
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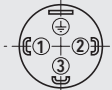
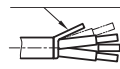
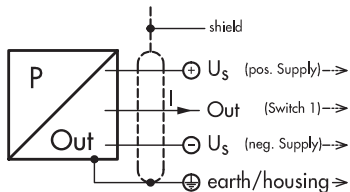
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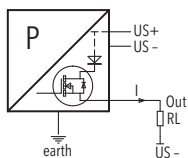
1) Tightening torque 50...60Ncm

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Electrical Connection

		Protection / electrical connection	
		IP65 (IP67)	IP69K
		Industrial standard EN175301-803A 04 	Cable **) 78 Shield 
Output signal		1	brown
	8320.XX.XXXX.XX.T1	2	blue
		3	black
		⊕	yellow / green

***) Ventilation via cable end



Connection of loads to switch contacts

Additional information

Documents

Data sheet	www.trafag.com/H72333
Instructions	www.trafag.com/H73333
Flyer	www.trafag.com/H70652