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 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.

S X

Applications

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

Features

- X
  II 1G Ex ia IIC T4/T6 Ga
  II 1D Ex ia IIIC T130° Da
  I m1 Ex ia 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, rmrS 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.		

Data sheet 923291 06/2019

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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[4]	1.2	25	69	0 ... 5[5]	18	350	F9
0 ... 0.6[4]	1.5	25	70	0 ... 10[5]	25	350	G0
0 ... 1.0[4]	2.0	25	71	0 ... 15[5]	30	350	G1
0 ... 1.6	3.5	80	73	0 ... 25	50	1200	G3
0 ... 2.5	5	100	75	0 ... 30	30	720	G5
0 ... 4	8	100	76	0 ... 50	120	860	G6
0 ... 6	12	100	77	0 ... 100	170	1450	G7
0 ... 10	20	200	78	0 ... 150	290	2900	G8
0 ... 16	32	200	79	0 ... 250	460	2900	G9
0 ... 25	50	300	80	0 ... 400	730	4350	H0
0 ... 40	80	300	81	0 ... 500	1160	4350	H1
0 ... 60	120	500	82	0 ... 1000	1740	5800	H2
0 ... 100	200	500	83	0 ... 1500	2900	7250	H3
0 ... 160	320	1000	85	0 ... 2000	4640	10850	H5
0 ... 250	500	1000	74	0 ... 3000	7250	14500	G4
0 ... 400	800	1500	84	0 ... 5000	11600	21750	H4
0 ... 600	1000	2000	86	0 ... 7500	14500	29000	H6
0 ... 1000[10]	1600	3000	88	0 ... 15000[10]	25000	45000	H8
0 ... 1600	3000	4000	89	0 ... 25000	45000	60000	H9
0 ... 2000	3000	4000	90	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 837[3,8]	53
G1/4” female[3,8]	10
G1/2” male[3,8]	21
G1/2” male (manometer) En 837[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	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 FD, 25 (m), 4 x 0.5mm² (cable length see “accessories”) - not ship approved[19]	78
Cable intrinsically safe with shield, material PVC, 2 x 0.75mm² (-40...+80°C), (cable length see “accessories”) - not ship approved[19]	80

Output signal

Signal output	Load resistance	I (supply)	U (supply)	
4 ... 20 ma	(usupply-10 V) / 20 ma		10 ... 30 VDC	19

trafag sensors controls

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Accessories		
	Female electrical connector En 175301-803-a (Din 43650-a), plastic (not for zones 0 (gas)	58
	Female electrical plug m12x1, 5-pole, plastic (not for zones 0 (gas)	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 [6] m	1M
	Cable length 3.0 [6] m	3M
	Cable length 5.0 [6] m	5M
	Special electrical connection: Pin 1 +, Pin 2 - (only for output signal 4 ... 20 mA) female electrical plug En175301-803-a (Din 43650-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, max. ambient and media temperature +85°C
[8] upon request
[9] With sensors 33 and 35: Overpressure 1300 bar/19000 psi, Burst pressure 2600 bar/38000 psi
[10] Cable length max. 20 m

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

Additional information

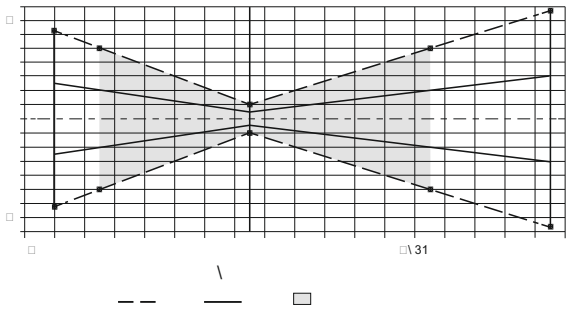
Documents	Data sheet	www.trafag.com/H72329
	Instructions	www.trafag.com/H73329
	Flyer	www.trafag.com/H70657

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

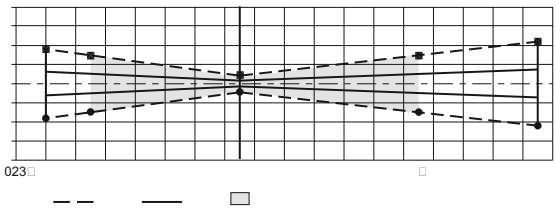
[1] See electrical connection

Accuracy		Class 0.5 % Ordering no. 25/35 (> 1 bar)	Class 0.3 % Ordering no. 23/33 (> 1 bar)	Class 0.5 % Ordering no. 26 (≤ 1bar)
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

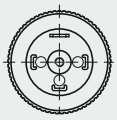
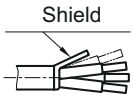
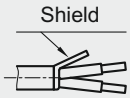
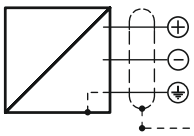
Class 0.5 %



Class 0.3 %



Electrical connection

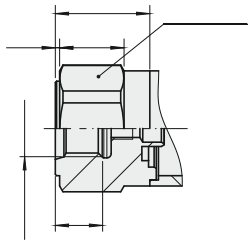
		Protection / electrical connection					
		IP65*	IP67 **	IP67 **	IP65*	IP67*	IP65*
		Industrial standard En175301-803a **05**	Cable (4 x 0.5 mm²) **78**	Cable (2 x 0.75 mm²) **80**	Binder 723 **14**	mIL-C 26482 **02**	m12x1 5-pole **35**
							
Output signal	 **8292** .xx.xxxx.xx.**19**	Standard 2 1 1 2 <e> <e> **92**	brown black yellow / green (blue = not connected)	1 (black) 2 (black) –	3 1 5	a C F	4 1 5
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
	For Ex zones	1, 2 20, 21, 22	0*, 1, 2 20, 21, 22		0, 1, 2 20, 21, 22		

* Attention! additional measure against static charges are required for Zone 0 to 20 for these cables (laid with earthed metal braid, metal hose or metal p

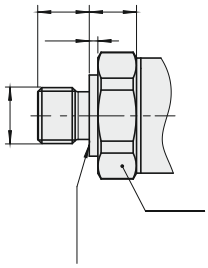
*) Provided female connector is mounted according to instructions
**) Ventilation via cable end
***) Only cable versions or female electrical plug with shield connection. With sections 33 and 35: max. +85°C
1)

Marking	
For Ex zones	Marking
0, 1, 2, 20, 21, 22 m1, m2	x II 1G Ex ia IIC T4/T6 Ga II 1D Ex ia IIIC T130°C Da I m1 Ex ia I ma
1, 2 20, 21, 22 m2	x II 2 G Ex ia IIC T4/T6 Gb (version with plastic type connector) II 1 D Ex ia IIIC T130°C Da I m1 Ex ia I ma

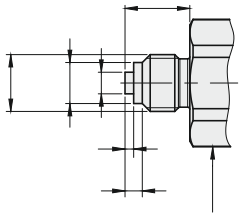
Dimensions



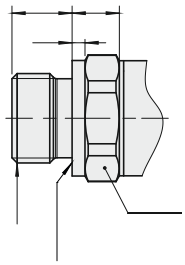
8292.xx.xx10.xx.xx.xx
(≤ 600 bar)



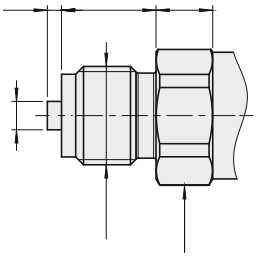
8292.xx.xx17.xx.xx.xx
(≤ 600 bar)



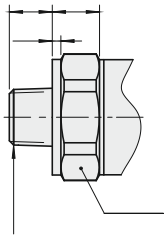
8292.xx.xx53.xx.xx.xx



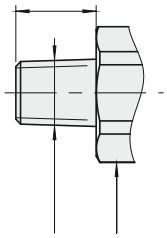
8292.xx.xx21.xx.xx.xx
(≤ 600 bar)



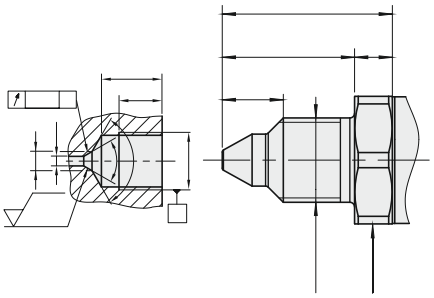
8292.xx.xx11.xx.xx.xx
(≤ 600 bar)



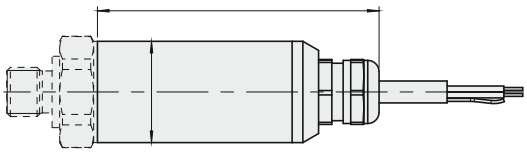
8292.xx.xx19.xx.xx.xx
(≤ 600 bar)



8292.xx.xx30.xx.xx.xx
(≤ 1000 bar)



8292.xx.xx29.xx.xx.xx
(> 600 bar)



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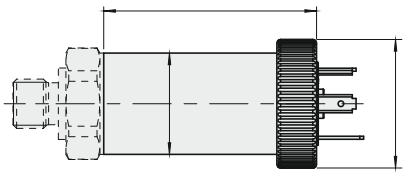

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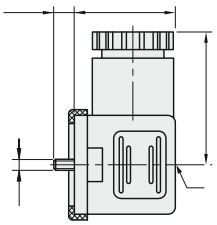

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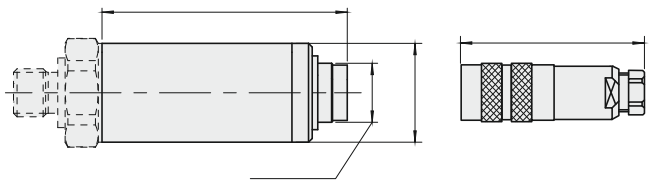

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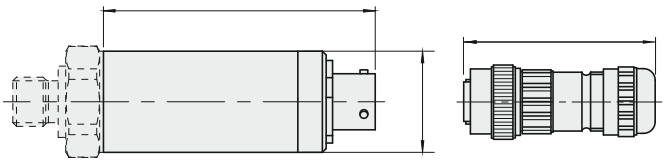

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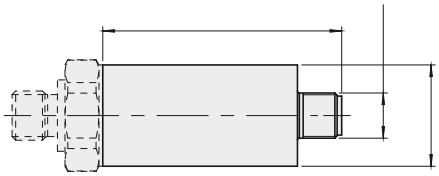

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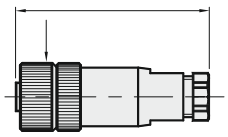

8292.xx.xxxx.xx.xx.33/35