

PB55-CB55 Pressure Transmitters Bronze Series Process and Cleanline

FEATURES

- All stainless steel design
- 0,2 % accuracy of adjusted span
- Strong flush mounted diaphragm
- Active temperature compensation
- Optional digital local display and adjustments
- Wide selection of electrical & process connections
- IP66/68 Ingress rating
- 3A and EHEDG approved connections available

TYPICAL USES

- Food and beverage industry
- Pharma industry
- Pulp and paper
- Chemical and petrochemical plants



Bronze series
PB55-CB55



PERFORMANCE SPECIFICATIONS

Reference Temperature:	21 °C ±2 °C (70 °F ±2 °F)
Accuracy:	± 0.2 % of adjusted span
Stability:	≤ ±0.1 % of span / year
Adjustable Pressure Span:	0.1 to 80 bar Check table "Standard pressure range" on page 2
Pressure Type:	Gauge, Absolute Vacuum and Compound on request

ENVIRONMENTAL SPECIFICATIONS

Thermal Coefficients:	0.15% / 10 K $((T_{amb}-T_{ref})/10) * 0.15%$ 0.3% / 10 K for $T_{amb} < 0 °C$
Temperature Limits:	Check table "Temperature Limits" on page 2
Humidity:	0-100 % R.H. (non-condensing)

FUNCTIONAL SPECIFICATIONS

Driver and Software:	Microsoft Windows [®] 7 or higher
Interfaces:	PACTware [™]
Response Time (Output):	25 ms
On-field Adjustment:	See table "On-field Adjustments" on page 2 (optional)

PHYSICAL SPECIFICATION

Pressure:	Max. Overpressure: See table 1 on page 2 Proof: 75% of Max. Overpressure
Process Connection Size:	Check coding table "Process Connection" on page 3/4
Weather Protection:	Ingress Protection IP66 (optimal IP68)
Shock and Vibration Effects:	4.0 - 13.2 Hz constant displacement-amplitude 1.0 mm 13.2 - 100.0 Hz constant acceleration - 0.7 g 1 Sweep up with 1 oct/min

ELECTRICAL SPECIFICATIONS

Output:	4-20 mA (2-wire configuration)
Electrical Connection:	PG9 Cable gland Check "Ordering Code" on page 4
Power Supply:	12 - 36 Vdc

KEY BENEFITS

- Intelligent transmitters with adjustable span and high accuracy
- Minimum temperature effect
- Several setting and adjustment options

WETTED COMPONENTS

Diaphragm:	Stainless steel 316L (1.4404) optional: St. st. 316L (1.4404) gold plated optional: Hastelloy C-276 (2.4819)
Flange:	Stainless steel 316L (1.4404) optional: Hastelloy C-276 (2.4819) inlay optional: St. st. 316L (1.4404) Tantalum coated inlay

NON-WETTED COMPONENTS

Housing:	Stainless steel 304 (1.4401) optional: Stainless steel 316L (1.4404)
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ON-FIELD ADJUSTMENTS WITH OPTIONAL LOCAL DISPLAY

- + Zero adjustment (4 mA)
- + Span adjustment (20 mA)
- + Cancel mounting position effect
- + Switch pressure units
- + Decimal point adjustment
- + Adjustable damping (0 to 99,9 sec)
- + Display mode selection (Pressure, current or percentage)

TEMPERATURE LIMITS

Ambient/Storage: -20 °C to 70 °C (-4 °F to 160 °F)

Process: -20 °C to 80 °C (-4 °F to 180 °F)
optional up to 100 °C (210 °F)

Active Temp. compensation on process side:

PB55
 Standard: 0 °C to 80 °C (30 °F to 180 °F)
 optional up to 100 °C (210 °F)

Low Temp option: -20 °C to +70 °C (-4 °F to 160 °F)

CB55
 Standard: 0 °C to 100 °C (30 °F to 210 °F)

Low Temp option: -20 °C to +70 °C (-4 °F to 160 °F)

High Temp option: 100 °C to 200 °C (210 °F to 390 °F)

Ultra-High Temp option: 150 °C to 280 °C (300 °F to 540 °F)

