ECT 8472

Industrial Pressure Transmitter

Applications

- Machine tools
- Hydraulics
- Water treatment

Features

- Excellent media compatibility
- Relative or absolute pressure measurement
- Titanium version optional
- Wide temperature range

EMC: 2014/30/EU

S.I. 2016 No. 1091

RoHS/Reach compliant

UL-listed version

Product description

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 of features and options makes the ECT 8472 pressure transmitter a versatile solution suitable for most industrial applications.

Technical Data

Measuring principle	Thick-film-on-ceramic
Measuring range	0 ... 1 to 0 ... 400 bar 0 ... 15 to 0 ... 5000 psi
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, 0.5 ... 4.5 VDC ratiometric
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

Additional information

Data sheet	www.trafag.com/H72324
Instructions	www.trafag.com/H73324
Accessories	www.trafag.com/H72258
Video	https://youtu.be/GLq3yOjGUas

ECT 8472

Ordering information/Type code

								8472	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 ... 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 [2]	200	300	**83**	0 ... 1000	2000	3000	**H2**						
	0 ... 160 [2]	320	480	**85**	0 ... 1500 [2]	3000	4500	**H3**						
	0 ... 250 [2]	500	750	**74**	0 ... 2000 [2]	4000	6000	**H5**						
	0 ... 400 [2] [3]	800	1000	**84**	0 ... 3000 [2]	6000	9000	**G4**						
	Option 5P:	Fivefold overpressure			0 ... 5000 [2] [3]	10000	12500	**H4**						
	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**
	Relative pressure, Material pressure connection and housing: 1.4404/1.4435 (AISI316L) [2]	**59**
	Relative pressure, Material pressure connection and housing: 1.4462 (AISI318LN) [2]	**52**
	Relative pressure, titanium grade 5 [2]	**53**
	Absolute pressure, Material pressure connection and housing: 1.4305 (AISI303) [4]	**87**
	Absolute pressure, Material pressure connection and housing: 1.4404/1.4435 (AISI316L) [2] [4]	**89**
	Absolute pressure, Material pressure connection and housing: 1.4462 (AISI318LN) [2] [4]	**82**
	Absolute pressure, titanium grade 5 [2] [4]	**83**

ECT 8472

		8472	XX	XX	XX	XX	XX	XX
Pressure connection	G1/4" female				10			
	G1/4" male				17			
	G1/2" male DIN 3852-A [2]				21			
	G1/2" male DIN 3852-E [2]				41			
	G1/2" male DIN 3852-E, with inner cone [2] [5] [6]				59			
	1/4" NPT male, ANSI B1.20.1 [2]				30			
	7/16"-20UNF-2A male, SAE J1926-3 (Light Duty) [2] [7]				42			
	7/16"-20UNF male, DIN 3866 [4]				18			
	7/16"-20UNF female, SAE J512 with valve opener [4]				24			
	7/16"-20UNF female, SAE J512 without valve opener [4]				44			
	9/16"-18UNF-2A male, SAE J1926-3 (Light Duty), Seal: Accessory 61 [2] [7] [8]				61			
	R1/4" male, DIN 3858				19			
Electrical connection	Male electrical connector EN 175301-803-A (DIN 43650-A), Material PA					05		
	Male electrical connector M12x1, 5-pole, Material PBT					35		
	Cable PUR (Screwed cable gland PA 6-3), -20°C ... +70°C [9] [10]					24		
	Cable PVC (Screwed cable gland PA 6-3), -5°C ... +60°C [9] [10] [11]					22		
	Cable Raychem (Screwed cable gland PA 6-3), -20°C ... +100°C [9] [10] [11]					08		
	3 Way male Delphi MetriPack 1.5 sealed connector, Material PA66					51		

