



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

Materials

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

Elektrical overview

	Output	Power supply	Load	Current consumption
With full scale adjustment	ration. 10 ... 90%	5 VDC ±5%	> 10 kOhm / < 100 nF	< 4 mA
Without full scale adjustment	ration. 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

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

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

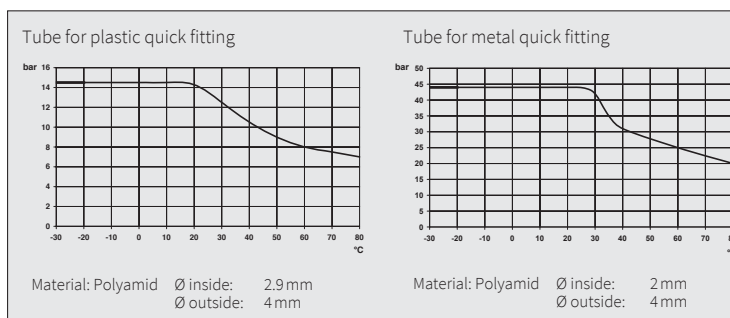
With plastic quick fitting	~ 15 g
With metal quick fitting	~ 25 g

Packaging

Multiple packaging 4 blisters in covering box (140 pcs)

* 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

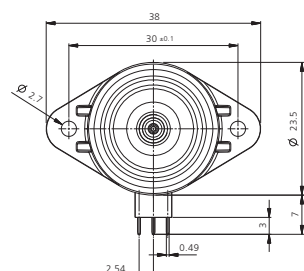
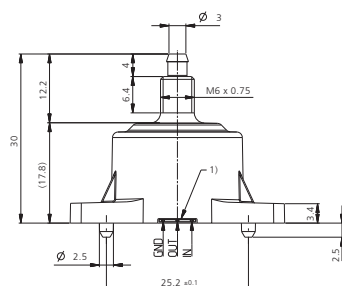
¹⁾ Versions with full scale adjustment, only

²⁾ TC = Temperature coefficient

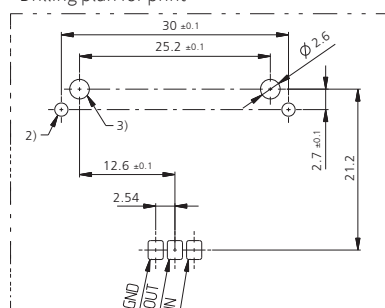
		1	2	3	4	5	6	7
Order code selection table		516.	X	X	X	X	X	X
Pressure mode	Relative	9						
	Absolute	8						
Pressure range	-1 ... + 0 bar	9	0	0				
	0.8 ... + 1.4 bar barometric Sensor	8	1	0				
	0 ... + 1 bar		1	1				
	0 ... + 1.6 bar		1	2				
	0 ... + 2.5 bar		1	4				
	0 ... + 4 bar		1	5				
	0 ... + 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 ratiom. 10 ... 90% at 5VDC power supply					0	4	
	Factory adjustment zero point only ratiom. 10 ... 60% ±1.2V at 5VDC power supply	9				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 ²⁾	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

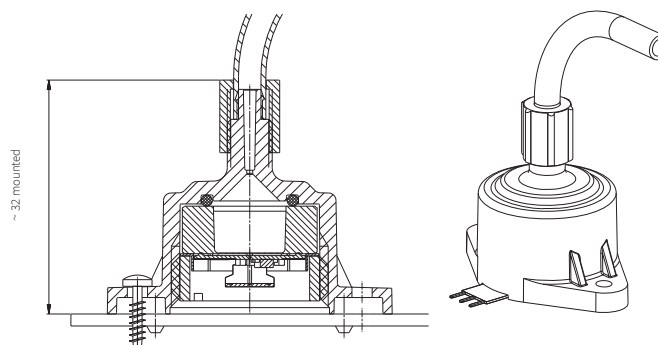


¹⁾ Keep the space at the flex cable open for relative pressure for the pressure compensation. Do not seal or cover it.

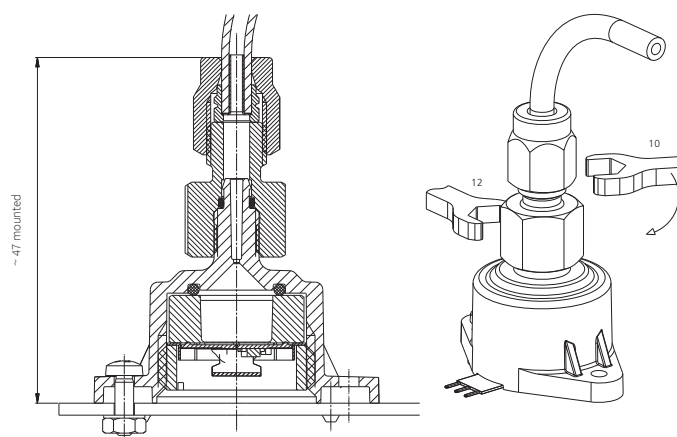
²⁾ Securing holes
 – for self tapping screw (K22) Ø 1.75 mm
 – for metric screw (M2.5) Ø 2.7 mm
 We recommend metric screws with nut instead of self tapping screws for higher pressure or eventual mechanical loads.
 (see accessories mounting set)

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.

Huba Control AG

Headquarters Schweiz
Industriestrasse 17
CH-5436 Würenlos
Telefon +41 56 436 82 00
Fax +41 56 436 82 82
info.ch@hubacontrol.com

Huba Control AG

Niederlassung Deutschland
Schlattgrabenstrasse 24
D-72141 Walddorfhäslach
Telefon +49 7127 2393 00
Fax +49 7127 2393 20
info.de@hubacontrol.com

Huba Control AG

Vestiging Nederland
Hamseweg 20A
NL-3828 AD-Hoogland
Telefoon +31 33 433 03 66
Telefax +31 33 433 03 77
info.nl@hubacontrol.com

Huba Control SA

Succursale France
Rue Lavoisier
Technopôle Forbach-Sud
F-57602 Forbach Cedex
Téléphone +33 3 87 84 73 00
Télécopieur +33 3 87 84 73 01
info.fr@hubacontrol.com

Huba Control AG

Branch Office United Kingdom
Unit 13 Berkshire House, County Park
Business Centre, Shivenham Road
Swindon - Wiltshire SN1 2NR
Phone +44 1993 77 66 67
Fax +44 1993 77 66 71
info.uk@hubacontrol.com

www.hubacontrol.com