STANDARD PRESSURE RANGE

RANGE	CODE	ADJUSTABLE SPAN RANGES	MAX. OVERPRESSURE	NOTE
0 ... 0.4 bar	0P4BR	0 ... 0.1 bar to 0 ... 0.4 bar	6.4 bar	-
0 ... 0.7 bar	0P7BR	0 ... 0.4 bar to 0 ... 0.7 bar	6.4 bar	-
0 ... 1.5 bar	1P5BR	0 ... 0.7 bar to 0 ... 1.5 bar	10.5 bar	-
0 ... 4 bar	4BR	0 ... 1 bar to 0 ... 4 bar	16 bar	-
0 ... 10 bar	10BR	0 ... 1 bar to 0 ... 10 bar	30 bar	-
0 ... 16 bar	16BR	0 ... 7.5 bar to 0 ... 16 bar	60 bar	-
0 ... 50 bar	50BR	0 ... 16 bar to 0 ... 50 bar	120 bar	-
0 ... 80 bar	80BR	0 ... 40 bar to 0 ... 80 bar	200 bar	-



PB55-CB55 Pressure Transmitters Bronze Series Process and Cleanline

ORDERING CODE		EXAMPLE:	CB55	020	20	150	RF	FG	FN	42	KV1	G	10BR	S	XC3
Model															
PB55	Process pressure transmitter bronze series														
CB55	Cleanline pressure transmitter bronze series (sanitary)	CB55													
Accuracy															
020	0.2% of adjusted span			020											
Connection size															
		Process series PB55													
Threaded; for more connection types use MG6F and select option at category "Reducing Nipple"															
	G 1/2" (1/2" BSP) with flush diaphragm														
MG4F	(available for 10, 16, 50, and 80 bar range) (not admissible for seal assembly)														
MG6F	G 1" (1" BSP) with flush diaphragm														
08F	1" NPT with flush diaphragm (available for 10, 16, 50 and 80 bar)														
Weld-on Nipple															
W33	Ø 33 mm connection nipple														
Manufacturer compatibility															
X2	M44x1,25 threaded lock ring (matches the 1-1/2" PMC and Rosemount)														
X10	Valcom process connection, ET 13														
X12	Satron / Valmet PASVE 1" BSP connection														
X37	Valcom process connection, ET 15 (available for 1.5, 4, 10, 16, 50 and 80 bar range)														
		Cleanline series CB55													
Threaded; for more connections types use W62 and select option at category "Reducing Nipple"															
85	G 1-1/2" with flush diaphragm														
71	G 2" with flush diaphragm														
67	1-1/2" NPT with flush diaphragm														
IC20	2" IDF coupling nut														
SU85	SMS-Union 1-1/2"														
SU71	SMS-Union 2"														
Milk coupling															
MD25	Milk coupling DN25 (DIN 11851) (available for 4, 10, 16, 50 and 80 bar range)														
MD40	Milk coupling DN40 (DIN 11851)														
MD50	Milk coupling DN50 (DIN 11851)														
Tri-Clamp															
S15	1-1/2" Tri-Clamp (DIN 32676) (3A approved version available)														
S20	2" Tri-Clamp (DIN 32676) (3A approved version available)														
S30	3" Tri-Clamp (DIN 32676)														
Weld-on Nipple															
W62	Ø62 mm connection hygienic nipple														
W85	Ø85 mm connection hygienic nipple (3A approved version available)														
Flange according ASME B16.5 or EN1092-1															
10	Flange size 1" (ASME)														
15	Flange size 1-1/2" (ASME)														
20	Flange size 2" (ASME)														
30	Flange size 3" (ASME)														
DN25	Flange size DN25 (EN)														
DN40	Flange size DN40 (EN)														
DN50	Flange size DN50 (EN)														
DN80	Flange size DN80 (EN)														

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PB55-CB55 Pressure Transmitters Bronze Series Process and Cleanline

ORDERING CODE	EXAMPLE:	CB55	020	20	150	RF	FG	FN	42	KV1	G	10BR	S	XC3
Connection size														
Cleanline series CB55														
Manufacturer compatibility														
X1	Universal adapter E+H flush													
X4	Varivent (baseplate from GEA, Tuchenhagen DN50 up to DN125; EHEDG and 3A approved version available)													
X6	APV baseplate													
X7	DRD flange (3A approved version available)													
X13	VEGA "LA" DN40													
X25	Anderson													
Flange Pressure Rating														
150	Flange rating 150 lbs (ASME)													150
300	Flange rating 300 lbs (ASME)													
600	Flange rating 600 lbs (ASME)													
900	Flange rating 900 lbs (ASME)													
PN10	Flange rating PN 10 (EN)													
PN16	Flange rating PN 16 (EN)													
PN25	Flange rating PN 25 (EN)													
PN40	Flange rating PN 40 (EN)													
Flange														
RF	Raised face (ASME)													RF
B1	Raised face form B (EN)													
Flange-Instrument Connection														
FT	Threaded													
FG	Welded													FG
Diaphragm Size														
FN	Standard diaphragm diameter Ø 35 mm													FN
FE	Increased diaphragm diameter Ø 76,1 mm													
Output Signal														
42	4-20 mA													42
Electrical Connection														
KV1	PG9 cable gland (standard)													KV1
KV2	PG 11 cable gland													
KV3	PG 13,5 cable gland													
EW	M12, 4-pin in stainless steel 316 (1.4401)													
HM	Hirschmann connector plug													
JL	1/2 NPT Female conduit													
JM	M20x1,5 Female													
Pressure Type														
G	Gauge pressure (standard)													G
A	Sensor connected to reference chamber for absolute pressure													
V	Compound or vacuum ranges													
Pressure Ranges - Coding example only, see standard ranges on page 2														
10BR	10 bar													10BR
Wetted Parts														
S	Diaphragm in Stainless steel 316L (1.4404) (standard)													S
H	Diaphragm in Hastelloy® C-276 (2.4819)													
H1	Wetted parts in Hastelloy® C-276 (2.4819)													
U	Wetted parts with Tantalum coating													
W	Diaphragm in Stainless steel 316L (1.4404) and with Gold coating													

