

PICOTRANS

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The NPN pressure transmitter offers reliable and accurate pressure measurement over a wide temperature range. Its excellent long-term stability is based on the leading thin-film-on-steel sensor technology from Trafag. Its robust design and the block design with its optional flange connection makes the NPN the perfect choice for demanding applications such as marine and rail industries.



Applications

- Shipbuilding
- Engine manufacturing
- Railways
- Machine tools
- Hydraulics

Features

- Compact design
- Flange connection (PICO family)
- High vibration resistance
- Good temperature resistance
- Completely welded steel sensor system without additional seals

Technical Data			
Measuring principle	Thin film on steel	Media temperature	-40°C ... 100°C
Measuring range	0 ... 2.5 to 0 ... 250 bar	Ambient temperature	-40°C ... 100°C
Output signal	4 ... 20 mA	Approval	ABS, BV, CCS, DNV, GL, KRS, LRS, NKK, RINA, RMRS
Accuracy @ 25°C typ.	± 0.5 % FS typ. ± 0.3 % FS typ.		

05/2014

Data sheet H72313k

Subject to change

Ordering information/type code

				8264 . XX . XX . XX . XX . XX
Measuring range ¹⁾	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [bar]	
	0 ... 2.5	5	100	75
	0 ... 4	8	100	76
	0 ... 6	12	100	77
	0 ... 10	20	200	78
	0 ... 16	32	200	79
	0 ... 25	50	300	80
	0 ... 40	80	300	81
	0 ... 60	120	500	82
	0 ... 100	200	500	83
	0 ... 160 ²⁾	320	1000	85
0 ... 250 ²⁾	500	1000	74	
Sensor	Relative pressure, accuracy: 0.3% ³⁾			23
	Relative pressure, accuracy: 0.5%			25
Pressure connection	G1/4" female			10
	M10x1.0 female			17
	G1/8" female			18
Electrical connection	Male electrical plug: EN 175301-803-A (DIN43650-A), Mat.: PA			04
	Cable with shield: Material: FDR 25 (Raychem) 4 x 0.5mm ² (Cable length see "Accessories")			78
Output	Output	Load resistance	I (supply)	U (supply)
	4 ... 20mA	(U _{supply} -9V) / 20mA		24 (9 ... 32)VDC
Accessories	Flange with O-Ring ⁴⁾			41
	Pressure peak damping element ø 1.0 mm			40
	Pressure peak damping element ø 0.3 mm			43
	Pressure peak damping element ø 0.5 mm			45
	Welsh plug G1/8"			57
	Welsh plug G1/4"			74
	Female electrical connector EN 175301-803-A (DIN43650-A)/NBR, -40...90°C			58
	Elbow connector female: 90° EN 175301-803-A (DIN43650-A)/NBR, -40...90°C			55
	Fixing set			V3
	Special electrical connection: Pin 1 + , Pin 2 - (Only for output 4...20mA and male electrical plug EN175301-803-A / DIN43650-A)			92
	Cable length 1.5 m			1M
	Cable length 3.0 m			3M
	Cable length 5.0 m			5M

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

²⁾ Only for pressure connection G1/4"

³⁾ Flange (accessory 41) ≤ 40 bar only

⁴⁾ Only for pressure connection G1/8" or G1/4"

Standard products (extra short lead time)

