

ترانسمیتر فشار مطلق ترافاگ

MODEL : ECT 8473 Absolute



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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 economic pressure transmitter ECT 8473 is based on the tried and true ECT line of transmitters with the wide media temperature range from -25 to 125°C. The enhanced accuracy and the low pressure ranges down to 100 mbar in combination with a comprehensive set of features, materials and options makes the ECT 8473 pressure transmitter an ideal and versatile solution suitable for a wide variety of applications.



Applications

- Machine tools
- Hydraulics
- Water treatment

Features

- Measuring ranges from 100 mbar
- 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.	± 0.3 % FS typ. (± 0.5 % FS typ., ± 1 % FS typ.)
Measuring range	0 ... 0.1 to 0 ... 40 bar 0 ... 1.5 to 0 ... 500 psi	Media temperature	-25°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	max. -25°C ... +125°C (UL-rated ambient temperature: -20°C ... +80°C) details see section Electrical Connection
NLH @ 25°C (BSL) typ.	± 0.2 FS typ. (± 0.3 FS typ.)		

Ordering information/type code

				8473 .	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 ... 0.1	1.2	2	66	0 ... 1.5	15	30	F6	
	0 ... 0.16	1.2	2	67	0 ... 2	15	30	F7	
	0 ... 0.2	1.2	2	68	0 ... 2.5	15	30	F8	
	0 ... 0.4	1.2	2	69	0 ... 5	15	30	F9	
	0 ... 0.6	1.2	2	70	0 ... 10	20	30	G0	
	0 ... 1.0	2	3	71	0 ... 15	30	45	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 ... 500	1000	1250	H1	
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					
Sensor	Relative pressure, Material pressure connection and housing: 1.4305 (AISI303)		54	Absolute pressure, Material pressure connection and housing: 1.4305 (AISI303) ^{2) 3)}					
	Relative pressure, Material pressure connection and housing: 1.4404/1.4435 (AISI316L) ²⁾		56	Absolute pressure, Material pressure connection and housing: 1.4404/1.4435 (AISI316L) ^{2) 3)}					
	Relative pressure, Material pressure connection and housing: 1.4462 (AISI318LN) ²⁾		50	Absolute pressure, Material pressure connection and housing: 1.4462 (AISI318LN) ^{2) 3)}					
	Relative pressure, titanium grade 5 ²⁾		51	Absolute pressure, titanium grade 5 ^{2) 3)}					
Pressure connection	G1/4" female ²⁾							10	
	G1/4" male							17	
	G1/2" male DIN3852-A ²⁾							21	
	G1/2" male DIN3852-E ²⁾							41	
	G1/2" male DIN3852-E, with inner cone ^{2) 12) 14)}							59	
	1/4" NPT male, ANSI B1.20.1 ²⁾							30	
	1/8" NPT male, ANSI B1.20.1 ^{2) 10)}							43	
	7/16"-20UNF male, SAE4 (J1926) ²⁾							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 ^{2) 13)}							61	
	R1/4" male, DIN3858 ²⁾							19	
	G3/4" frontal membrane ^{2) 4)}							52	
Electrical connection	Male electrical connector EN 175301-803-A (DIN 43650-A), Mat. PA							05	
	Male electrical connector M12x1, 5-pole, Mat. PBT							35	
	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 ^{5) 6) 9)}							08	

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Output signal	Signal output	Load resistance	I (supply)	U (supply)	
	4 ... 20 mA	(U _{supply} -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	≥ 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) ⁷¹⁾				62
	Seal EPDM (-25°C ... +125°C)				63
	Pressure peak damping element ø 1.0 mm, material 1.4305 ⁸¹⁾				40
	Pressure peak damping element ø 0.4 mm, material 1.4305 (sensors 54, 84) resp. 1.4404 (sensors 50, 51, 56, 80, 81, 86) ⁸¹⁾				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 -, Pin 5 Ground (only for output signal 4 ... 20 mA and male electrical connector 35, M12x1, 5-pole)				94
	Special electrical connection: Pin 1 +, Pin 3 -, Pin 4 Ground (only for output signals 19 and male electrical connector 35, M12x1, 5-pole)				69
	Special electrical connection: Pin 1 +, Pin 2 -, Pin 5 Ground (only for output signals 19 and male electrical connector 35, M12x1, 5-pole)				H1
	Special electrical connection: Pin 1 +, Pin 3 Out, Pin 2 -, Pin 5 Ground (only for output signals 14, 16, 17, 23 and male electrical connector 35, M12x1, 5-pole)				E8
	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 ¹¹⁾				VM
	UL-listed version				UL

