

INDUSTRIAL PRESSURE TRANSMITTER

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The economical pressure transmitter ECT 8472 is based on the tried and true ECT line of transmitters. The wide media temperature range from -25 to 125°C in combination with a comprehensive set of features and options makes the ECT 8472 pressure transmitter a versatile solution suitable for most industrial applications.



Applications

- Machine tools
- Hydraulics
- Water treatment

Features

- Excellent media compatibility
- Relative or absolute pressure measurement
- Titanium version optional
- Frontal membrane optional

| Technical Data | | | |
|-----------------------|---|----------------------|---|
| Measuring principle | Thick-film-on-ceramic | Accuracy @ 25°C typ. | ± 0.5 % FS typ. |
| Measuring range | 0 ... 1 to 0 ... 400 bar 0 ... 15 to 0 ... 5000 psi | Media temperature | -25°C ... +125°C 400 bar/5000 psi: -10°C ... +125°C |
| Output signal | 4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, 0.5 ... 4.5 VDC ratiom. | Ambient temperature | -25°C ... +125°C Cable PVC 22: -5°C ... +60°C Cable PUR 24: -20°C ... +70°C Cable Raychem 08: -20°C ... +100°C |
| NLH @ 25°C (BSL) typ. | ± 0.2 % FS typ. | | |