Output signal	**Output signal**	**Load resistance**	**I (supply)**	**U (supply)**	
	4 ... 20 mA	(U_s – 9 V) / 20 mA	(= signal output)	9 ... 30 VDC	19
	0 ... 5 VDC	≥ 2.5 kΩ	≤ 20 mA	10 ... 30 VDC	14
	1 ... 6 VDC	≥ 5.0 kΩ	≤ 20 mA	10 ... 30 VDC	16
	0 ... 10 VDC	≥ 5.0 kΩ	≤ 20 mA	15 ... 30 VDC	17
	0.5 ... 4.5 VDC ratiom.	≥ 5.0 kΩ	≤ 20 mA	5 VDC ± 0.25 VDC ratiom.	23

Accessories	Seal FKM (-20°C ... +125°C)	61
	Seal CR ≤ 100 bar (-25°C ... +100°C) [12]	62
	Seal EPDM (-25°C ... +125°C)	63
	Pressure peak damping element ø 1.0 mm, material 1.4305 [13]	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) [13]	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
	Female electrical plug M12x1, 5-pole	33
	Cable length 1.5 m	1M
	Cable length 3.0 m	3M
	Cable length 5.0 m	5M
	Housing nut for electrical connection EN 175301-803-A (DIN 43650-A) secured with Loctite (max. 85°C)	L9
	Multiple packaging [14]	VM
	UL-listed version	UL
	Pin configuration, see table: Electrical connection	

Footnotes: See next page

Ordering information/Type code

[01] Extended overpressure as well as customized pressure ranges upon request, see table „Customised measuring ranges"
[02] Upon request, whereas minimum order quantities may apply
[03] Media -10°C ... +125°C
[04] max. 40 bar
[05] Only for sensors 52 and 82
[06] max. 60 bar / overpressure 120 bar
[07] Measuring range max. 350 bar according to SAE J1926-3 (Light Duty)
[08] Only for sensors 59 and 89
[09] Cable length see accessories (max. length 50 m, in 5-meter sections)
[10] IP68-rated protection: Immersion depth max. 3 m, Media +10°C … +35°C
[11] Pressure ranges > 16 bar (Pressure ranges ≤ 16 bar upon request)
[12] Only for pressure connections 10, 30, 43, 18, 24, 44, 19
[13] Not for pressure connections 10, 18, 24, 44
[14] The order quantity must be a multiple of 50, only for electrical connections 05 and 35

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.

Compatibility matrix pressure connection and accessories

		Damping		Seal		
Code	**Pressure connection**	Ø 0.4 mm (Code 44)	Ø 1.0 mm (Code 44)	FKM [1] (Code 61)	CR [2] (Code 62)	EPDM [1] (Code 63)
10	G1/4" female				✓	
17	G1/4" male	✓	✓	✓		✓
21	G1/2" male DIN 3852-A	✓	✓	✓		✓
41	G1/2" male DIN 3852-E	✓	✓	✓		✓
59	G1/2" male DIN 3852-E, with inner cone	✓	✓	✓		✓
30	1/4" NPT male, ANSI B1.20.1	✓	✓		✓	
42	7/16"-20UNF male, SAE4 (J1926)	✓	✓	✓		
18	7/16"-20UNF male, DIN 3866				✓	
24	7/16"-20UNF female, SAE J512 with valve opener				✓	
44	7/16"-20UNF female, SAE J512 without valve opener				✓	
61	9/16"-18UNF male, SAE6 (J1926)	✓	✓	✓		
19	R1/4" male, DIN 3858	✓	✓		✓	

[1] Seal: inner and outer
[2] Seal: inner

Ordering-no. for process connections

	Combination with UL
Measuring range	All ranges on datasheet
Sensor	All codes on datasheet
Pressure connection	All codes on datasheet
Electrical connection	All codes on datasheet
Output signal	All codes except PS and T1
Accessories	All codes except GA, GS and GU

Signal processing

Code	Cut-off frequency f_G	Rise time (10 ... 90 % nominal pressure)	Output signal			
			4 ... 20 mA	0.5 ... 4.5 VDC ratiometric	0 ... 6 VDC	0 ... 10 VDC
GA [1]	11 Hz	32 ms	x	x	-	-
Standard specification	350 Hz	1 ms	x	x	x	x