¹⁾ Extended overpressure as well as customized pressure ranges upon request, see table "Customised measuring ranges"

²⁾ Upon request

³⁾ Only for ranges: ≥ 400 mbar or 5 psi

⁴⁾ Only with sensors 56, 50, 51, 86, 80, 81 and for pressure ranges ≤ 25 bar or 400 psi

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

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

⁷⁾ Only for pressure connections 10, 30, 43, 18, 24, 44, 19

⁸⁾ Not for pressure connections 10, 18, 24, 44, 52

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

¹⁰⁾ Only for sensors 56 and 86 and electrical connections 35 (others on request)

¹¹⁾ The order quantity must be a multiple of 50, only for electrical connections 05 and 35

¹²⁾ Only for sensors 50 and 80

¹³⁾ Only for sensors 56 and 86

¹⁴⁾ max. 16 bar / overpressure 32 bar



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



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



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.

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Customised measuring ranges

Min. pressure ¹⁾	Max. pressure ²⁾	Min. span	Min. span	Overpressure	Accuracy	Code
-0.4	0.6	≥ 0.1	< 0.2	1.2	1.0 %	21
-0.4	0.6	≥ 0.2	< 0.5	1.2	0.5 %	21
-1	1	≥ 0.5	≤ 1.2	2	0.3 %	21
-1	2	≥ 1.2	< 2	3.2	0.3 %	22
-1	4	≥ 2	≤ 4.5	8	0.3 %	24
-1	6	> 4.5	≤ 7	12	0.3 %	25
-1	10	> 7	≤ 11	20	0.3 %	26
-1	16	> 11	≤ 17	32	0.3 %	27
-1	25	> 17	≤ 26	50	0.3 %	28
-1	40	> 26	≤ 41	80	0.3 %	29

All pressures in bar

1) Minimum pressure= lowest zero point, start of measuring range (relative)

2) Maximum pressure= highest pressure, end of measuring range (relative)

Standard products (extra short lead time)

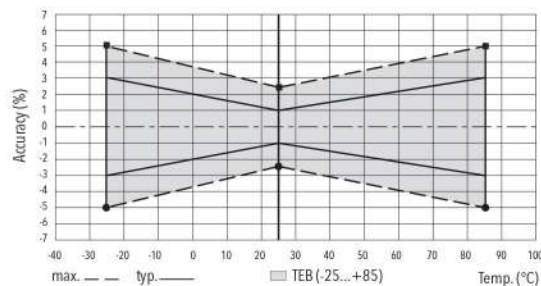
Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Pressure connection	Signal output	Accuracy @ 25°C typ. [%]
ECT0.1A	8473 66 5417 05 0000 0000 19 58 61	0 ... 0.1	1.2	G1/4" male	4 ... 20 mA	1.0
ECT0.16A	8473 67 5417 05 0000 0000 19 58 61	0 ... 0.16	1.2	G1/4" male	4 ... 20 mA	1.0
ECT0.2A	8473 68 5417 05 0000 0000 19 58 61	0 ... 0.2	1.2	G1/4" male	4 ... 20 mA	0.5
ECT0.4A	8473 69 5417 05 0000 0000 19 58 61	0 ... 0.4	1.2	G1/4" male	4 ... 20 mA	0.3
ECT0.6A	8473 70 5417 05 0000 0000 19 58 61	0 ... 0.6	1.2	G1/4" male	4 ... 20 mA	0.3
ECT0.1V	8473 66 5417 05 0000 0000 17 58 61	0 ... 0.1	1.2	G1/4" male	0 ... 10 VDC	1.0
ECT0.16V	8473 67 5417 05 0000 0000 17 58 61	0 ... 0.16	1.2	G1/4" male	0 ... 10 VDC	1.0
ECT0.2V	8473 68 5417 05 0000 0000 17 58 61	0 ... 0.2	1.2	G1/4" male	0 ... 10 VDC	0.5
ECT0.4V	8473 69 5417 05 0000 0000 17 58 61	0 ... 0.4	1.2	G1/4" male	0 ... 10 VDC	0.3
ECT0.6V	8473 70 5417 05 0000 0000 17 58 61	0 ... 0.6	1.2	G1/4" male	0 ... 10 VDC	0.3
ECTF0.1A	8473 66 5652 05 0000 0000 19 58 61	0 ... 0.1	1.2	G3/4" frontal membrane	4 ... 20 mA	1.0
ECTF0.16A	8473 67 5652 05 0000 0000 19 58 61	0 ... 0.16	1.2	G3/4" frontal membrane	4 ... 20 mA	1.0
ECTF0.2A	8473 68 5652 05 0000 0000 19 58 61	0 ... 0.2	1.2	G3/4" frontal membrane	4 ... 20 mA	0.5
ECTF0.4A	8473 69 5652 05 0000 0000 19 58 61	0 ... 0.4	1.2	G3/4" frontal membrane	4 ... 20 mA	0.3
ECTF0.6A	8473 70 5652 05 0000 0000 19 58 61	0 ... 0.6	1.2	G3/4" frontal membrane	4 ... 20 mA	0.3
ECTF1.0A	8473 71 5652 05 0000 0000 19 58 61	0 ... 1	2	G3/4" frontal membrane	4 ... 20 mA	0.3
ECTF1.6A	8473 73 5652 05 0000 0000 19 58 61	0 ... 1.6	3.2	G3/4" frontal membrane	4 ... 20 mA	0.3
ECTF2.5A	8473 75 5652 05 0000 0000 19 58 61	0 ... 2.5	5	G3/4" frontal membrane	4 ... 20 mA	0.3
ECTF4.0A	8473 76 5652 05 0000 0000 19 58 61	0 ... 4	8	G3/4" frontal membrane	4 ... 20 mA	0.3
ECTF6.0A	8473 77 5652 05 0000 0000 19 58 61	0 ... 6	12	G3/4" frontal membrane	4 ... 20 mA	0.3
ECTF10.0A	8473 78 5652 05 0000 0000 19 58 61	0 ... 10	20	G3/4" frontal membrane	4 ... 20 mA	0.3