03/2022

Data sheet H72324al

Subject to change

Ordering information/type code

| | | | | 8472 . XX | XX | XX | XX | XX | XX | |
|--------------------------------------|---|------------------------------|-----------------------------|--|-----------------------------|-------|-----------|-----------|----|--|
| Measuring range ¹⁾ | Pressure measurement range [bar] | Over pressure [bar] | Burst pressure [bar] | | | | | | | |
| | 0 ... 1.0 | 2 | 3 | 71 | 0 ... 15 | 30 | 40 | G1 | | |
| | 0 ... 1.6 | 3.2 | 4.8 | 73 | 0 ... 20 | 40 | 60 | G3 | | |
| | 0 ... 2.5 | 5 | 7.5 | 75 | 0 ... 30 | 60 | 90 | G5 | | |
| | 0 ... 4 | 8 | 12 | 76 | 0 ... 50 | 100 | 150 | G6 | | |
| | 0 ... 6 | 12 | 15 | 77 | 0 ... 100 | 200 | 250 | G7 | | |
| | 0 ... 10 | 20 | 25 | 78 | 0 ... 150 | 300 | 375 | G8 | | |
| | 0 ... 16 | 32 | 40 | 79 | 0 ... 200 | 400 | 600 | GA | | |
| | 0 ... 25 | 50 | 75 | 80 | 0 ... 250 | 500 | 625 | G9 | | |
| | 0 ... 40 | 80 | 100 | 81 | 0 ... 400 | 800 | 1200 | H0 | | |
| | 0 ... 60 | 120 | 180 | 82 | 0 ... 500 | 1000 | 1250 | H1 | | |
| | 0 ... 100 ⁴⁾ | 200 | 300 | 83 | 0 ... 1000 | 2000 | 3000 | H2 | | |
| | 0 ... 160 ⁴⁾ | 320 | 480 | 85 | 0 ... 1500 ⁴⁾ | 3000 | 4500 | H3 | | |
| | 0 ... 250 ⁴⁾ | 500 | 750 | 74 | 0 ... 2000 ⁴⁾ | 4000 | 6000 | H5 | | |
| | 0 ... 400 ^{2) 4)} | 800 | 1000 | 84 | 0 ... 3000 ⁴⁾ | 6000 | 9000 | G4 | | |
| | | | | | 0 ... 5000 ^{2) 4)} | 10000 | 12500 | H4 | | |
| | Option 5P: | Fivefold overpressure | | | | | | | | |
| | 0 ... 2.5 | 12.5 | 18 | 55 | | | | | | |
| | 0 ... 4 | 20 | 30 | 56 | | | | | | |
| | 0 ... 6 | 30 | 48 | 57 | | | | | | |
| | 0 ... 10 | 50 | 75 | 58 | | | | | | |
| | 0 ... 16 | 80 | 120 | 59 | | | | | | |
| 0 ... 25 | 125 | 180 | 60 | | | | | | | |
| 0 ... 40 | 200 | 300 | 61 | | | | | | | |
| 0 ... 60 | 300 | 480 | 62 | | | | | | | |
| Sensor | Relative pressure, Material pressure connection and housing: 1.4305 (AISI303) | | 57 | Absolute pressure, Material pressure connection and housing: 1.4305 (AISI303) ³⁾ | | | 87 | | | |
| | Relative pressure, Material pressure connection and housing: 1.4404/1.4435 (AISI316L) ⁴⁾ | | 59 | Absolute pressure, Material pressure connection and housing: 1.4404/1.4435 (AISI316L) ^{3) 4)} | | | 89 | | | |
| | Relative pressure, Material pressure connection and housing: 1.4462 (AISI318LN) ⁴⁾ | | 52 | Absolute pressure, Material pressure connection and housing: 1.4462 (AISI318LN) ^{3) 4)} | | | 82 | | | |
| | Relative pressure, titanium grade 5 ⁴⁾ | | 53 | Absolute pressure, titanium grade 5 ^{3) 4)} | | | 83 | | | |
| | | | | | | | | | | |
| Pressure connection | G1/4" female | | | | | | 10 | | | |
| | G1/4" male | | | | | | 17 | | | |
| | G1/2" male DIN3852-A ⁴⁾ | | | | | | 21 | | | |
| | G1/2" male DIN3852-E ⁴⁾ | | | | | | 41 | | | |
| | G1/2" male DIN3852-E, with inner cone ^{4) 13) 15)} | | | | | | 59 | | | |
| | 1/4" NPT male, ANSI B1.20.1 ⁴⁾ | | | | | | 30 | | | |
| | 1/8" NPT male, ANSI B1.20.1 ¹¹⁾ | | | | | | 43 | | | |
| | 7/16"-20UNF male, SAE4 (J1926) ⁴⁾ | | | | | | 42 | | | |
| | 7/16"-20UNF male, DIN3866 ³⁾ | | | | | | 18 | | | |
| | 7/16"-20UNF female, SAE J512 with valve opener ³⁾ | | | | | | 24 | | | |
| | 7/16"-20UNF female, SAE J512 without valve opener ³⁾ | | | | | | 44 | | | |
| | 9/16"-18UNF male, SAE6 (J1926), seal: accessory 61 ^{4) 14)} | | | | | | 61 | | | |
| | R1/4" male, DIN3858 | | | | | | 19 | | | |
| Electrical connection | Male electrical connector EN 175301-803-A (DIN 43650-A), Mat. PA | | | | | | 05 | | | |
| | Male electrical connector M12x1, 5-pole, Mat. PBT | | | | | | 35 | | | |
| | Male electrical connector Packard Metri Pack, Mat. PBT | | | | | | 51 | | | |
| | Cable PUR (Screwed cable gland PA 6-3), -20°C ... +70°C ^{5) 6)} | | | | | | 24 | | | |
| | Cable PVC (Screwed cable gland PA 6-3), -5°C ... +60°C ^{5) 6) 9)} | | | | | | 22 | | | |
| | Cable Raychem (Screwed cable gland PA 6-3), -20°C ... +100°C ^{3) 6) 9)} | | | | | | 08 | | | |

| Output signal | Signal output | Load resistance | I (supply) | U (supply) | |
|--------------------|--|------------------------------------|------------|--------------------------|----|
| | 4 ... 20 mA | (U _{supply} -9 V) / 20 mA | | 9 ... 30 VDC | 19 |
| | 0 ... 5 VDC | ≥ 2.5 kΩ | ≤ 10 mA | 10 ... 30 VDC | 14 |
| | 1 ... 6 VDC | ≥ 5.0 kΩ | ≤ 10 mA | 10 ... 30 VDC | 16 |
| | 0 ... 10 VDC | ≥ 5.0 kΩ | ≤ 10 mA | 15 ... 30 VDC | 17 |
| | 0.5 ... 4.5 VDC ratiometric | ≥ 5.0 kΩ | ≤ 10 mA | 5 VDC ± 0.25 VDC ratiom. | 23 |
| Accessories | Seal FKM (-20°C ... +125°C) | | | | 61 |
| | Seal CR ≤ 100 bar (-25°C ... +100°C) ⁸⁾ | | | | 62 |
| | Seal EPDM (-25°C ... +125°C) | | | | 63 |
| | Pressure peak damping element ø 1.0 mm, material 1.4305 ¹⁰⁾ | | | | 40 |
| | Pressure peak damping element ø 0.4 mm, material 1.4305 (sensors 57, 87) resp. 1.4404 (sensors 52, 53, 59, 82, 83, 89) ¹⁰⁾ | | | | 44 |
| | Female electrical plug EN 175301-803-A (DIN43650-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 (DIN43650-A)/NBR, -40°C ... +90°C, for cable diameter 4 ... 9.5 mm, flammability standard UL94-V2 | | | | 58 |
| | Female electrical plug M12x1, 5-pole | | | | 33 |
| | Special electrical connection: Pin 1 +, Pin 2 - (only for output signal 4 ... 20 mA and male electrical connector EN175301-803-A / DIN43650-A) | | | | 92 |
| | Special electrical connection: Pin 1 Out, Pin 2 -, Pin 3 + (only for output 14, 16, 17, 23 and male electrical connector EN175301-803-A / DIN43650-A) | | | | 98 |
| | Special electrical connection: Pin 1 +, Pin 2 -, Pin 3 Out (only for output signals 14, 16, 17, 23 and male electrical connector EN 175301-803-A / DIN 43650-A) | | | | 97 |
| | Special electrical connection: Pin 1 +, Pin 3 - (only for output 4 ... 20 mA and male electrical connector Packard Metri Pack 3-poles) | | | | E4 |
| | Special electrical connection: Pin 1 +, Pin 2 Out, Pin 3 - (only for output signals 14, 16, 17, 23 and male electrical connector Packard Metri Pack 3-poles) | | | | 99 |
| | Special electrical connection: Pin 1 +, Pin 3 -, Pin 5 Ground (only for output signal 4 ... 20 mA and male electrical connector 35, M12x1, 5-pole) | | | | 94 |
| | Special electrical connection: Pin 1 Out, Pin 2 -, Pin 3 +, Pin 4 Ground (only for output signals 14, 16, 17, 23 and male electrical connector 01, industrial standard) | | | | E3 |
| | Cable length 1.5 m | | | | 1M |
| | Cable length 3.0 m | | | | 3M |
| | Cable length 5.0 m | | | | 5M |
| | Housing nut for electrical connection EN175301-803-A (DIN43650-A) secured with Loctite (max. 85°C) | | | | L9 |
| | Multiple packaging ¹²⁾ | | | | VM |

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

²⁾ Media -10°C ... +125°C

³⁾ max. 40 bar

⁴⁾ Upon request

⁵⁾ Cable length see accessories (max. length 50 m, in 5-meter sections)

⁶⁾ Protection IP68: Immersion depth max. 3 m, Media +10°C ... +35°C

⁸⁾ Only for pressure connections 10, 30, 43, 18, 24, 44, 19

⁹⁾ Pressure ranges > 16 bar (Pressure ranges ≤ 16 bar upon request)

¹⁰⁾ Not for pressure connections 10, 18, 24, 44

¹¹⁾ Only for sensors 59 and 89 and electrical connections 35, 51 (others on request)

¹²⁾ The order quantity must be a multiple of 50, only for electrical connections 05 and 35

¹³⁾ Only for sensors 52 and 82

¹⁴⁾ Only for sensors 59 and 89

¹⁵⁾ max. 60 bar / overpressure 120 bar



Vacuum measuring ranges: Measuring ranges below 0 bar (e.g. -1 bar ... 0 bar) are available as special pressure ranges.