[1] Upon request, whereas minimum order quantities may apply

Customised measuring ranges

min. pressure [bar] [1]	max. pressure [bar] [2]	min. span [bar]	max. span [bar]	Overpressure [bar]	Code
-1	1	≥ 0.5	≤ 1.2	2	**21**
-1	2	≥ 0.8	< 2	3.2	**22**
-1	4	≥ 2	≤ 4.5	8	**24**
-1	6	> 4.5	≤ 7	12	**25**
-1	10	> 7	≤ 11	20	**26**
-1	16	> 11	≤ 17	32	**27**
-1	25	> 17	≤ 26	50	**28**
-1	40	> 26	≤ 41	80	**29**
-1	60	> 41	≤ 61	120	**30**
-1	100	> 61	≤ 101	200	**31**
-1	160	> 101	≤ 161	320	**35**
-1	250	> 161	≤ 251	500	**32**
-1	400	> 251	≤ 401	800	**34**

[1] Minimum pressure = Lowest zero point, start of measuring range (relative)
[2] Maximum pressure = Highest pressure, end of measuring range (relative)

For absolute pressure sensors, the measuring range must include the point 1000 mbar (absolute)

For relative pressure sensors, measuring range must include the point 0 bar (relative)

Standard configurations

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

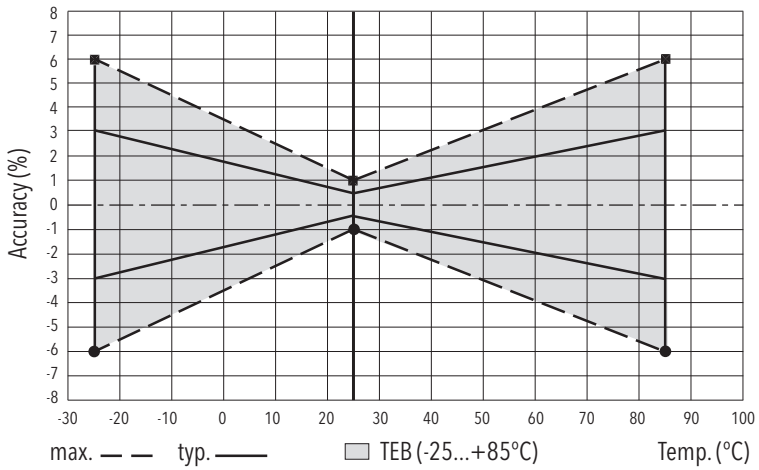
Specifications

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 ratiometric
	Power-on delay time	max. 1.5 s
	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 = 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
	Resistance of insulation	Type 14/16/17/23: > 10 MΩ, 100 VDC Type 19: > 10 MΩ, 250 VDC
	Dielectric strength	Type 14/16/17/23: 100 VAC, 50 Hz Type 19: 250 VAC, 50 Hz
	Current limiting output signal	4 ... 20mA: appr. 25 mA max.
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
	Storage temperature	-20°C ... +40°C
	Protection	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_2O_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
	Mounting torque	15 ... 20 Nm

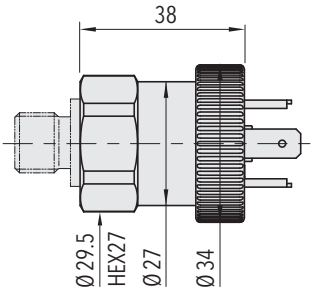
Accuracy

	≥ 0 bar ≤ 1000 bar
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.