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: 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
	Ambient temperature	max. -25°C ... +125°C (UL-rated ambient temperature: -20°C ... +80°C) details see section Electrical Connection
	Protection	IP65, IP67, IP68 details see section Electrical Connection
	Humidity	Max. 95 % relative
	Vibration	15 g RMS (20...2000 Hz) (EN60068-2-64) 15 g Sinus (10...2000 Hz) (EN60068-2-6)
	Shock	50 g / 11 ms (EN60068-2-27)
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)	54/84: 1.4305 (AISI303) 56/86: 1.4404/1.4435 (AISI316L) 50/80: 1.4462 (AISI318LN) 51/81: Titanium Grade 5
	Housing	54/84: 1.4305 (AISI303) 56/86: 1.4404/1.4435 (AISI316L) 50/80: 1.4462 (AISI318LN) 51/81: Titanium Grade 5
	Sealing	FKM 70 Sh, CR, EPDM
	Male electrical connector	See ordering information
	Weight	~ 110 g
	Mounting torque	15 ... 20 Nm

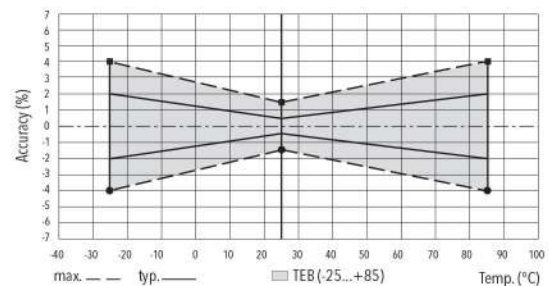
Accuracy

Pressure measuring range	[bar]	$\geq 0 \dots 0.3$	$\geq 0 \dots 0.2$ $< 0 \dots 0.3$ Option 5P (Codes 55-59)	$\geq 0 \dots 0.1$ $< 0 \dots 0.2$
	[psi]	$\geq 0 \dots 5$	$\geq 0 \dots 2.5$ $< 0 \dots 5$	$\geq 0 \dots 1.5$ $< 0 \dots 2.5$
TEB @ -25 ... +85°C	[% FS typ.]	± 1.0	± 2.0	± 3.0
Accuracy @ +25°C	[% FS typ.]	± 0.3	± 0.5	± 1.0
NLH @ +25°C (BSL)	[% FS typ.]	± 0.2	± 0.3	± 0.3
TC zero point and span	[% FS/K typ.]	± 0.02	± 0.02	± 0.02
Long term stability 1 year @ +25°C	[% FS typ.]	± 0.2	± 0.2	± 0.2