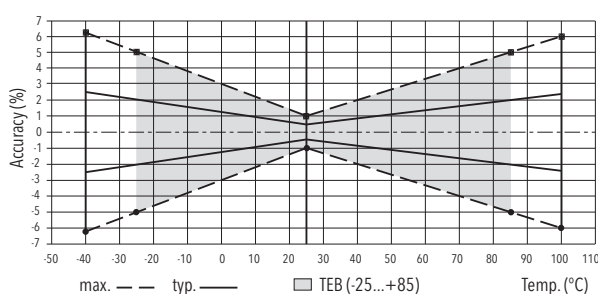
Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Supply [VDC]	NLH @ 25°C (BSL) FS typ. [%]
NPN4.0A4	8264 76 2510 04 0000 0000 19 58 V3	0...4	10	24 (9 ... 32)	±0.2
NPN6.0A4	8264 77 2510 04 0000 0000 19 58 V3	0...6	15	24 (9 ... 32)	±0.2
NPN10.0A4	8264 78 2510 04 0000 0000 19 58 V3	0...10	20	24 (9 ... 32)	±0.2
NPN16.0A4	8264 79 2510 04 0000 0000 19 58 V3	0...16	32	24 (9 ... 32)	±0.2
NPN25.0A4	8264 80 2510 04 0000 0000 19 58 V3	0...25	50	24 (9 ... 32)	±0.2
NPN40.0A4	8264 81 2510 04 0000 0000 19 58 V3	0...40	80	24 (9 ... 32)	±0.2
NPN4.0AF4	8264 76 2510 04 0000 0000 19 41 58 74 V3	0...4	10	24 (9 ... 32)	±0.2
NPN6.0AF4	8264 77 2510 04 0000 0000 19 41 58 74 V3	0...6	15	24 (9 ... 32)	±0.2
NPN10.0AF4	8264 78 2510 04 0000 0000 19 41 58 74 V3	0...10	20	24 (9 ... 32)	±0.2
NPN16.0AF4	8264 79 2510 04 0000 0000 19 41 58 74 V3	0...16	32	24 (9 ... 32)	±0.2
NPN25.0AF4	8264 80 2510 04 0000 0000 19 41 58 74 V3	0...25	50	24 (9 ... 32)	±0.2
NPN40.0AF4	8264 81 2510 04 0000 0000 19 41 58 74 V3	0...40	80	24 (9 ... 32)	±0.2

Specifications		
Electrical Data	Output / supply voltage	4...20 mA: 24 (9...32) VDC
	Rise time	typ. 1 ms/10...90% nominal pressure
Environmental Conditions	Media temperature	-40°C ... 100°C
	Ambient temperature	-40°C ... 100°C
	Protection ¹⁾	Electrical connection 04: IP65 Electrical connection 78: IP69K
	Humidity	Max. 95% relative
	Vibration	Electrical connection 04/accessory 55: 10g (50...2000 Hz) Electrical connection 04: 15g (50...2000 Hz) Electrical connection 78: 15g rms
	Shock	50g/ 3 ms
EMC Protection	Emission	EN/IEC 61000-6-4
	Immunity	EN/IEC 61000-6-2
Mechanical Data	Sensor	1.4542 (AISI630)
	Housing / Pressure connection	1.4542 (AISI630) / 1.4301 (AISI304)
	Sealing	NBR
	Male electrical plug	See ordering information
	Weight	~ 190...220 g
	Mounting torque	See accessories

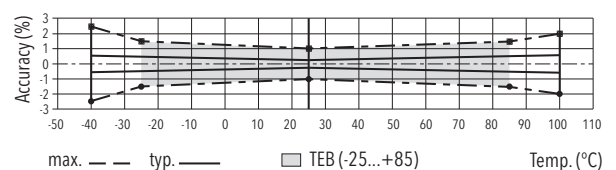
¹⁾ Electrical connection 04: Provided female connector is mounted according to instructions

Accuracy			
		Measuring accuracy 0.5%	Measuring accuracy 0.3%
		Ordering No. 25	Ordering No. 23
TEB @ -25...+85°C	[% FS typ.]	± 2.0	± 0.5
Accuracy @ +25°C	[% FS typ.]	± 0.5	± 0.3
NLH @ +25°C (BSL)	[% FS typ.]	± 0.2	± 0.1
TC zero point and span	[% FS/K typ.]	± 0.03	± 0.005
Long term stability 1 year @ +25°C	[% FS typ.]	± 0.2	± 0.2