Reversed calibration: A reversed calibration is also possible for measuring ranges below 0 bar, with the signals 4 ... 20 mA (code 19), 1 ... 6 VDC (code 16) and 0 ... 10 VDC (code 17). The signal zero point is at 0 bar, the signal end point at -1 bar. Additional configurations on request.

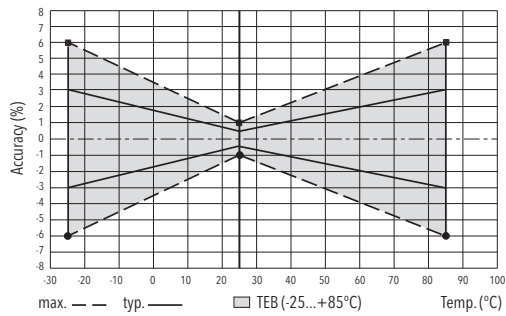
Standard products (extra short lead time)

| Product No. | Type Code | Pressure range [bar] | Over pressure max. [bar] | Signal output | Supply [VDC] |
|-------------|------------------------------------|----------------------|--------------------------|---------------|--------------|
| ECT1.0A | 8472 71 5717 05 0000 0000 19 58 61 | 0 ... 1 | 3.2 | 4 ... 20 mA | 9 ... 30 |
| ECT1.6A | 8472 73 5717 05 0000 0000 19 58 61 | 0 ... 1.6 | 3.2 | 4 ... 20 mA | 9 ... 30 |
| ECT2.5A | 8472 75 5717 05 0000 0000 19 58 61 | 0 ... 2.5 | 5 | 4 ... 20 mA | 9 ... 30 |
| ECT4.0A | 8472 76 5717 05 0000 0000 19 58 61 | 0 ... 4 | 8 | 4 ... 20 mA | 9 ... 30 |
| ECT6.0A | 8472 77 5717 05 0000 0000 19 58 61 | 0 ... 6 | 12 | 4 ... 20 mA | 9 ... 30 |
| ECT10.0A | 8472 78 5717 05 0000 0000 19 58 61 | 0 ... 10 | 20 | 4 ... 20 mA | 9 ... 30 |
| ECT16.0A | 8472 79 5717 05 0000 0000 19 58 61 | 0 ... 16 | 32 | 4 ... 20 mA | 9 ... 30 |
| ECT25.0A | 8472 80 5717 05 0000 0000 19 58 61 | 0 ... 25 | 50 | 4 ... 20 mA | 9 ... 30 |
| ECT40.0A | 8472 81 5717 05 0000 0000 19 58 61 | 0 ... 40 | 80 | 4 ... 20 mA | 9 ... 30 |
| ECT60.0A | 8472 82 5717 05 0000 0000 19 58 61 | 0 ... 60 | 120 | 4 ... 20 mA | 9 ... 30 |
| ECT1.0V | 8472 71 5717 05 0000 0000 17 58 61 | 0 ... 1 | 3.2 | 0 ... 10 VDC | 15 ... 30 |
| ECT1.6V | 8472 73 5717 05 0000 0000 17 58 61 | 0 ... 1.6 | 3.2 | 0 ... 10 VDC | 15 ... 30 |
| ECT2.5V | 8472 75 5717 05 0000 0000 17 58 61 | 0 ... 2.5 | 5 | 0 ... 10 VDC | 15 ... 30 |
| ECT4.0V | 8472 76 5717 05 0000 0000 17 58 61 | 0 ... 4 | 8 | 0 ... 10 VDC | 15 ... 30 |
| ECT6.0V | 8472 77 5717 05 0000 0000 17 58 61 | 0 ... 6 | 12 | 0 ... 10 VDC | 15 ... 30 |
| ECT10.0V | 8472 78 5717 05 0000 0000 17 58 61 | 0 ... 10 | 20 | 0 ... 10 VDC | 15 ... 30 |
| ECT16.0V | 8472 79 5717 05 0000 0000 17 58 61 | 0 ... 16 | 32 | 0 ... 10 VDC | 15 ... 30 |
| ECT25.0V | 8472 80 5717 05 0000 0000 17 58 61 | 0 ... 25 | 50 | 0 ... 10 VDC | 15 ... 30 |
| ECT40.0V | 8472 81 5717 05 0000 0000 17 58 61 | 0 ... 40 | 80 | 0 ... 10 VDC | 15 ... 30 |
| ECT60.0V | 8472 82 5717 05 0000 0000 17 58 61 | 0 ... 60 | 120 | 0 ... 10 VDC | 15 ... 30 |

