

OEM Relative and absolute pressure measuring cell type 513

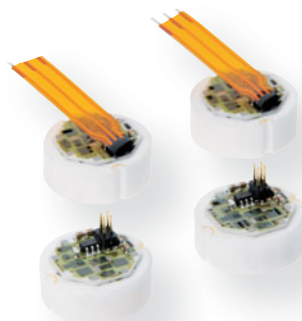
Pressure range
-1 ... 0 – 600 bar

www.btone-mro.com

Type 513 pressure measuring cells have an adjusted, amplified sensor signal. They are especially suitable for high volume OEM applications.

The unique integrated electronics allow installation without the need for temperature and pressure adjustment by the customer.

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



Technical overview

Pressure range ¹⁾

Relative	-1 ... 0 – 600 bar
Absolute	0 ... 1 – 25 bar

Operating conditions

Medium		Liquids and gases
Temperature	FPM	-15 ... +125 °C
	NBR	-25 ... +85 °C
	FPM spec.	-30 ... +150 °C
	Storage	-40 ... +130 °C
	in packaging	-40 ... +65 °C
Temperature influences at range -30 ... +125 °C	TC-zero point ²⁾	max. ± 0.15% fs/10K
	TC-full scale ²⁾	max. ± 0.15% fs/10K
Overload / rupture pressure ³⁾	-1 ... 4 bar	3 x fs
	6 ... 60 bar	2.5 x fs
	> 60 bar	2.0 x fs
Humidity protection (optional)		KFW, 20 days acc. DIN 50017

Material in contact with the medium

Measuring cell	Ceramic Al ₂ O ₃ (96%)
Sealing material	FPM, NBR, FPM spec.

Electrical overview

Output	with full scale adjustment	ration. 10 ... 90%
	without full scale adjustment	ration. 10 ... 60% ±1.2 V
Power supply		5 VDC ±5%
Load		> 10 kOhm / < 100 nF
Current consumption	At nominal pressure without load	< 4 mA
ESD-handling		Necessary
Electromagnetic compatibility	The product ist designed exclusively for installation in equipment which complies with EU directives. The customer is responsible for CE conformity.	

Dynamic response

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

Electrical connections

Connector RAST 1.27	
Flex connection RAST 2.54	

Installation arrangement

According to recommendation of Huba Control with special assembly instructions

Weight

~ 5 g

Packaging (multi packaging)

With connector in covering box	5 Blisters 96 pcs each	(= 480 pcs)
With flex connection in covering box	5 Blisters 80 pcs each	(= 400 pcs)

Accuracy

Parameter	Unit	
Tolerance zero point with full scale adjustment	% fs	± 0.5
Tolerance full scale with full scale adjustment	% fs	± 0.5
Tolerance zero point without full scale adjustment	V	0.5 ± 0.02
Tolerance full scale without full scale adjustment	V	3.0 ± 1.2
Resolution	% fs	0.1
Total of linearity, hysteresis and repeatability	max. % fs	± 0.3
Barometric sensor	max. % fs/10K	± 0.5
Long term stability acc. to DIN EN 60770	% fs	± 0.5

¹⁾ Other pressure ranges on request

²⁾ TC = Temperature coefficient

³⁾ Higher overload / higher rupture pressure on request

Order code selection table 513. X X X X X X

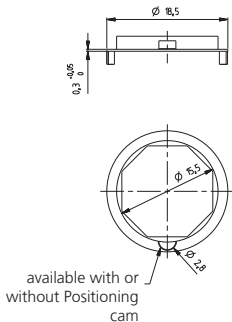
Pressure mode	Relative, axial sealed	9						
	Absolute, axial sealed (≤ 60 bar)	8						
	Relative, radial sealed (≤ 60 bar)	R						
	Absolute, radial sealed (≤ 60 bar)	A						
Pressure range	-1 ... + 0 bar	9,R	0	0				
	0.8 ... + 1.4 bar barometric sensor	8,A	1	0				
	0 ... + 1 bar		1	1				
	0 ... + 1.6 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				
	0 ... + 25 bar		3	2				
	0 ... + 40 bar	9,R	3	3				
	0 ... + 60 bar	9,R	4	0				
	0 ... + 100 bar	9	4	1				
	0 ... + 160 bar	9	4	2				
	0 ... + 250 bar	9	4	3				
	0 ... + 400 bar	9	5	4				
	0 ... + 600 bar	9	5	5				
▲ Full scale signal at these pressure								
Adjustment	Factory adjusted only zero point and full scale						0	
	Factory adjusted only zero point	9,R					1	
Output / power supply	ration. 10 ... 90% with connector without humidity protection						0	4
	ration. 10 ... 60% ± 1.2 V with connector without humidity protection	9,R					1	8
	ration. 10 ... 90% with connector with humidity protection						0	F
	ration. 10 ... 60% ± 1.2 V with connector with humidity protection	9,R					1	G
	ration. 10 ... 90% with flexible connector without humidity protection						0	H
	ration. 10 ... 60% ± 1.2 V with flexible connector without humidity protection	9,R					1	I
	ration. 10 ... 90% with flexible connector with humidity protection						0	J
	ration. 10 ... 60% ± 1.2 V with flexible connector with humidity protection	9,R					1	K
Pressure range variation	Indicate W and state range on order (e.g.: W0... + 5bar/OUT1...8V)						0	W