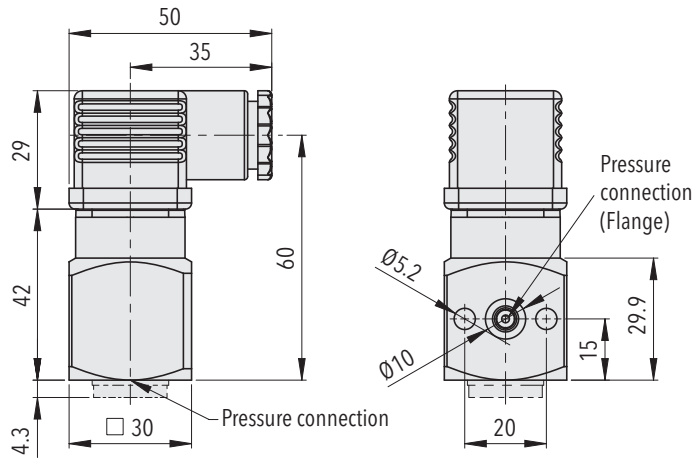
Measuring accuracy 0.5%



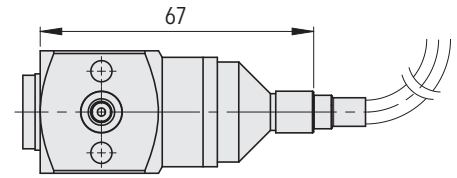
Measuring accuracy 0.3%



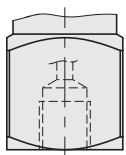
Dimensions



8264.XX.XXXX.04.XX.XX



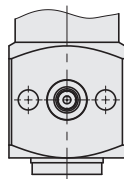
8264.XX.XXXX.78.XX.XX



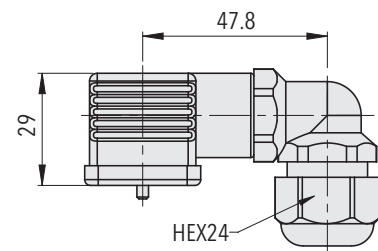
G 1/4"x12: 8264.XX.XX10.XX.XX.XX

G 1/8"x10: 8264.XX.XX18.XX.XX.XX

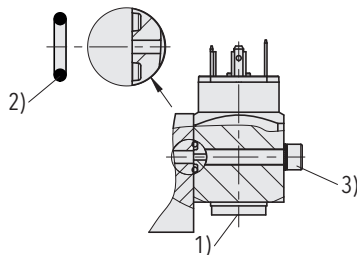
M10x1x10: 8264.XX.XX17.XX.XX.XX



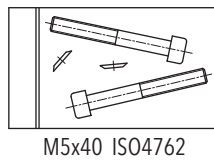
Flange: 8264.XX.XXXX.XX.XX.41



8264.XX.XXXX.XX.XX.55



8264.XX.XXXX.XX.XX.41



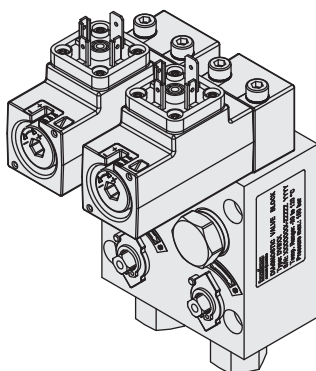
8264.XX.XXXX.XX.XX.V3

1) Torque: G 1/4": $M_A = 32 \dots 40 \text{ Nm}$

2) O-Ring: $\varnothing 6.75 \times 1.78 \text{ NBR 90 Sh}$

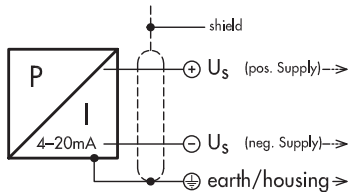
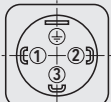
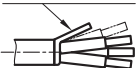
3) Fixing screw: M5; property class: 8.8; torque: $4.5 \dots 6 \text{ Nm}$