| Specifications | | |
|---------------------------------|--|---|
| Accuracy | TEB typ. @ -25 ... +85°C | ± 3.0 % FS typ. |
| | Accuracy @ 25°C typ. | ± 0.5 % FS typ. |
| | NLH @ 25°C (BSL) typ. | ± 0.2 % FS typ. |
| | TC zero point and span typ. | ± 0.03 % FS/K typ. |
| | Long term stability 1 year typ. | ± 0.3 % FS typ. |
| Electrical Data | Output / supply voltage | 4 ... 20 mA: 24 (9 ... 30) VDC 0 ... 5 VDC: 24 (10 ... 30) VDC 1 ... 6 VDC: 24 (10 ... 30) VDC 0 ... 10 VDC: 24 (15 ... 30) VDC 0.5 ... 4.5 VDC ratiom. |
| | Rise time | Typ. 1 ms / 10 ... 90 % nominal pressure |
| | Power-on delay time | Max. 1.5 s |
| | Inverse-polarity protection, short-circuit strength @ 25°C during 5 min. | 4 ... 20 mA: to $U_s = 30$ VDC 0 ... 10 VDC, 0 ... 5 VDC, 1 ... 6 VDC: to $U_s = 30$ VDC 0.5 ... 4.5 VDC ratiometric: to $U_s = 5.25$ VDC |
| Environmental conditions | Media temperature | -25°C ... +125°C 400 bar/5000 psi: -10°C ... +125°C |
| | Ambient temperature | -25°C ... +125°C Cable PVC 22: -5°C ... +60°C Cable PUR 24: -20°C ... +70°C Cable Raychem 08: -20°C ... +100°C |
| | Protection ¹⁾ | IP65, IP67, IP68 |
| | Humidity | Max. 95 % relative |
| | Vibration | 15 g RMS (20...2000 Hz) (EN 60068-2-64) 15 g Sinus (10...2000 Hz) (EN 60068-2-6) |
| | Shock | 50 g / 11 ms (EN 60068-2-27) |
| EMC Protection | Emission | EN/IEC 61000-6-3 |
| | Immunity | EN/IEC 61000-6-2 |
| Mechanical Data | Sensor (wetted parts) | Ceramic, Al ₂ O ₃ (96 %) |
| | Pressure connection (wetted parts) | 57/87: 1.4305 (AISI303) 59/89: 1.4404/1.4435 (AISI316L) 52/82: 1.4462 (AISI318LN) 53/83: Titanium Grade 5 |
| | Housing | 57/87: 1.4305 (AISI303) 59/89: 1.4404/1.4435 (AISI316L) 52/82: 1.4462 (AISI318LN) 53/83: Titanium Grade 5 |
| | Sealing | FKM 70 Sh, CR, EPDM |
| | Male electrical connector | See ordering information |
| | Weight | ~ 110 g |
| | Mounting torque | 15 ... 20 Nm |

