

## Marine Pressure Transmitter



### Product description

The industrial pressure transmitter EPN 8288, like its reliable predecessor the EPN 8298, has an exceptional ruggedness and a strong thin-film-on-steel sensor cell. The triple overpressure safety, a wide temperature range of up to 125°C and the marine certifications make the EPN 8288 the ideal solution for a wide variety of challenging applications.

### Applications

- Shipbuilding
- Engine manufacturing
- Machine tools
- Hydraulics

### Features

- Excellent long-term stability
- High resistance to over pressure
- Completely welded steel sensor system without additional seals
- Different accuracy classes

 EMC: 2014/30/EU

 S.I. 2016 No. 1091

 RoHS/Reach compliant

 DNV EU RO Mutual Recognition

### Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 2.5 to 0 ... 600 bar 0 ... 30 to 0 ... 7500 psi
Output signal	4 ... 20 mA, 0 ... 10 VDC
Media temperature	-40°C ... +125°C
Ambient temperature	-40°C ... +125°C

### Additional information

Data sheet [www.trafag.com/H72318](http://www.trafag.com/H72318)  
Instructions [www.trafag.com/H73317](http://www.trafag.com/H73317)  
Accessories [www.trafag.com/H72258](http://www.trafag.com/H72258)  
Video <https://youtu.be/CUFsHkVWj10>

## Ordering information/Type code

Ordering information/Type code				8288			XX	XX	XX	XX	XX	XX
Measuring range <sup>1)</sup>	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [bar]	Pressure-measurement-range [psi]	Over pressure [psi]	Burst pressure [psi]						
	0 ... 2.5	7.5	50	<b>75</b>	0 ... 30	90	700	<b>G5</b>				
	0 ... 4	12	60	<b>76</b>	0 ... 50	150	850	<b>G6</b>				
	0 ... 6	18	100	<b>77</b>	0 ... 100	300	1450	<b>G7</b>				
	0 ... 10	30	200	<b>78</b>	0 ... 150	450	2500	<b>G8</b>				
	0 ... 16	48	200	<b>79</b>	0 ... 200	600	2500	<b>GA</b>				
	0 ... 25	75	300	<b>80</b>	0 ... 250	750	2500	<b>G9</b>				
	0 ... 40	120	300	<b>81</b>	0 ... 300	900	4000	<b>HA</b>				
	0 ... 60	180	400	<b>82</b>	0 ... 400	1200	4000	<b>H0</b>				
	0 ... 100	300	500	<b>83</b>	0 ... 500	1500	4000	<b>H1</b>				
	0 ... 160	480	750	<b>85</b>	0 ... 1000	3000	5000	<b>H2</b>				
	0 ... 250	750	1000	<b>74</b>	0 ... 1500	4500	7000	<b>H3</b>				
	0 ... 400	1000	2000	<b>84</b>	0 ... 2000	6000	10000	<b>H5</b>				
	0 ... 600	1500	2500	<b>86</b>	0 ... 3000	9000	14500	<b>G4</b>				
					0 ... 5000	12500	21750	<b>H4</b>				
					0 ... 7500	18750	29000	<b>H6</b>				
<b>Sensor</b>	Relative pressure, accuracy: 0.3 %; Material pressure connection and housing: 1.4542 (AISI 630)							<b>23</b>				
	Relative pressure, accuracy: 0.5 %; Material pressure connection and housing: 1.4542 (AISI 630)							<b>25</b>				
	Relative pressure, accuracy class: 0.3 %; Material pressure connection and housing: 1.4404 (AISI 316L) <sup>2)</sup>							<b>33</b>				
	Relative pressure, accuracy class: 0.5 %; Material pressure connection and housing: 1.4404 (AISI 316L) <sup>2)</sup>							<b>35</b>				
<b>Pressure connection</b>	G1/4" male (Seal)								<b>17</b>			
	G1/2" male (Manometer) EN 837 <sup>3)</sup>								<b>11</b>			
	1/4" NPT male <sup>3)</sup>								<b>30</b>			
	1/2" NPT male <sup>3)</sup>								<b>51</b>			
	R1/4" male, DIN3858 <sup>3)</sup>								<b>19</b>			
	M14x1.5 male, DIN6149-2 <sup>3)</sup>								<b>31</b>			
	9/16"-18UNF-2A male, SAE J1926-3 (Light Duty) <sup>3) 4)</sup>								<b>61</b>			
<b>Electrical connection</b>	Male electrical connector EN 175301-803-A (DIN 43650-A), Material PA									<b>05</b>		
<b>Output signal</b>	<b>Output signal</b>	<b>Load resistance</b>	<b>I (supply)</b>		<b>U (supply)</b>							
	4 ... 20 mA	(U <sub>s</sub> - 9 V) / 20 mA			9 ... 32 VDC						<b>19</b>	
	0 ... 10 VDC	> 5 kΩ	< 10 mA		15 ... 32 VDC						<b>17</b>	

8288

XX XX XX XX XX XX

Accessories		
Seal FKM, -18°C ... +125°C		61
Seal EPDM, -40°C ... +125°C		63
Seal NBR, -25°C ... +100°C		83
Pressure peak damping element ø 1.0 mm, material 1.4305 <sup>5)</sup>		40
Pressure peak damping element ø 0.4 mm, material 1.4305 (sensors 23, 25) resp. 1.4404 (sensors 33, 35) <sup>5)</sup>		44
Female electrical plug EN 175301-803-A (DIN 43650-A)/NBR, -40°C ... +90°C For cable diameter 4 ... 9 mm, flammability standard UL94-V0		46
Female electrical plug EN 175301-803-A (DIN 43650-A)/silicone, -40°C ... +125°C For cable diameter 4 ... 9 mm, flammability standard UL94-V0		56
Female electrical plug EN 175301-803-A (DIN 43650-A)/NBR, -40°C ... +90°C For cable diameter 4 ... 9.5 mm, flammability standard UL94-V2		58
Special electrical connection: Pin 1 +, Pin 2 - (Only for output signal 4 ... 20 mA and male electrical connector EN 175301-803-A / DIN 43650-A)		92
Special electrical connection: Pin 1 Out, Pin 2 -, Pin 3 + (Only for output 0 ... 10 VDC and male electrical connector EN 175301-803-A / DIN 43650-A)		98
Special electrical connection: Pin 1 +, Pin 2 -, Pin 3 Out (Only for output 0 ... 10 VDC and male electrical connector EN 175301-803-A / DIN 43650-A)		97
Enhanced condensation protection		CP
Multiple packaging <sup>6)</sup>		VM

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

<sup>2)</sup> Only for pressure ranges  $\geq 0 \dots 10$  bar

<sup>3)</sup> Upon request, whereas minimum order quantities may apply

<sup>4)</sup> Measuring range max. 350 bar according to SAE J1926-3 (Light Duty)

<sup>5)</sup> Not for pressure connection 11

<sup>6)</sup> The order quantity must be a multiple of 50

## Compatibility matrix pressure connection and accessories

Code	Pressure connection	Seal		
		FKM (Code 61)	EPDM (Code 63)	NBR (Code 83)
17	G1/4" male (Seal)	✓	✓	✓
11	G1/2" male (Manometer) EN 837			
30	1/4" NPT male			
51	1/2" NPT male			
19	R1/4" male, DIN3858			
31	M14x1.5 male, DIN6149-2	✓		
61	9/16"-18UNF-2A male, SAE J1926-3 (Light Duty)	✓		

## Standard products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Overpressure max. [bar]	Supply [VDC]	Signal output
EPN2.5A	8288 75 2517 05 0000 0000 19 44 58 61	0 ... 2.5	7.5	9 ... 32	4 ... 20 mA
EPN4.0A	8288 76 2517 05 0000 0000 19 44 58 61	0 ... 4	12	9 ... 32	4 ... 20 mA
EPN6.0A	8288 77 2517 05 0000 0000 19 44 58 61	0 ... 6	18	9 ... 32	4 ... 20 mA
EPN10.0A	8288 78 2517 05 0000 0000 19 44 58 61	0 ... 10	30	9 ... 32	4 ... 20 mA
EPN16.0A	8288 79 2517 05 0000 0000 19 44 58 61	0 ... 16	48	9 ... 32	4 ... 20 mA
EPN25.0A	8288 80 2517 05 0000 0000 19 44 58 61	0 ... 25	75	9 ... 32	4 ... 20 mA
EPN40.0A	8288 81 2517 05 0000 0000 19 44 58 61	0 ... 40	120	9 ... 32	4 ... 20 mA
EPN60.0A	8288 82 2517 05 0000 0000 19 44 58 61	0 ... 60	180	9 ... 32	4 ... 20 mA
EPN100.0A	8288 83 2517 05 0000 0000 19 44 58 61	0 ... 100	300	9 ... 32	4 ... 20 mA
EPN160.0A	8288 85 2517 05 0000 0000 19 44 58 61	0 ... 160	480	9 ... 32	4 ... 20 mA
EPN250.0A	8288 74 2517 05 0000 0000 19 44 58 61	0 ... 250	750	9 ... 32	4 ... 20 mA
EPN400.0A	8288 84 2517 05 0000 0000 19 44 58 61	0 ... 400	1000	9 ... 32	4 ... 20 mA
EPN600.0A	8288 86 2517 05 0000 0000 19 44 58 61	0 ... 600	1500	9 ... 32	4 ... 20 mA

## Specifications

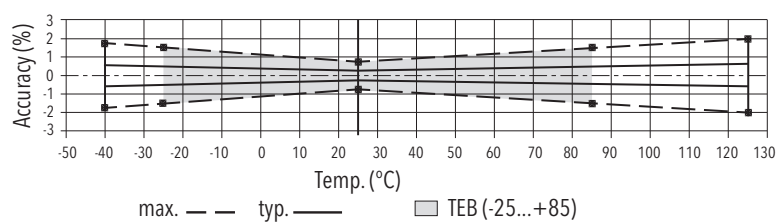
<b>Electrical data</b>	Output / supply voltage	4 ... 20 mA: 24 (9 ... 32) VDC 0 ... 10 VDC: 24 (15 ... 32) VDC
	Power-on delay time	100 ms
	Rise time of supply voltage	typ. 1 ms, 10 ... 90 % nominal pressure
	Inverse-polarity protection, short-circuit strength @ 25°C during 5 min.	4 ... 20 mA: to $U_s = 32$ VDC 0 ... 10 VDC: to $U_s = 28$ VDC
	Resistance of insulation	> 10 M $\Omega$ , 50 VDC
	Dielectric strength	50 VAC, 50 Hz
	Current limiting output signal	4 ... 20 mA: appr. 24 mA (Overload)
<b>Environmental conditions</b>	Media temperature	-40°C ... +125°C
	Ambient temperature	-40°C ... +125°C
	Storage temperature	-20°C ... +40°C
	Protection <sup>1)</sup>	IP65
	Humidity	IEC 60068-2-30 (Damp heat, cyclic, 100 % RH @ +55°C)
	Vibration	15 g RMS (20 ... 2000 Hz) acc.to EN 60068-2-64 25 g sin (10 ... 2000 Hz), 1 oct./min, (1x @ 25°C) acc.to EN 60068-2-6
	Shock	500 g/1 ms acc.to EN 60068-2-27
<b>EMC protection</b>	Emission	EN/IEC 61000-6-3, IACS UR E10
	Immunity	EN/IEC 61000-6-2, IACS UR E10
<b>Mechanical data</b>	Sensor (wetted parts)	1.4542 (AISI630)
	Pressure connection (wetted parts)	1.4542 (AISI630) or 1.4404 (AISI316L)
	Housing	1.4542 (AISI630) or 1.4404 (AISI316L)
	Sealing	FPM, EPDM, NBR
	Male electrical connector	See ordering information
	Weight	~ 80 ... 110 g
	Mounting torque	25 Nm

<sup>1)</sup> See electrical connection

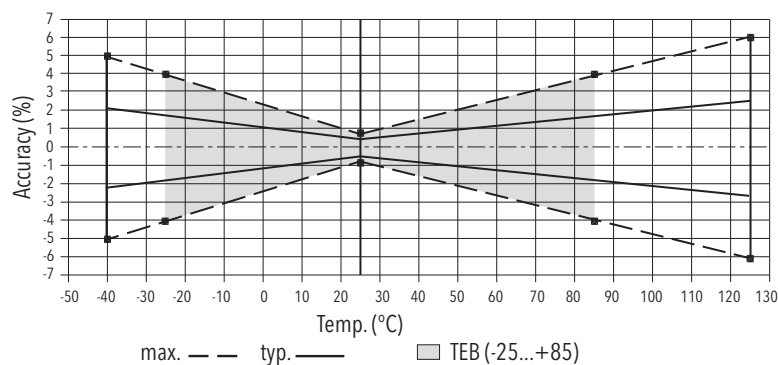
## Accuracy

		Accuracy class 0.3% Ordering code 23/33	Accuracy class 0.5% Ordering code 25/35
TEB @ -25 ... +85°C	[% FS typ.]	± 0.5	± 1.75
Accuracy @ +25°C	[% FS typ.]	± 0.3	± 0.5
NLH @ +25°C (BSL)	[% FS typ.]	± 0.1	± 0.2
TC zero point and span	[% FS/K typ.]	± 0.005	± 0.03
Long term stability 1 year @ +25°C	[% FS typ.]	± 0.1	± 0.1

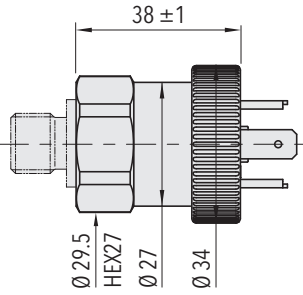
### Accuracy class 0.3 %



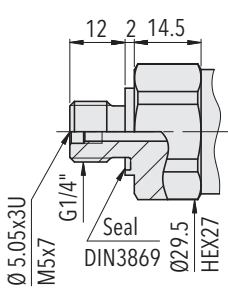
### Accuracy class 0.5 %



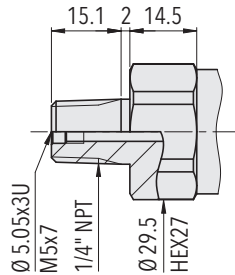
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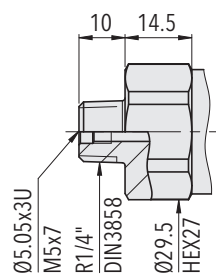
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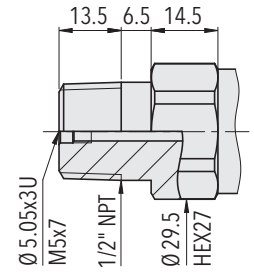
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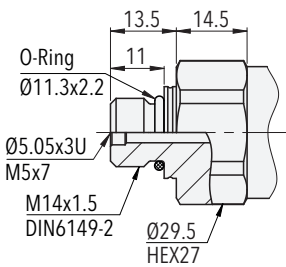
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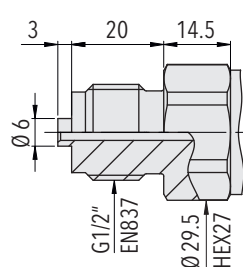
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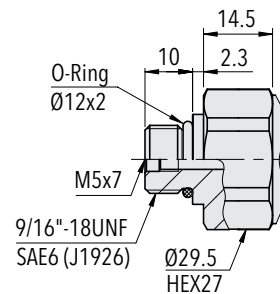
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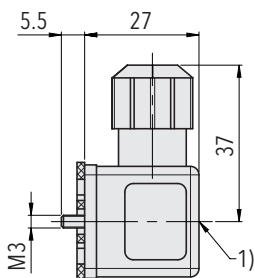
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8288.XX.XXXX.11.XX.XX

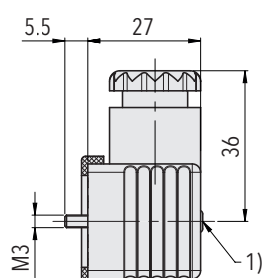


8288.XX.XX.61.XX.XX.XX



1) Tightening torque 50 ... 60 Ncm

8288.XX.XXXX.XX.XX.46/56



8287.XX.XXXX.XX.XX.58

## Electrical connection

Industrial standard EN175301-803A <sup>2)</sup>



Electrical connection type code	05		
IP protection	IP65, IP67 <sup>1)</sup>		
Pin assignment type code			92
<b>Output signal</b> 8288.xx.xxxx.xx.19 	2 1 Earth		1 2 Earth
Pin assignment type code		98	97
<b>Output signal</b> 8288.xx.xxxx.xx.17 	2 3 1 Earth	3 1 2 Earth	1 3 2 Earth

