

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 EX pressure transmitter EXNT is based on Trafag's own thin-film-on-steel sensor technology with excellent long-term stability and offers reliable and accurate pressure measurement over a wide temperature range. The intrinsic safety design is certified for applications in Ex-Zones 0, 1, 2 (gas), 20, 21, 22 (dust) and mining.



Applications

- Shipbuilding
- Ex Zones 0, 1, 2 (gas); 20, 21, 22 (dust) and mining
- Hydrogen

Features

- II 1G Ex ia IIC T4/T6 Ga
- II 1D Ex ia IIIC T130° Da
- I M1 Ex ia I Ma
- II 1/2G Ex ia IIC T4/T6 Ga/Gb (with plastic-type connector)
- Pressure ranges from 0.4 to 2000 bar
- Completely welded sensor system
- Optional with hydrogen-compatible sensor
- ATEX and IECEx

Technical Data

| | | | |
|----------------------|-----------------------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------|
| Measuring principle | Thin film on steel | Media temperature | Max. -40°C ... +120°C (see electrical connection) |
| Measuring range | 0 ... 0.4 to 0 ... 2000 bar 0 ... 5 to 0 ... 30000 psi | Ambient temperature | Max. -40°C ... +120°C (see electrical connection) |
| Output signal | 4 ... 20 mA | Approval / conformity | GL, KRS ATEX / IECEx, according to the norm EN/IEC 60079-0/EN 60079-11/ EN 60079-26/ EN 50303 |
| Accuracy @ 25°C typ. | ± 0.5 % FS typ. ± 0.3 % FS typ. | | |

01/2018

Data sheet H72329n

Subject to change

Ordering information/type code

| | | | | 8292 . 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 ... 0.4 ²⁾ | 1.2 | 25 | 0 ... 5 ²⁾ | 18 | 350 | F9 | | | |
| | 0 ... 0.6 ²⁾ | 1.5 | 25 | 0 ... 10 ²⁾ | 25 | 350 | G0 | | | | |
| | 0 ... 1.0 ²⁾ | 2.0 | 25 | 0 ... 15 ²⁾ | 30 | 350 | G1 | | | | |
| | 0 ... 1.6 | 3.5 | 80 | 0 ... 25 | 50 | 1200 | G3 | | | | |
| | 0 ... 2.5 | 5 | 100 | 0 ... 30 | 30 | 720 | G5 | | | | |
| | 0 ... 4 | 8 | 100 | 0 ... 50 | 120 | 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 | 460 | 2900 | G9 | | | | |
| | 0 ... 25 | 50 | 300 | 0 ... 400 | 730 | 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 | | | | |
| | 0 ... 1000 ⁹⁾ | 1600 | 3000 | 0 ... 15000 ⁹⁾ | 25000 | 45000 | H8 | | | | |
| | 0 ... 1600 | 3000 | 4000 | 0 ... 25000 | 45000 | 60000 | H9 | | | | |
| | 0 ... 2000 | 3000 | 4000 | 0 ... 30000 | 45000 | 60000 | J0 | | | | |
| Sensor | Relative pressure, accuracy: 0.3% (> 1 bar) | | | | | | 23 | | | | |
| | Relative pressure, accuracy: 0.5% (> 1 bar) | | | | | | 25 | | | | |
| | Relative pressure, accuracy: 0.5% (≤ 1 bar) | | | | | | 26 | | | | |
| | Relative pressure, accuracy: 0.5 %, wetted parts hydrogen compatible ^{7) 8)} | | | | | | 35 | | | | |
| | Relative pressure, accuracy: 0.3 %, wetted parts hydrogen compatible ^{7) 8)} | | | | | | 33 | | | | |
| Pressure connection | G1/4" male ³⁾ | | | | | | 17 | | | | |
| | G1/4" male (Manometer) EN 871 ^{3) 8)} | | | | | | 53 | | | | |
| | G1/4" female ^{3) 8)} | | | | | | 10 | | | | |
| | G1/2" male ^{3) 8)} | | | | | | 21 | | | | |
| | G1/2" male (Manometer) ^{3) 8)} | | | | | | 11 | | | | |
| | R1/4" male ^{3) 8)} | | | | | | 19 | | | | |
| | 1/4" NPT male ^{3) 8)} | | | | | | 30 | | | | |
| | M18x1.5 male (conical seal: 58°) ^{4) 8)} | | | | | | 29 | | | | |
| Electrical connection | Male electrical plug EN 175301-803-A, plastic (only zones 1, 2 (gas) and 20, 21 (dust)) | | | | | | 05 | | | | |
| | Male electrical plug M12x1, 5-pole, metal | | | | | | 35 | | | | |
| | Male electrical plug MIL-C 26482, 6-pole, metal ⁵⁾ | | | | | | 02 | | | | |
| | Male electrical plug Binder 723, 5-pole, metal | | | | | | 14 | | | | |
| | Cable with shield, material FDR 25 (Raychem), 4 x 0.5mm ² (cable length see "Accessories") - not ship approved | | | | | | 78 | | | | |
| | Cable intrinsically safe with shield, material PVC, 2 x 0.75mm ² (-40...+80°C), (cable length see "Accessories") - not ship approved | | | | | | 80 | | | | |
| Output signal | Signal output | Load resistance | I (supply) | U (supply) | | | | | | | |
| | 4 ... 20 mA | (Usupply-10 V) / 20 mA | | 10 ... 30 VDC | | | | | | 19 | |