¹⁾ See electrical connection

Measuring accuracy 0.5 %



Electrical connection

| | | Protection / electrical connection | | | | | | | |
|---------------|---|--|-------------------------------|-------------------------------------|--------------------------|------------------|-------------------------------|-----------------------------------|--------------------------------|
| | | IP65*) | IP67*) | IP67*) | IP68 max. 3m | IP68 max. 3 m | | | |
| | | Industrial standard EN175301-803A **) | M12x1 **) 5-pole | Packard Metri Pack **) 3-pole | Cable**) | Cable **) | | | |
| | | 05 | 35 | 51 | 24/22 | 08 | | | |
| | | | | | | | | | |
| Output signal | <p>8472.XX.XXXX.XX.19</p> | Standard 2 1 ⊕ | 92 1 2 ⊕ | Standard 4 1 5 | 94 1 3 5 | 1 2 3 | E4 1 3 yellow | white brown green | red black green |
| | <p>8472.XX.XXXX.XX.14/16/17/23</p> | Standard 2 3 1 ⊕ | 98 3 1 2 ⊕ | 97 1 3 2 ⊕ | 2 4 3 5 | 1 3 2 | 99 1 2 3 | white green brown yellow | red white black green |

*) Provided female electrical plug is mounted according to instructions

**) Ventilation via male electric plug/cable end

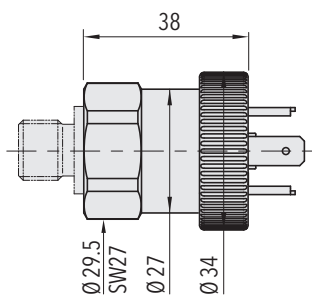
***) Only cable versions or female electrical plug with shield connection

Additional information

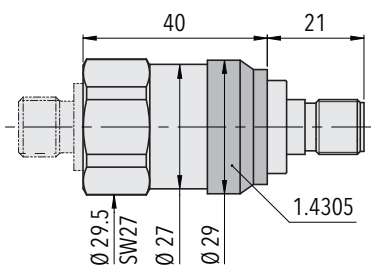
Documents

| | |
|--------------|--|
| Data sheet | www.trafag.com/H72324 |
| Instructions | www.trafag.com/H73324 |
| Flyer | www.trafag.com/H70662 |

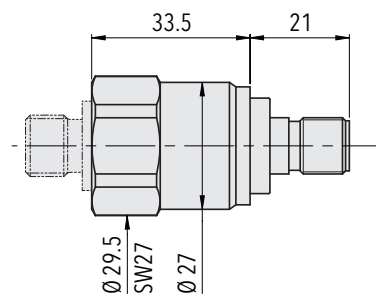
Dimensions



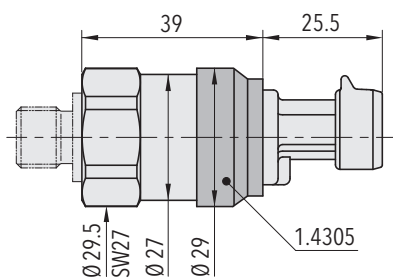
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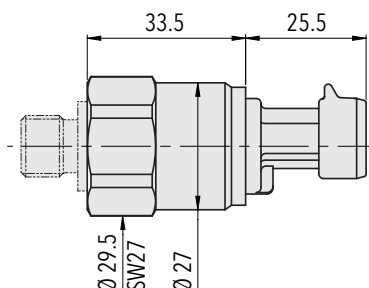
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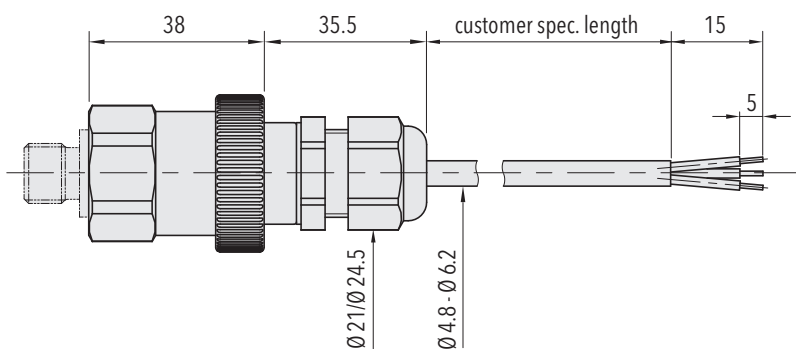
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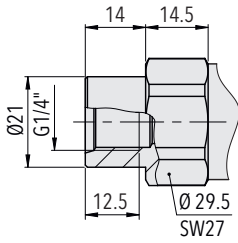


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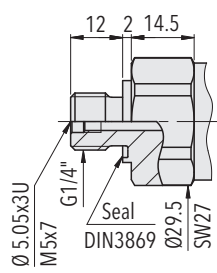


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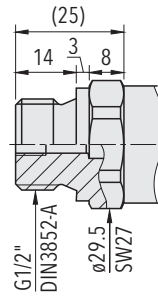
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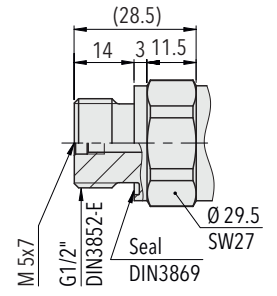
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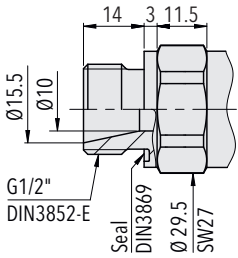
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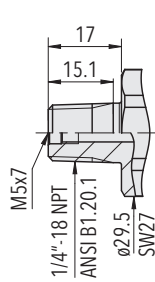
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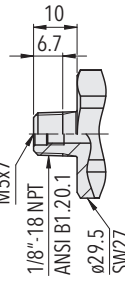
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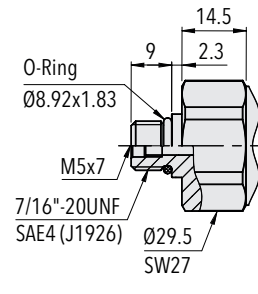
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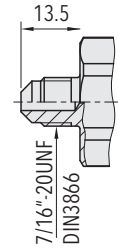
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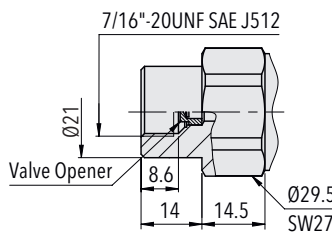
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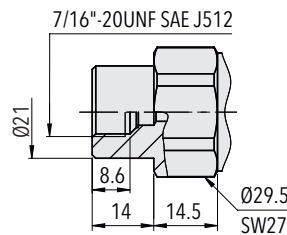
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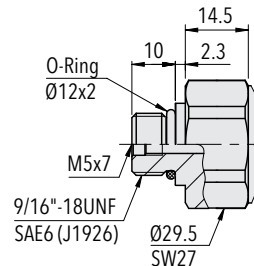
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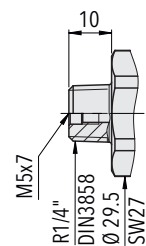
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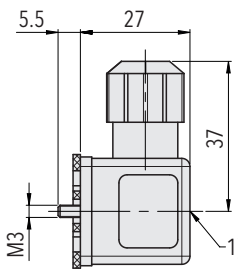
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8472.XX.XX61.XX.XX.XX

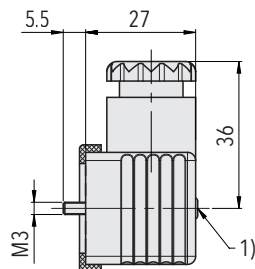


8472.XX.XX19.XX.XX.XX



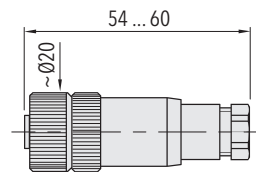
1) Tightening torque 50...60 Ncm

8472.XX.XXXX.XX.XX.46/56



1) Tightening torque 50...60 Ncm

8472.XX.XXXX.XX.XX.58



8472.XX.XXXX.XX.XX.33