Accessories Accessories supplied loose

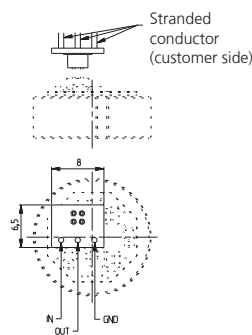
	Order number
O-ring FPM ≤ 60 bar	105598
O-ring NBR ≤ 60 bar	105145
O-ring FPM spec. ≤ 60 bar	109338
O-ring FPM ≥ 100 bar	105285
O-ring NBR ≥ 100 bar	104952
O-ring FPM spec. ≥ 100 bar	102321
Backup-ring ≥ 100 bar	114660
Positioning ring (PPS) ≤ 160 bar	107397
Positioning ring without cam (PPS) ≤ 160 bar	107926
Positioning ring (metal) > 160 bar	107383
Connection print (connector counterpart)	109225
Clamping Screw M20x1	112151
Screw insert for Clamping Screw	112187

www.bone-mro.com

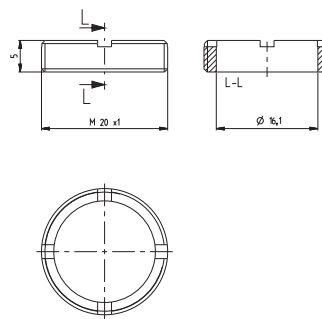
Positioning ring



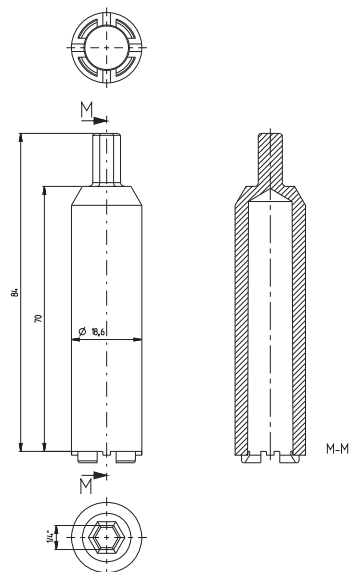
Connection print



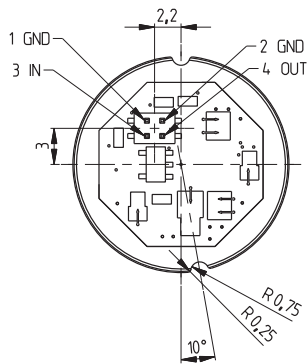
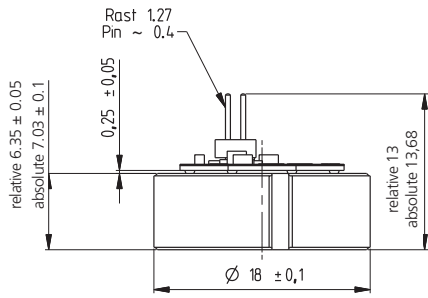
Clamping Screw



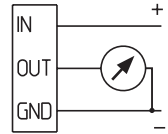
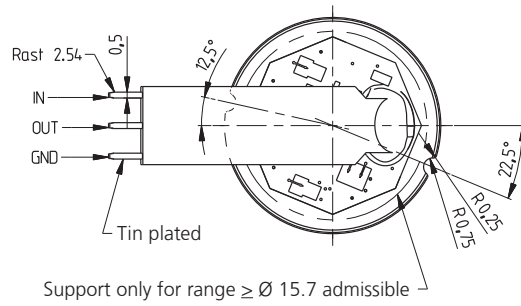
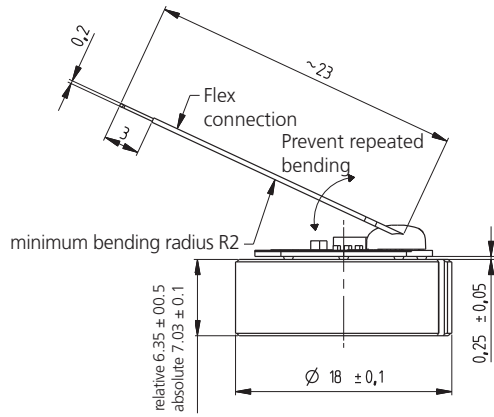
Screw insert



Connection with connector



Connections with flex cable



www.btone-mro.com

Huba Control AG

Headquarters

Industriestrasse 17
5436 Würenlos
Telefon +41 (0) 56 436 82 00
Telefax +41 (0) 56 436 82 82
info.ch@hubacontrol.com

Huba Control AG

Niederlassung Deutschland

Schlattgrabenstrasse 24
72141 Walddorfhäslach
Telefon +49 (0) 7127 23 93 00
Telefax +49 (0) 7127 23 93 20
info.de@hubacontrol.com

Huba Control SA

Succursale France

Rue Lavoisier
Technopôle Forbach-Sud
57602 Forbach Cedex
Téléphone +33 (0) 387 847 300
Télécopieur +33 (0) 387 847 301
info.fr@hubacontrol.com

Huba Control AG

Vestiging Nederland

Harnseweg 20A
3828 AD Hoogland
Telefoon +31 (0) 33 433 03 66
Telefax +31 (0) 33 433 03 77
info.nl@hubacontrol.com

Huba Control AG

Branch Office United Kingdom

Unit 3 Network Point, Range Road
Witney Oxfordshire OX29 0YD
Phone +44 (0) 1993 776667
Fax +44 (0) 1993 776671
info.uk@hubacontrol.com

Huba Control AG

Rep. Office Singapore

No. 16 Ayer Rajah Crescent Witney
#06-06B Tempco Technominium
139965 Singapore
Phone +65 (0) 61 004 822
Fax +65 (0) 63 994 822
info.sg@hubacontrol.com

Huba Control AG

Rep. Office China

CBC Building, 49A Wuyi Road
Shanghai 200050
Phone +86 (0) 21 511 808 21
Fax +86 (0) 21 515 520 99
info.cn@hubacontrol.com