

MS5 - MR5 Stainless steel gauges with electrical contacts DN 100

All stainless steel pressure gauge with electrical contacts

Corrosive atmospheres and fluids

Resistant to transient overpressure

MS5 - dry contacts (40xx)

MR5 - dry contacts with magnet (50xx)

Fully welded process connection

Sealed case can be filled with dampening fluid (MR5 - contact with magnet (50xx))

The mechanical components conform to the Pressure Directive PED 97/23/CE

The electrical components conform to the Low Voltage Directive DBT 73/23/CE



Pressure gauges intended for process industries such as chemical, petro-chemical, energy or gas industries.

These pressure gauges have been designed to satisfy requirements to operate in aggressive environments. All of the external components, together with the measurement element and connection are made of stainless steel.

Technical Data (20°C)

Measurement range -1...0 to 0...1600 bar

Minimum ranges

Dry contacts CES (40xx)		Dry contacts with magnet CESA (50xx)	
1 contact	2 contacts	1 contact	2 contacts
1 bar	1.6 bar	1.6 bar	2.5 bar

Gauge working temperature

-20...70°C
The gauge may be used on fluid temperatures up to 200°C providing that the gauge temperature does not exceed 70°C.

Temperature error

Additional error when temperature of the pressure element deviates from +20°C (68°F) ±0.4% for every 10°C (50°F) rising or falling. Percentage of span.

Accuracy

Class 2 of full scale (within the operating range)

IP rating

IP 65 (EN 60529)

Case and bezel ring

1.4301 (AISI 304) st. steel, bayonet lock type.
With blow-out disc at the top of the case.

Connection

1.4571 (316Ti) or 1.4404 (316L) st. steel, 22 mm square, G1/2 or 1/2NPT

Sensing element

P ≤ 2.5 bar and P ≥ 1000 bar: 1.4404 (316L) stainless steel, solid drawn tube.
2.5 < P < 1000 bar: 1.4571 (316Ti) st. steel, rolled welded tube.
Tube shape: < 60 bar : in C
≥ 60 bar : helicoil

Movement

Stainless steel with zero and overrange stops

Window

Safety laminated glass, 4 mm thick

Window gasket

Elastomer

Dial

White aluminium, black lettering.

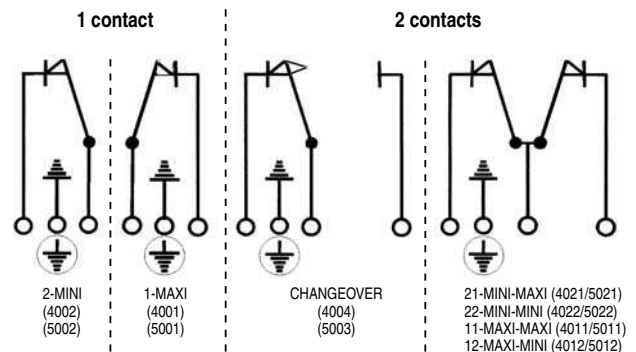
Pointer

Black aluminium, balanced.

Electrical connection

Terminal block. Cable gland M20x1.5.
Cable 7 to 13 mm. **Code 4710**

Block wiring diagram :



For electrical contact characteristics : AREB relay and Electrical output , see data sheet A21.33

Options

Supplementary blow-out back (30 mm dia). **Code 0760**

1.4404 (AISI 316L) stainless steel case and bezel ring. Sensing element

1.4404 (AISI 316L) st. steel solid drawn tube (2.5 < P < 1000 bar). **Code 0816**

Oxygen Application. **Code 0765**

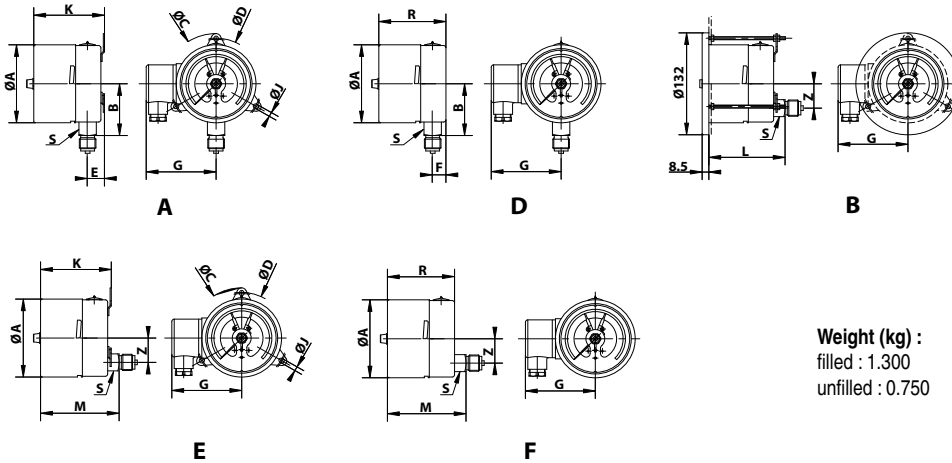
Special connection. **Consult us**

Restrictor screw **Code 0771**



Baumer

Dimensions - Types of mounting



	[mm]
A	101
B	67
C	134
D	118
E	21.5
F	17
G	89
J	5.5
K	89.5
L	96
M	99
R	85.5
S	22
Z	31.5

Weight (kg) :
filled : 1.300
unfilled : 0.750

Panel cut-outs for types B = Ø 102 mm

Ordering Details - MS5-MR5

		Mx5xxxxxxx
Family	1' digit	
Pressure gauge		M
Contacts	2' digit	
dry contacts CES (40xx)		S
dry contacts with magnet CESA (50xx)		R
Dimension nominal	3' digit	
100 mm		5
Control functions	4' digit	
Mini (CES : code 4002 or CESA : code 5002)	} 1 contact	1
Maxi (CES : code 4001 or CESA : code 5001)		2
Mini-Maxi (CES : code 4021 or CESA : code 5021)	} 2 contacts	4
Mini-Mini (CES : code 4022 or CESA : code 5022)		5
Maxi-Maxi (CES : code 4011 or CESA : code 5011)		6
Maxi-Mini (CES : code 4012 or CESA : code 5012)		7
Changeover (CESA : code 5003)		9
Tendency (CES : code 4004)		B
Type of mounting*	5' digit	
Bottom connection, 3 back lugs fixing		A
Back connection, front flange		B
Bottom connection		D
Back connection, 3 back lugs fixing		E
Back connection		F
Hydraulic connection	6' digit	
G1/4		2
G1/2		3
1/4NPT		5
1/2NPT		6
Liquid filling	7' digit	
Dry		0
BH3 (silicone) only MR5 contacts CESA (50xx)		3
BH5 (oxygen 160 bar max.) only MR5 contacts CESA (50xx)		5
BH10 (paraffin - vaseline oil) only MR5 contacts CESA (50xx)		K
Unit of measurement	8' digit	
bar		B
kPa		D
psi		H
Pressure range	9' ... 10' digit	
See data sheet		xx

code	bar	kPa	code	Psi
59**	-1 + 0	-100 + 0	59**	-30"Hg+ 0
72**	-1 + 0.6	-100 + 60	73**	-30"Hg+ 15
74**	-1 + 1.5	-100 + 150	75**	-30"Hg+ 30
76	-1 + 3	-100 + 300	2C	-30"Hg+ 60
77	-1 + 5	-100 + 500	78	-30"Hg+ 100
79	-1 + 9	-100 + 900	79	-30"Hg+ 150
81	-1 + 15	-100 + 1500	81	-30"Hg+ 220
82	-1 + 24	-100 + 2400	82	-30"Hg+ 300
15**	0 + 1	0 + 100	15**	0 + 15
16**	0 + 1.6	0 + 160	1C**	0 + 20
18**	0 + 2.5	0 + 250	17**	0 + 30
19	0 + 4	0 + 400	19	0 + 60
20	0 + 6	0 + 600	21	0 + 100
22	0 + 10	0 + 1000	22	0 + 160
24	0 + 16	0 + 1600	23	0 + 200
26	0 + 25	0 + 2500	25	0 + 300
27	0 + 40	0 + 4000	26	0 + 400
29	0 + 60	0 + 6000	27	0 + 600
31	0 + 100	0 + 10000	30	0 + 1000
33	0 + 160	0 + 16000	31	0 + 1500
35	0 + 250	0 + 25000	34	0 + 3000
38	0 + 400	0 + 40000	38	0 + 6000
39	0 + 600	0 + 60000	40	0 + 10000
41*	0 + 1000	0 + 100000	41*	0 + 15000
42*	0 + 1600	0 + 160000	1D*	0 + 20000

* Working pressure steady: 75% of full scale value

** See minimum measurement range for 1 and 2 contacts

Uncoded options:

PNEUMATIC RECEIVER	0.2 - 1 bar 3-15 psi
	0 - 10 lin.
	0 - 10 √
	0 - 100 lin.
	0 - 100 √

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