Measuring accuracy



Dimensions



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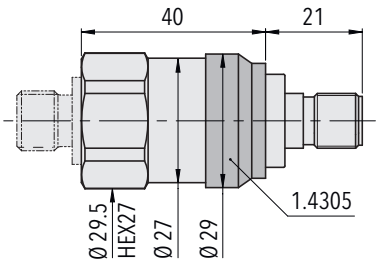

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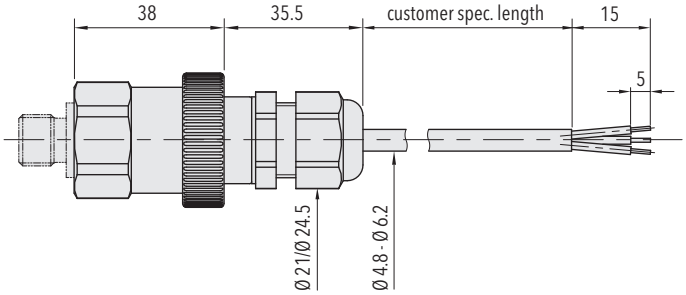

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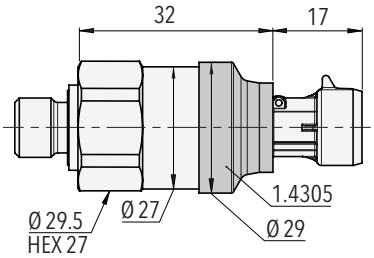
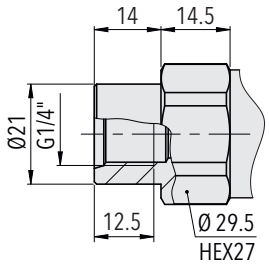


8472.XX.XXXX.**51**.XX.XX

ECT 8472

Dimensions



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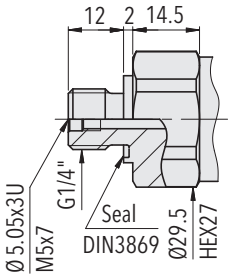

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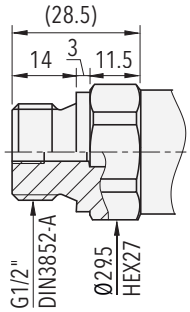

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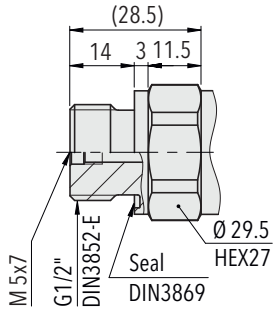

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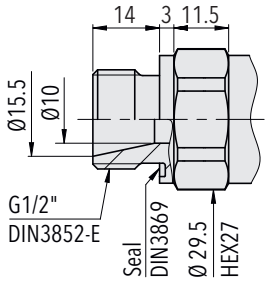

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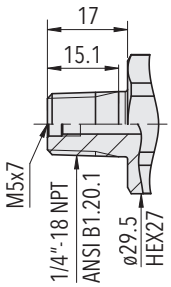

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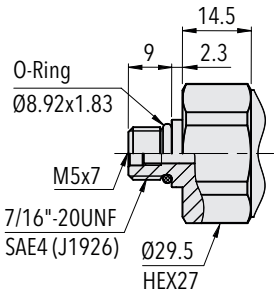

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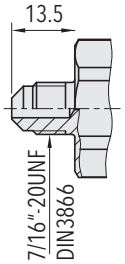

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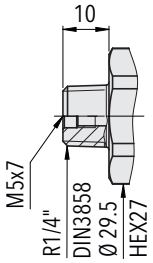

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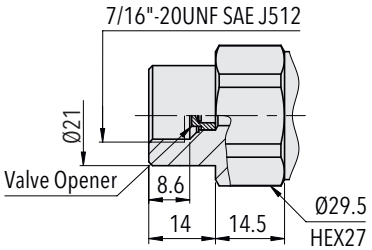

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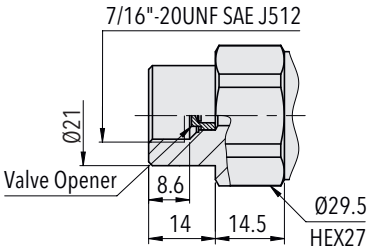

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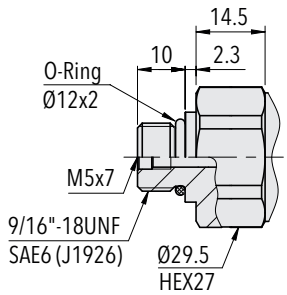

