

FOR FINE PRESSURE AND FLOW MEASUREMENT

# OEM Relative and absolute pressure transmitter type 516

Pressure range -1 ... 0 – 16 bar



Used in combination with a unique integrated electronic design the type 516 gives a high degree of accuracy for all temperature ranges.

This technology, with its amplified ratiometric output signal, allows direct assembly without the need of user temperature or pressure adjustment.

- Integrated amplifier electronics
- No customer specific adjustment necessary
- Excellent EMC capacity by reinforcement on measuring cell
- Easy and quick fitting on PCB
- Negligible temperature influence on accuracy

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#### Technical overview Pressure range Relative -1 ... 0 – 16 bar 0 ... 1 – 16 bar Absolute Barometric sensor 0.8 ... 1.4 bar Operating conditions Liquids and gases Medium NBR -25 ... +80 °C Medium / ambient -30 ... +80 °C FPM spec Temperature \* in packaging -40 ... +65 °C Storage without packaging -40 ... +80 °C 3.0 x fs < 6 Overload / rupture pressure 2.5 x fs > 6 PΑ Case PA / Stainless steel 1.4305 Pressure connection Materials in contact with medium Sensor Ceramic Al<sub>2</sub>O<sub>3</sub> (96%) NBR, FPM spec Sealing material Elektrical overview Power supply Current consumption Output Load 5 <u>VDC ±5%</u> With full scale adjustment > 10 kO<u>hm / < 100 nF</u> ratiom. 10 ... 90% < 4 mA < 4 mA > 10 kOhm / < 100 nF ratiom. 10 ... 60% ±1.2 V 5 VDC ±5% Without full scale adjustment ESD handling Necessary

Dynamic response

Electromagnetic compatibility

Response time	< 2 ms, typ. 1 ms
Load cycle	< 100 Hz

The product is designed exclusively for installation in equipment. The customer is responsible for CE conformity.

#### **Protection standard**

IP 00

#### Electrical connection

Flexible connector	(Prevent repeated bending)
Contact spacing Bast 2.54 (100 mil)	

### Pressure connection

Plastic	quick	fitting
Metal		

# Installation arrangement

Unrestricted

# Tests / Admissions The according to the property of the prope

Vibration acc. DIN IEC 600-68-2-6	20 $g$ , 2 2000 Hz with amplitude $\pm$ 15 mm, 10 Octave/min. all 3 directions, 3 constant load.

# Weight

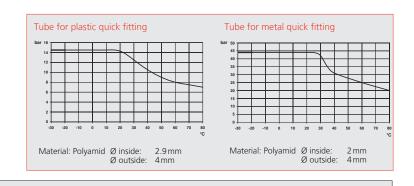
With plastic quick fitting	~ 15 g
With metal quick fitting	~ 25 g

#### Packaging

Multiple packaging 4 blisters in covering box (140 pcs)

#### \*) Please note:

Max. admissible pressure and temperature can be limited with the applied tube (see diagram). It is essential to consider the manufacturers' instruction for the tube.



# Accuracy

Parameter		Unit	-1 0 – 16 bar	barometric sensor
Tolerance zero point 1)	max.	% fs	±0.5	±0.5
Tolerance full scale 1)	max.	% fs	±0.5	±0.5
Resolution		% fs	0.1	0.1
Total of linearity,				
hysteresis and repeatability		% fs	±0.5	±0.8
Long term stability acc. to DIN EN 60770		% fs	±0.5	±0.5
TC zero point 2)	max.	% fs/10K	±0.3	±0.3
TC sensitivity 2)	max.	% fs/10K	±0.2	±0.2

Test conditions: 25 °C, 45% RH, Power supply 24 VDC TC z.p. / TC s. -15 ... +80 °C

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 $^{1)}$  Versions with full scale adjustment, only  $^{2)}$  TC = Temperature coefficient

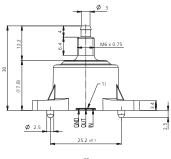
Order code selection table			516.	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Pressure mode	Relative			9						
	Absolute			8						
Pressure range	-1 + 0 bar			9	0	0				
	0.8 + 1.4 bar barometric Sensor			8	1	0				
	0 + 1 bar				1	1				
	0 + 1.6 bar				1	2				
	0 + 2.5 bar				1	4				
	0 + 4 bar				1	5				
	0 + 6 bar				1	7				
	0 + 10 bar				3	0				
	0 + 16 bar				3	1				
	▲ Full scale signal at these pressures									
Sealing material/	O-Ring NBR	Plastic quick fitting					2			
Pressure connection	O-Ring FPM spec.	Plastic quick fitting					6			
	O-Ring NBR	Metal quick fitting					3			
	O-Ring FPM spec.	Metal quick fitting					7			
Adjustment / Output	Factory zero point and fullscale adjustment	ratiom. 10 90%	at 5 VDC power supply					0	4	
	Factory adjustment (only zero point)	ratiom. 10 60% ±1.2V	at 5 VDC power supply	9				1	8	
Pressure range variation 1)	Indicate W and state range on order (e.g.: W0 + 8 bar/OUT0.54.5V)						0	4	W	

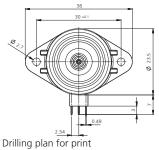
# Accessories 2)

		Order number
Self tapping filister head screw WN 1412	KA22x8	108436
Mounting set for 35 pieces (screws, serrated look washers, nuts)	M2.5x10	111423
Calibration certificate		104551

# Dimensions in mm / Electrical connections

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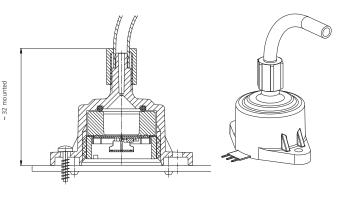
30 ±0.1

- $^{\rm D}$  Keep the space at the flex cable open for relative pressure for the pressure compensation. Do not seal or cover it.

- <sup>2)</sup> Securing holes
   for self tapping screw (K22) Ø 1.75 mm
   for metric screw (M2.5) Ø 2.7mm
  We recommend metric screws with nut instead of self tapping screws for higher pressure or eventual mechanical loads.
  (see accessories mounting set)

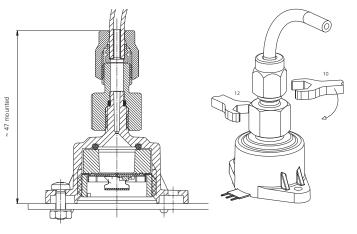
3) Positioning holes





IN OUT GND

## Pressure connection: Metal quick fitting for higher pressure / higher temperature



Installation advice for metal screwing

- 1. It is essential to connect the tube to the sensor before mounting on the pcb.
- 2. Assemble finger tight, final adjustment 1.5 turn with spanner 10.

1) Versions with full scale adjustment, only

<sup>2)</sup> Accessories supplied loose