| | | |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----|
| Accessories | Female electrical connector EN 175301-803-A (DIN43650-A), plastic (only zones 1, 2 (gas) and 20, 21 (dust)) | 58 |
| | Female electrical plug M12x1, 5-pole, plastic (only zones 1, 2 (gas) and 20, 21 (dust)) | 33 |
| | Female electrical plug M12x1, 5-pole, metal | 35 |
| | Female electrical connector MIL-C 26482, 6-pole, metal | 32 |
| | Female electrical connector Binder 723, 5-pole, metal | 37 |
| | Pressure peak damping element ø 0.4 mm | 44 |
| | Pressure peak damping element ø 1.0 mm | 40 |
| | Cable length 1.5 m ⁶⁾ | 1M |
| | Cable length 3.0 m ⁶⁾ | 3M |
| | Cable length 5.0 m ⁶⁾ | 5M |
| | Special electrical connection: Pin 1 +, Pin 2 - (only for output signal 4 ... 20 mA and male electrical plug EN175301-803-A / DIN43650-A) | 92 |
| | Zener barrier 28V/93mA; R ≈300Ω: Ordering no ZEN28VDC | |
| | Damping elements and snubber see data sheet H72258 | |

¹⁾ Extended overpressure as well as customized pressure ranges upon request

²⁾ Only with sensor 26 (0.5%)

³⁾ For pressure ranges ≤ 600 bar

⁴⁾ For pressure ranges > 600 bar

⁵⁾ For pressure ranges < 40 bar upon request

⁶⁾ Other cable lengths upon request

⁷⁾ Pressure ranges 0 ... 40 to 0 ... 1000 bar

⁸⁾ Upon request

⁹⁾ With sensors 33 and 35: Overpressure 1300 bar/19000 psi, Burst pressure 2600 bar/38000 psi

Standard products (extra short lead time)

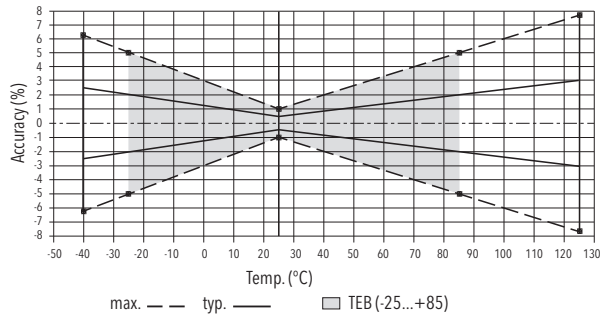
| Product No. | Type Code | Pressure range [bar] | Over pressure max. [bar] | Supply [VDC] | Accuracy @ 25°C typ. [%] |
|-------------|------------------------------------|----------------------|--------------------------|--------------|--------------------------|
| EXNT0.4A | 8292 69 2617 05 0000 0000 19 58 92 | 0 ... 0.4 | 1.2 | 10 ... 30 | ± 0.5 |
| EXNT0.6A | 8292 70 2617 05 0000 0000 19 58 92 | 0 ... 0.6 | 1.5 | 10 ... 30 | ± 0.5 |
| EXNT1.0A | 8292 71 2617 05 0000 0000 19 58 92 | 0 ... 1 | 2 | 10 ... 30 | ± 0.5 |
| EXNT2.5A | 8292 75 2517 05 0000 0000 19 58 92 | 0 ... 2.5 | 5 | 10 ... 30 | ± 0.5 |
| EXNT4.0A | 8292 76 2517 05 0000 0000 19 58 92 | 0 ... 4 | 8 | 10 ... 30 | ± 0.5 |
| EXNT6.0A | 8292 77 2517 05 0000 0000 19 58 92 | 0 ... 6 | 12 | 10 ... 30 | ± 0.5 |
| EXNT10.0A | 8292 78 2517 05 0000 0000 19 58 92 | 0 ... 10 | 20 | 10 ... 30 | ± 0.5 |
| EXNT16.0A | 8292 79 2517 05 0000 0000 19 58 92 | 0 ... 16 | 32 | 10 ... 30 | ± 0.5 |
| EXNT25.0A | 8292 80 2517 05 0000 0000 19 58 92 | 0 ... 25 | 50 | 10 ... 30 | ± 0.5 |
| EXNT40.0A | 8292 81 2517 05 0000 0000 19 58 92 | 0 ... 40 | 80 | 10 ... 30 | ± 0.5 |
| EXNT100.0A | 8292 83 2517 05 0000 0000 19 58 92 | 0 ... 100 | 200 | 10 ... 30 | ± 0.5 |
| EXNT250.0A | 8292 74 2517 05 0000 0000 19 58 92 | 0 ... 250 | 500 | 10 ... 30 | ± 0.5 |

| Specifications | | |
|---------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical Data | Output / supply voltage | 4 ... 20 mA; 24 (10 ... 30) VDC |
| | Rise time | Typ. 1 ms / 10 ... 90 % nominal pressure |
| | Switch-on-delay | Max. 1.5 s |
| Environmental conditions | Media temperature | Max. -40°C ... +120°C (see electrical connection) |
| | Ambient temperature | Max. -40°C ... +120°C (see electrical connection) |
| | Protection ¹⁾ | Min. IP65 Electrical connection cable: IP67 Electrical connection 02: IP67 |
| | Humidity | Max. 95 % relative |
| | Vibration | 10 g (50...2000 Hz) |
| | Shock | 50 g / 3 ms |
| EMC Protection | Emission | IEC 61000-6-4 |
| | Immunity | IEC 61000-6-2 |
| Mechanical Data | Sensor (wetted parts) | 1.4542 (AISI630), optional hydrogen-compatible steel |
| | Pressure connection (wetted parts) | Pressure ranges ≤ 250 bar and > 600 bar: 1.4542 (AISI630) Pressure ranges > 250 bar and ≤ 600 bar: 1.4301 (AISI304) Optional hydrogen-compatible steel |
| | Housing | 1.4301 (AISI304) |
| | Sealing | FKM 70 Sh |
| | Male electrical plug | See ordering information |
| | Weight | ~ 165 g |
| | Mounting torque | 25 Nm Pressure connection 29: 30 Nm |

¹⁾ See electrical connection

| Accuracy | | | | |
|-------------------------------------------------------------------------------------------------------|---------------|--------------------------------------------|--------------------------------------------|-----------------------------------------------------------------|
| | | Class 0.5% Ordering No. 25 (> 1 bar) | Class 0.3% Ordering No. 23 (> 1 bar) | Class 0.5% Ordering No. 26 (≤ 1 bar) |
| TEB @ -25...+85°C | [% FS typ.] | ± 2.0 | ± 0.5 | ± 1.0 |
| Accuracy @ +25°C | [% FS typ.] | ± 0.5 | ± 0.3 | ± 0.5 |
| NLH @ +25°C (BSL) | [% FS typ.] | ± 0.2 | ± 0.1 | ± 0.10 |
| TC zero point and span | [% FS/K typ.] | ± 0.03 | ± 0.005 | ± 0.01 |
| Long term stability 1 year @ +25°C | [% FS typ.] | ± 0.2 | ± 0.2 | ± 0.2 |
| Mounting dependency with 180° rotation (Vibration and shock: multiply this value with number of g) | [% FS typ.] | - | - | 0 ... 1 bar: 0.05 0 ... 0.6 bar: 0.09 0 ... 0.4 bar: 0.13 |

Class 0.5 %



Class 0.3 %



Electrical connection

| | | Protection / electrical connection | | | | | | |
|---------------|----------------------------------|------------------------------------|--------------------------------------|---------------------------------------|---------------|----------------|----------------|---|
| | | IP65*) | IP67 | IP67 | IP65*) | IP67*) | IP65*) | |
| | | Industrial standard EN175301-803A | Cable **) (4 x 0.5 mm ²) | Cable **) (2 x 0.75 mm ²) | Binder 723 | MIL-C 26482 | M12x1 5-pole | |
| | | 05 | 78 Shield | 80 Shield | 14 | 02 | 35 | |
| | | | | | | | | |
| Output signal | | Standard 2 | 92 1 | brown | 1 (black) | 3 | A | 4 |
| | | 1 | 2 | black | 2 (black) | 1 | C | 1 |
| | | | | yellow / green | - | 5 | F | 5 |
| | 8292 .XX.XXXX.XX.19 | | | (blue = not connected) | | | | |
| T-Range | Ambient and media temperature T4 | -40 ... +120°C | -40 ... +120°C | -40 ... +80°C | -30 ... +95°C | -40 ... +120°C | -40 ... +120°C | |
| | Ambient and media temperature T6 | -40 ... +65°C | -40 ... +65°C | -40 ... +65°C | -30 ... +65°C | -40 ... +65°C | -40 ... +65°C | |

*) Provided female connector is mounted according to instructions

**) Ventilation via cable end

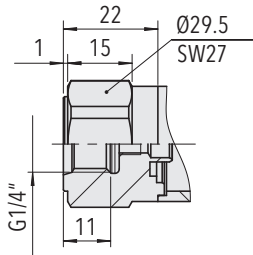
***) Only cable versions or female electrical plug with shield connection

Additional information

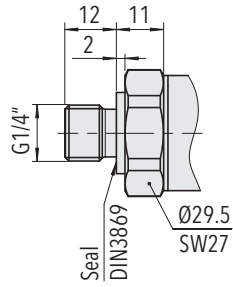
Documents

| | |
|--------------|------------------------------------------------------------------|
| Data sheet | www.trafag.com/H72329 |
| Instructions | www.trafag.com/H73329 |
| Flyer | www.trafag.com/H70657 |

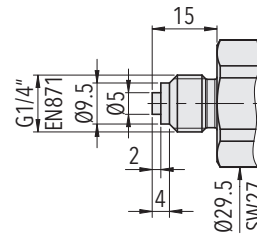
Dimensions



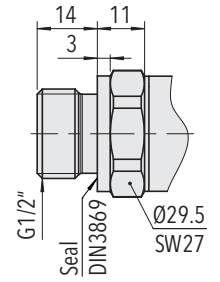
8292.XX.XX10.XX.XX.XX
(≤ 600 bar)



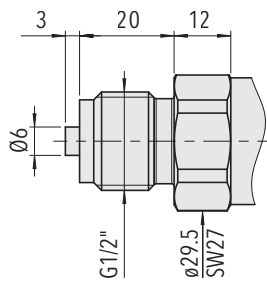
8292.XX.XX17.XX.XX.XX
(≤ 600 bar)



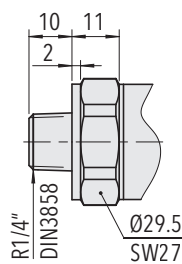
8292.XX.XX53.XX.XX.XX



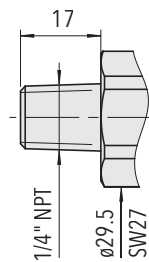
8292.XX.XX21.XX.XX.XX
(≤ 600 bar)



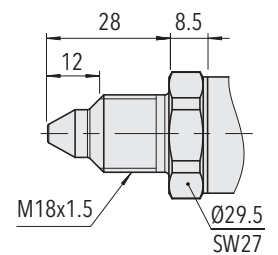
8292.XX.XX11.XX.XX.XX
(≤ 600 bar)



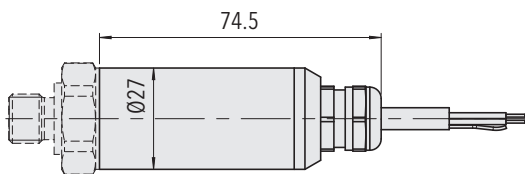
8292.XX.XX19.XX.XX.XX
(≤ 600 bar)



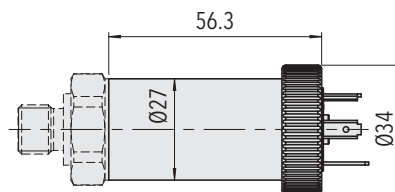
8292.XX.XX30.XX.XX.XX
(≤ 600 bar)



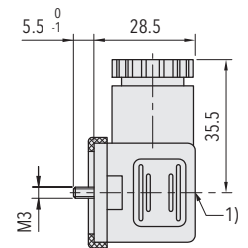
8292.XX.XX29.XX.XX.XX
(> 600 bar)



8292.XX.XXXX.78/80.XX.XX

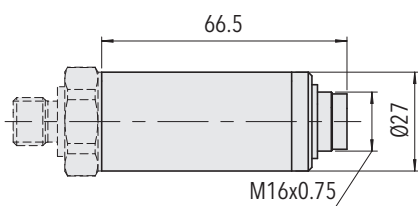


8292.XX.XXXX.05.XX.XX

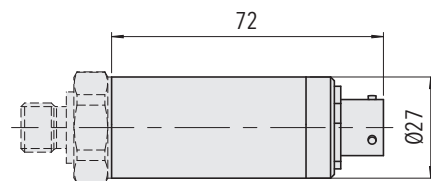
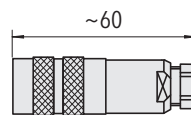


1) Tightening to torque 50...60Nm

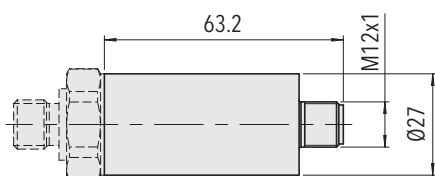
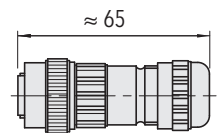
8292.XX.XXXX.XX.XX.58



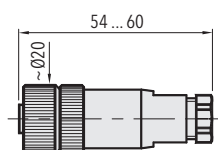
8292.XX.XXXX.14.XX.37



8292.XX.XXXX.02.XX.32



8292.XX.XXXX.35.XX.XX



8292.XX.XXXX.XX.XX.33/35