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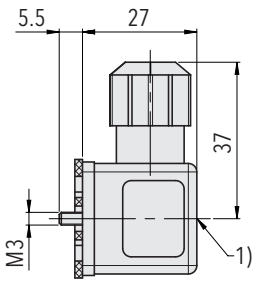
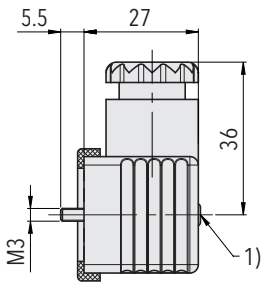
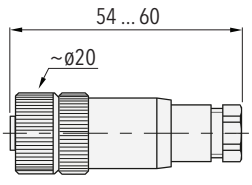


8472.XX.XXXX.XX.XX.**46/56**

[1] Tightening torque 50 ... 60 Ncm

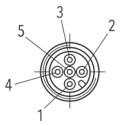
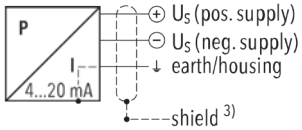


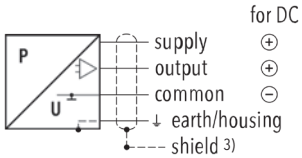
8472.XX.XXXX.XX.XX.**58**



8472.XX.XXXX.XX.XX.**33**

Electrical connection

	Industrial standard EN175301-803A [2]		M12x1, 5-pole		
					
Electrical connection type code	05		35		
IP protection	IP65 [1]		IP67 [1]		
Ambient temperature	-25°C ... +125°C		-25°C ... +125°C		
UL-rated ambient temperature	-20°C … +80°C		-20°C … +80°C		
Pin assignment type code		**92**		**G9**	**94**	**H1**
Output signal **8472.xx.xxxx.xx.19**  ⊕ U_S (pos. supply) ⊖ U_S (neg. supply) ⏚ earth/housing shield [3]	2 1 Earth	1 2 Earth	4 1 5	1 3 4	1 3 5	1 2 5

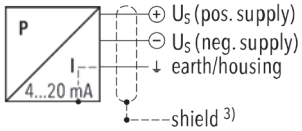
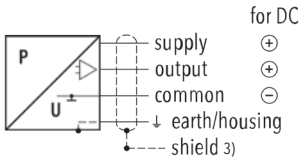
Pin assignment type code		**98**	**97**		**E8**
Output signal **8472.xx.xxxx.xx.14/16/17/23**  for DC supply ⊕ output ⊕ common ⊖ ⏚ earth/housing shield [3]	2 3 1 Earth	3 1 2 Earth	1 3 2 Earth	2 4 3 5	1 3 2 5

[1] Provided female electrical plug is mounted according to instructions
[2] Ventilation via male electric plug/cable end
[3] Only cable versions or female electrical plug with shield connection

Empty 'Pin Assignment Type Code' field: Default pinout

ECT 8472

Electrical connection

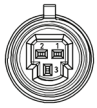
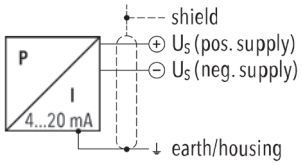
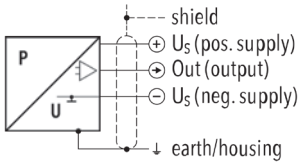
	Cable [2]	Cable [2]	Cable [2]
			
Electrical connection type code	22	24	08
IP protection	IP68, max. 3m	IP68, max. 3m	IP68, max. 3m
Ambient temperature	-5°C ... +60°C	-20°C ... +70°C	-25°C ... +125°C
UL-rated ambient temperature	-5°C ... +60°C	-20°C ... +70°C	-20°C … +80°C
Pin assignment type code			
Output signal **8472.xx.xxxx.xx.19** 	White Brown Yellow	White Brown Yellow	Red Black Green
Pin assignment type code			
Output signal **8472.xx.xxxx.xx.14/16/17/23** 	White Green Brown Yellow	White Green Brown Yellow	Red White Black Green

[1] Provided female electrical plug is mounted according to instructions
[2] Ventilation via male electric plug/cable end
[3] Only cable versions or female electrical plug with shield connection

Empty 'Pin Assignment Type Code' field: Default pinout

ECT 8472

Electrical connection

	3 Way M MetriPack 1.5 sealed connector	
		
Electrical connection type code	51	
IP protection	IP67 [1]	
Ambient temperature	-40°C … +125°C	
UL-rated ambient temperature	-20°C … +80°C	
Pin assignment type code		**E4**
Output signal 8472.XX.XXXX.XX.19 	1 2	1 3
Pin assignment type code		**99**
Output signal 8472.XX.XXXX.XX.14/16/17/23 	1 3 2	1 2 3

[1] Provided female electrical plug is mounted according to instructions

Empty 'Pin Assignment Type Code' field: Default pinout

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Trafag develops, produces and distributes robust, reliable and precise instruments for monitoring pressure, temperature and gas density.
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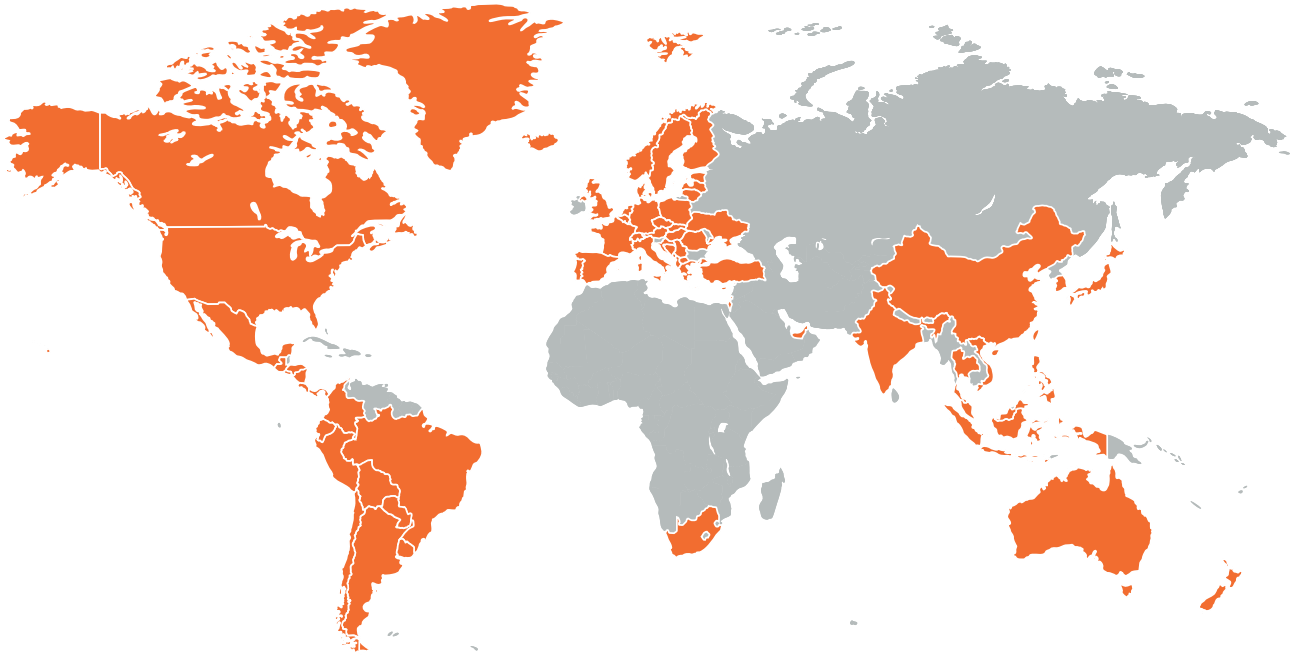
Trafag is headquartered in Switzerland, was founded in 1942 and has an extensive sales and service network in more than 40 countries worldwide.



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