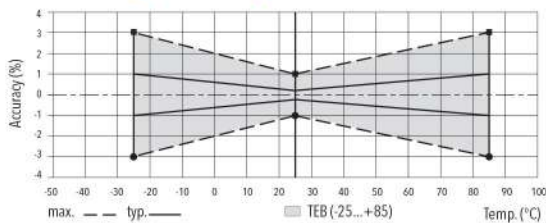
Measuring accuracy 1.0 %



Measuring accuracy 0.5 %



Measuring accuracy 0.3 %

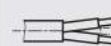


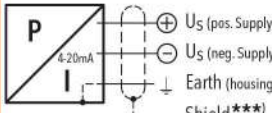
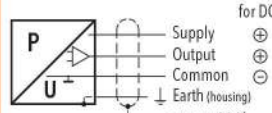
Additional information

Documents

Data sheet	www.trafag.com/H72326
Instructions	www.trafag.com/H73324
Flyer	www.trafag.com/H70663

Electrical connection

Protection / electrical connection									
IP65*)		IP67*)		IP68 max. 3m	IP68 max. 3 m	IP68 max. 3 m			
Industrial standard EN175301-803A **)		M12x1 **) 5-pole		Cable**)	Cable **)	Cable **)			
05 		35 		22 	24 	08 			
Ambient temperature		-25°C ... +125°C		-5°C ... +60°C	-20°C ... +70°C	-20°C ... +125°C			
UL-rated ambient temperature		-20°C ... +80°C		-5°C ... +60°C	-20°C ... +70°C	-20°C ... +80°C			

Output signal	 8473.XX.XXXX.XX.19	Standard	92	Standard	94	G9	H1	white brown yellow	white brown yellow	red black green
		2	1	4	1	1	1			
		1	2	1	3	3	2			
		↓	↓	5	5	4	5			
	 8473.XX.XXXX.XX.14/16/17/23	Standard	98	97	E8			white green brown yellow	white green brown yellow	red white black green
		2	3	1	2	1				
		3	1	3	4	3				
		1	2	2	3	2				
		↓	↓	↓	5	5				

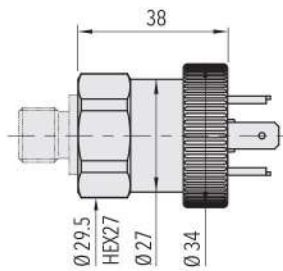
*) Provided female electrical plug is mounted according to instructions

**) Ventilation via male electric plug/cable end

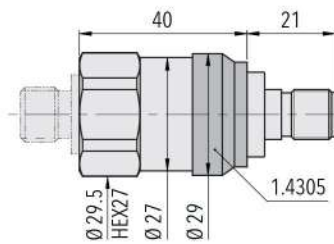
***) Only cable versions or female electrical plug with shield connection

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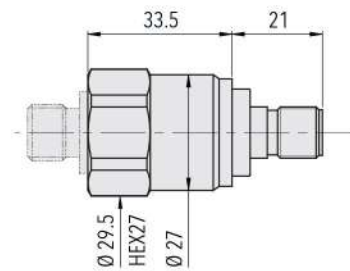
Dimensions



8473.XX.XXXX.05.XX.XX



8473.XX.XXXX.35.XX.XX



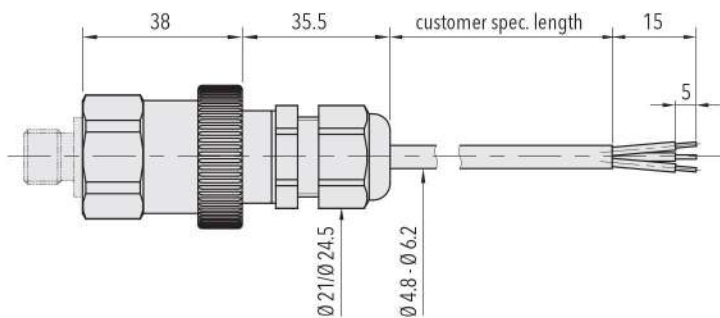
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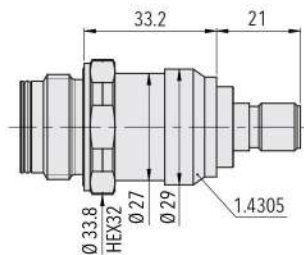
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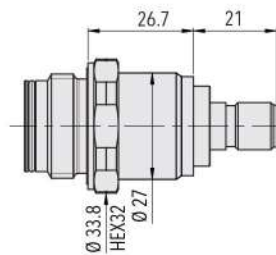
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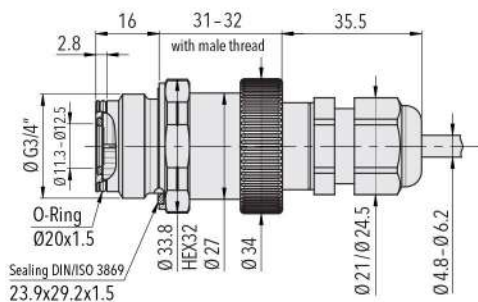
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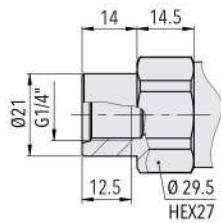
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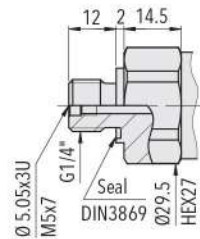
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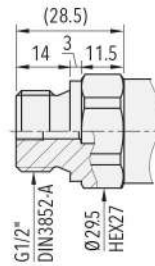
Dimensions



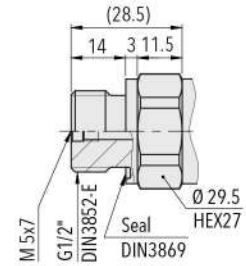
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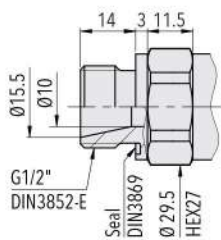
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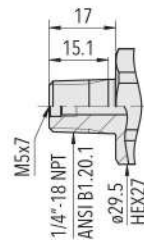
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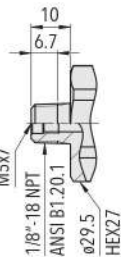
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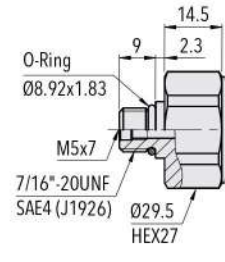
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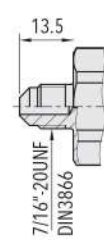
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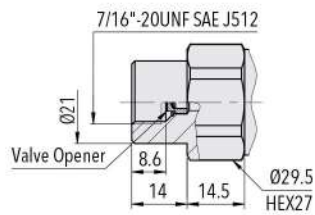
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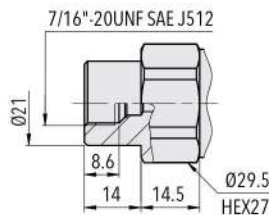
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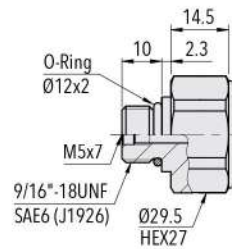
8473.XX.XX18.XX.XX.XX



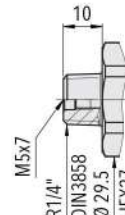
8473.XX.XX24.XX.XX.XX



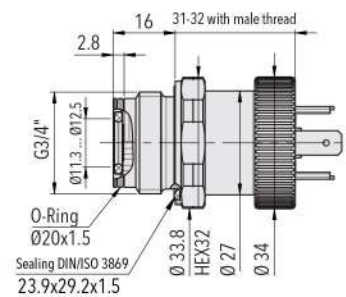
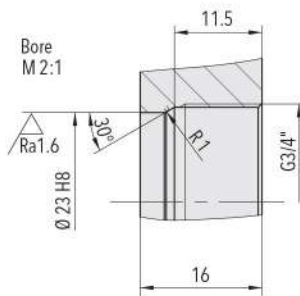
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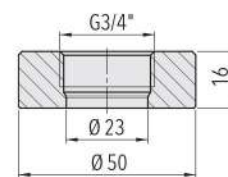
8473.XX.XX61.XX.XX.XX



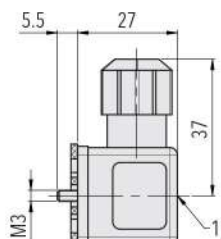
8473.XX.XX19.XX.XX.XX



8473.XX.XX52.05.XX.XX

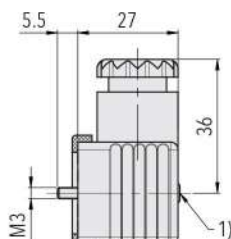


Welding flange (AISI 316L)
for G3/4" frontal membrane
Ordering No. C27805



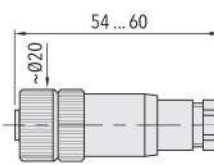
1) Tightening torque 50...60 Ncm

8473.XX.XXXX.XX.XX.46/56



1) Tightening torque 50...60 Ncm

8473.XX.XXXX.XX.XX.58



8473.XX.XXXX.XX.XX.33



علی صنعت

طراحی و تنظیم این کاتالوگ صد درصد توسط شرکت علی صنعت انجام شده
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