

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

Technical overview

Pressure range

Relative	-1 ... 0 – 16 bar
Absolute	0 ... 1 – 16 bar
Barometric sensor	0.8 ... 1.4 bar

Operating conditions

Medium		Liquids and gases	
Temperature *	Medium / ambient	NBR	-25 ... +80 °C
		FPM spec.	-30 ... +80 °C
	Storage	in packaging	-40 ... +65 °C
		without packaging	-40 ... +80 °C
Overload / rupture pressure*		< 6	3.0 x fs
		≥ 6	2.5 x fs

Materials

Case		PA
Materials in contact with medium	Pressure connection	PA / Stainless steel 1.4305
	Sensor	Ceramic Al ₂ O ₃ (96%)
	Sealing material	NBR, FPM spec.

Elektrical overview

With full scale adjustment	Output ratiom. 10 ... 90%	Power supply 5 VDC ±5%	Load > 10 kOhm / < 100 nF	Current consumption < 4 mA
Without full scale adjustment	ratiom. 10 ... 60% ±1.2 V	5 VDC ±5%	> 10 kOhm / < 100 nF	< 4 mA
ESD handling				Necessary
Electromagnetic compatibility	The product is designed exclusively for installation in equipment. The customer is responsible for CE conformity.			

Dynamic response

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

Protection standard

IP 00	
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Electrical connection

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

Pressure connection

Plastic quick fitting	
Metal quick fitting	

Installation arrangement

Unrestricted	
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Tests / Admissions

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

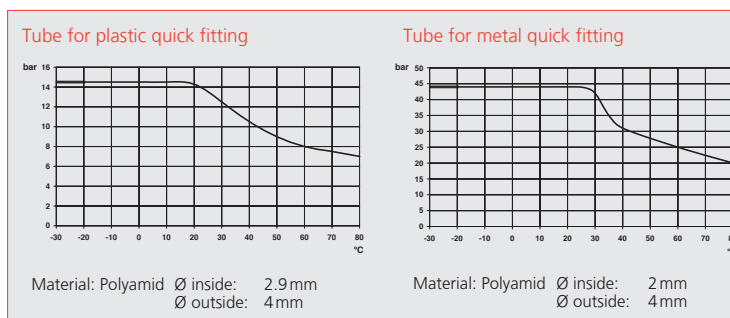
With plastic quick fitting	~ 15 g
With metal quick fitting	~ 25 g

Packaging

Multiple packaging 4 blisters in covering box (140 pcs)	
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*) 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

¹⁾ Versions with full scale adjustment, only

²⁾ TC = Temperature coefficient

Order code selection table

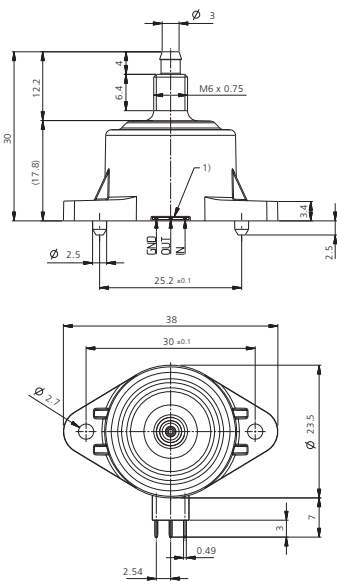
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Pressure mode	Relative		9						
	Absolute		8						
Pressure range	-1 ... + 0 bar		9	0	0				
	0.8 ... + 1.4 bar	barometric Sensor	8	1	0				
	0 ... + 1 bar			1	1				
	0 ... + 1.6 bar			1	2				
	0 ... + 2.5 bar			1	4				
	0 ... + 4 bar			1	5				
	0 ... + 6 bar			1	7				
	0 ... + 10 bar			3	0				
	0 ... + 16 bar		3	1					
	▲ Full scale signal at these pressures								
Sealing material/ Pressure connection	O-Ring NBR	Plastic quick fitting						2	
	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	ration. 10 ... 90%							0 4
	Factory adjustment (only zero point)	ration. 10 ... 60% ±1.2V	9						1 8
Pressure range variation ¹⁾	Indicate W and state range on order (e.g.: W0... + 8 bar/OUT0.5...4.5V)								0 4 W

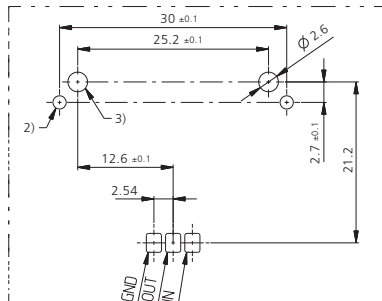
Accessories ²⁾

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

Dimensions in mm / Electrical connections



Drilling plan for print

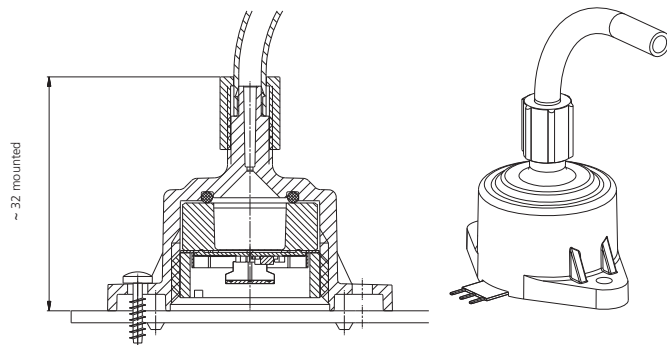


¹⁾ Keep the space at the flex cable open for relative pressure for the pressure compensation. Do not seal or cover it.

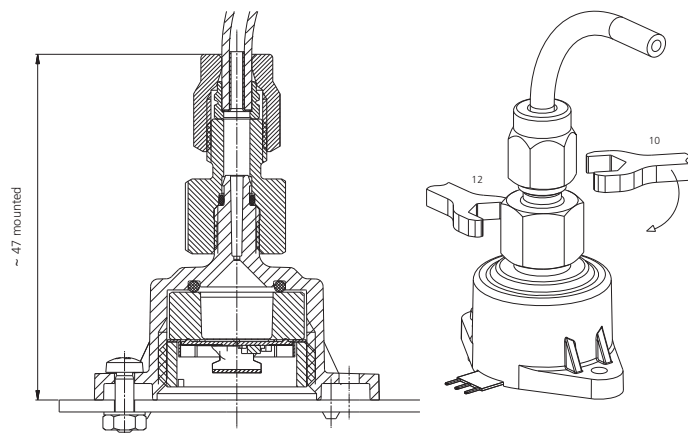
²⁾ Securing holes
 – for self tapping screw (K22) Ø 1.75 mm
 – for metric screw (M2.5) Ø 2.7 mm
 We recommend metric screws with nut instead of self tapping screws for higher pressure or eventual mechanical loads.
 (see accessories mounting set)

³⁾ Positioning holes

Pressure connection: Plastic quick fitting (standard)



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

²⁾ Accessories supplied loose

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