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ORDERING CODE	EXAMPLE:	CB55	020	20	150	RF	FG	FN	42	KV1	G	10BR	S	XC3
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Options (If choosing an option(s) must include a "X")

X__

Hygienic Option

- 3A 3A standards 74-07
(available with cleanline process connections S15, S20, W85, X4 and X7 and wetted parts S and H)
- EH EHEDG Hygienic standards
(only available with cleanline process connection X4 and wetted parts S, H)

Temperature Option

- HT High temperature execution with integrated cooling tower (Temperature range: 100 - 200 °C) *
- UT Ultra High temperature execution with integrated cooling tower (Temperature range: 150 - 280 °C) *
- LT Low temperature execution (Temperature range: < 0 °C)

Reducing Nipple

Process series PB55

select connection size **MG6F** in combination with below option

- RN1 G ¼" BSP Male
- RN2 G ¼" BSP Female and G ½" BSP Male
- RN3 G ½" BSP Male
- RN4 G ½" BSP Female
- RN5 G ½" BSP Male gauge connection DIN 16288
- RN6 G ¾" BSP Male
- RN7 ¼" NPT Male
- RN8 ½" NPT Male
- RN9 ½" NPT Female
- RN10 ½" NPT Male and ¼" NPT Female
- RN11 ¾" NPT Male
- RN12 M20x1,5

Cleanline series CB55

select connection size **W62** in combination with below option

- RN13 ½" BSP Male
- RN14 1" BSP Male
- RN15 ½" NPT Male
- RN16 ½" NPT Female
- RNO Others

Case

- YW Enclosure stainless steel 316L (1.4404)
- IP68 Ingress protection IP68 (only available for standard electrical connection PG9; venting cable required)

Electrical cable

- No cable (standard)
- EC With electrical cable

Electrical cable length

- 0,5 ... 100 Cable length in 0,5 m steps

Digital Indicator

- without local display (standard)
- DG Digital local display

Remote Sensor *

- RE Remote Sensor connected with cable to enclosure and separated electronics (inadmissible for hygienic option 3A and EH)

Remote Sensor cable length

- 3 ... 32 Remote cable length in 0,5 m steps

continued at page 6

* Not available for hygienic options



**PB55-CB55 Pressure Transmitters Bronze Series
 Process and Cleanline**
ORDERING CODE **EXAMPLE:** CB55 020 20 150 RF FG FN 42 KV1 G 10BR S XC3

Options (If choosing an option(s) must include a "X")

Agency Approval

SIL SIL 2 (proven in use)

Mounting *

FW Wall mounting bracket, material 304 (1.4301)

FW1 Wall mounting bracket, material 316L (1.4404)

TM 2" pipe mounting bracket, material 304 (1.4301)

TM1 2" pipe mounting bracket, material 316L (1.4404)

Cleaning

6B Cleaned for gaseous Oxygen or other strong oxidizing agents

YF Cleaned silicone free

Marking/Tagging *

NH Stainless steel tag, wired to case

NH1 Extra large stainless steel tag, wired to case

Testing/Certificates

CD2 Material test report according to EN 10204 / 2.2

C2R Material test report according to EN 10204 / 2.2 including roughness

C3 Material report according to EN 10204 / 3.1

C4 Individual calibration chart

CD5 Certificate according to NACE for Oilfields MR0175 / ISO 15156 and Refineries MR0103 / ISO17945

CL Calibration according customer requirements

MQ Positive Material Identification (PMI)

HY Hydrostatic pressure test

X_

C3

* