



Pressure transmitter



Huba Control

OEM Relative and absolute pressure transmitter

Type 516

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.

Pressure range
-1 ... 0 – 16 bar

- + 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

Output	Power supply	Load	Current consumption
With full scale adjustment	5 VDC ±5%	> 10 kOhm / < 100 nF	< 4 mA
Without full scale adjustment	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

Electrical connection

Flexible connector (Prevent repeated bending)

Protection standard

IP 00

Contact spacing Rast 2.54 (100 mil)

Pressure connection

Plastic quick fitting
Metal quick fitting

Installation arrangement

Unrestricted

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.

Weight

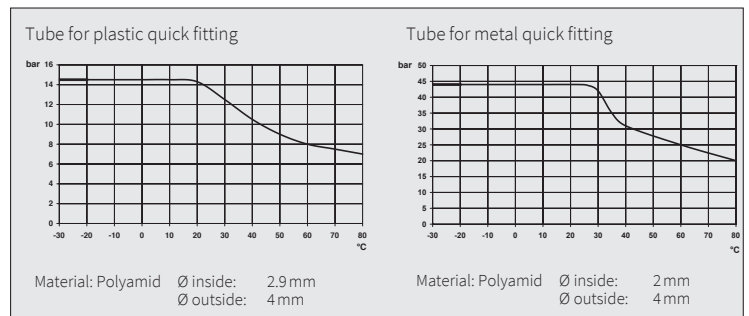
With plastic quick fitting	~ 15 g
With metal quick fitting	~ 25 g

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	Einheit	-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

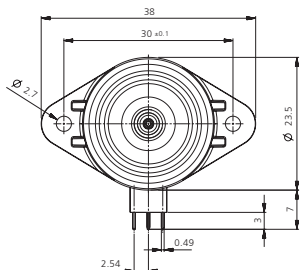
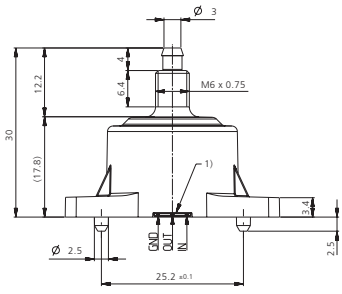
¹⁾ Versions with full scale adjustment, only

²⁾ TC = Temperature coefficient

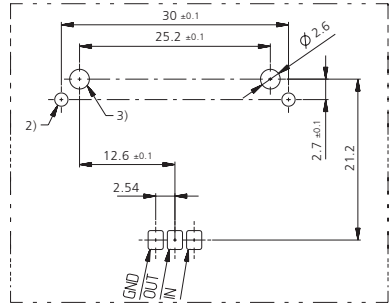
		1	2	3	4	5	6	7		
Order code selection table		516. X X X X X X X								
Pressure mode	Relative	9								
	Absolute	8								
Pressure range	-1 ... 0 bar	9	0	0						
	0.8 ... 1.4 bar barometric Sensor	8	1	0						
	0 ... 1 bar		1	1						
	0 ... 1.6 bar		1	2						
	0 ... 2.5 bar		1	4						
	0 ... 4 bar		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			
		Metal quick fitting					3			
	O-Ring FPM spec.	Plastic quick fitting					6			
		Metal quick fitting					7			
Adjustment / Output	Factory adjustment zero point and fullscale	ration. 10 ... 90%					0	4		
	Factory adjustment zero point only	ration. 10 ... 60% ±1.2V					1	8		
Pressure range variation ¹⁾ (Optional)	Indicate W and state range on order (e.g.: W0... +8 bar/OUT0.5...4.5V)							0	4	W

Accessories (supplied loose)		Order number
Self tapping filister head screw WN 1412	KA22x8	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

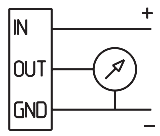
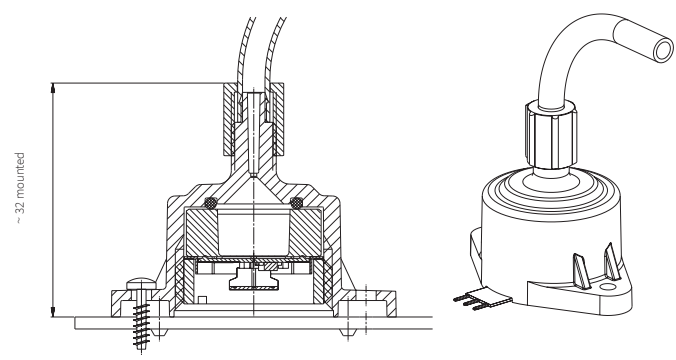


¹⁾ Keep the space at the flex cable open for relative pressure for the pressure compensation. Do not seal or cover it.

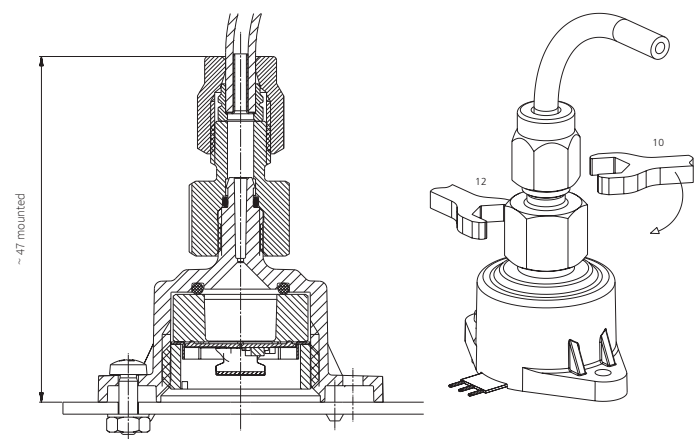
²⁾ Securing holes
 - for self tapping screw (K22) Ø 1.75 mm
 - for metric screw (M2.5) Ø 2.7 mm
 We recommend metric screws with nut instead of self tapping screws for higher pressure or eventual mechanical loads. (see accessories mounting set)

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

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