4) Torque connector center screw: max. 0.4 Nm



Diagnostic Valve Bloc (DVB)
see specification sheet H72361

Electrical Connection

		Protection / electrical connection	
		IP65	IP69K
Output signal  <p>8264.xx.XXXX.xx.19</p>		Industrial standard EN175301-803A 04 	Cable **) 78 Shield 
		Standard 2 1 ⊕	with accessory 92 1 2 ⊕

***) Ventilation via cable end

Additional information

Documents

Data sheet	www.trafag.com/H72313
Instructions	www.trafag.com/H73313
Flyer	www.trafag.com/H70673

Additional specifications

Electrical Data	Resistance of insulation	> 10 MΩ, 250 VDC
	Dielectric strength	250 VAC, 50 Hz
	Output signal	Appr. 24 mA (Overload)
Environmental Conditions	Storage temperature	-40°C ... 100°C
EMC Protection	ESD	EN/IEC 61000-4-2, Level 3
	RFI	EN/IEC 61000-4-3, Level 3
	Burst	EN/IEC 61000-4-4, Level 3
	Surge	EN/IEC 61000-4-5, Level 3
	Conducted Immunity	EN/IEC 61000-4-6, Level 3

Accuracy

		Measuring accuracy 0.5%	Measuring accuracy 0.3%
		Ordering No. 25	Ordering No. 23
TEB @ -25...+85°C	[% FS max.]	± 5.0	± 1.5
Accuracy @ +25°C	[% FS max.]	± 1.0	± 1.0
NLH @ +25°C (BSL)	[% FS max.]	± 0.35	± 0.15
NLH @ +25°C (BSL through 0)	[% FS typ.]	± 0.3	± 0.1
NLH @ +25°C (BSL through 0)	[% FS max.]	± 0.5	± 0.15
Repeatability	[% FS typ.]	± 0.05	± 0.05
TC zero point and span	[% FS/K max.]	± 0.05	± 0.015
Long term stability 1000h @ 85°C	[% FS typ.]	± 0.1	± 0.1
Temperature hysteresis	[% FS typ.]	± 0.2	± 0.2
	[% FS max.]	± 0.35	± 0.35
Deviation of zero signal and final value @ 25°C	[% FS typ.]	± 0.2	± 0.2
	[% FS max.]	± 0.5	± 0.5

Modifications

Index	Date	Description
1	02/2006	new data sheet
2	03/2006	Page 3: changed weight Page 5: changed: deviation of zero signal and final value (on ordering no. 23); changed: current limiter from 32mA to 24mA
a	03/2006	Page 1: removed „provisional“-status
b	05/2006	Page 3: added housing material; changed sensor material changed catalogsheet-no. from 2.3.1.11 to 2.3.1.29
	09/2006	Page 2: 160/250 bar with ** / Code for stock products added
c	05/2007	Page 2: added accessory 55 elbow connector female 90°
d	08/2008	Page 2: Female electrical connector 56 removed Page 3: Environmental conditions: vibration amended: execution 55: 10g (50...2000 Hz), others: 15g (50...2000Hz)
e	09/2008	Page 2: Execution 78 added/ cable length 1M/3M/5M added Page 3: Protection execution 78 IP69K added Page 3: Vibration executions specified (04 with acc. 55/ 04/ 78) Page 4: Electrical connection diagram adapted Page 5: Additional specifications: Measuring accuracy 0.3% long term stability 1000h @ 85°C: changed from 0.35% FS max. to 0.1% FS typ.
f	12/2009	Page 2 Sensor 23: Remark „Flange (accessory 41) ≤ 40 bar only" added
g	02/2010	Page 1: Chinese Ship Approval CCS added
h	05/2010	Page 3: IP Protection with remark: ²⁾ „provided female connector is mounted according to instructions" Page 4: Electrical connection: new remark: ³⁾ Ventilation via cable end
i	02/2014	All pages: Pressure range 400 bar removed due to low sales Page 3: Sensor material changed to 1.4542
k	05/2014	New layout NLH @ 25°C (BSL) as main specification and NLH @ 25°C (BSL through 0) as additional specification