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

<sup>2)</sup> Ventilation via male electric plug

<sup>3)</sup> Only female electrical plug with shield connection

**i** Empty 'Pin Assignment Type Code' field: Default pinout

# Reliable quality

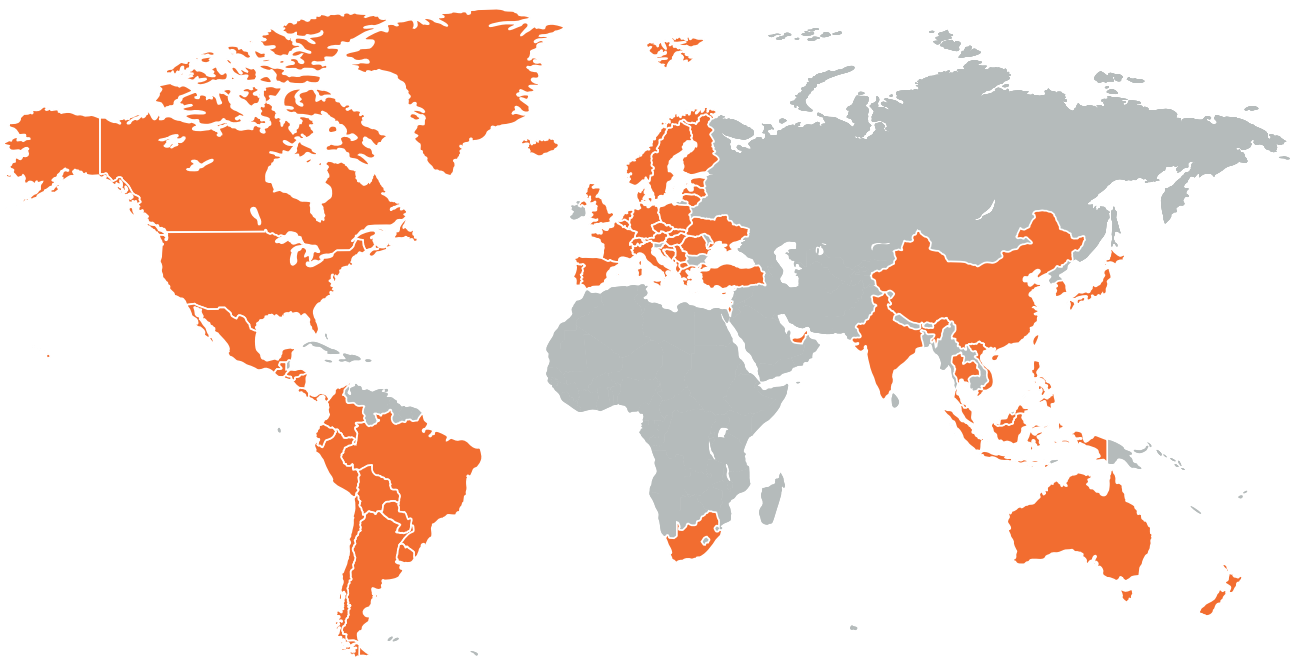
## Worldwide represented, globally trusted, Swiss based

Trafag develops, produces and distributes robust, reliable and precise instruments for monitoring pressure, temperature and gas density.

The broad portfolio of pressure and temperature measuring instruments is tailored for use in test benches through to applications in harsh environments. The research and development departments in Switzerland and Germany develop all important components from the sensor to the application-specific microchip, which are

then manufactured in the production facilities in Switzerland, Germany, the Czech Republic, and India. Strict quality management according to ISO 9001 and ISO 14001 ensures that Trafag products meet the required quality and sustainability standards.

Trafag is headquartered in Switzerland, was founded in 1942 and has an extensive sales and service network in more than 40 countries worldwide.



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Pressure transmitters



Electronic pressure switches



Mechanical pressure switches



Pressure gauge



Thermostats



Temperature transmitters



Gas density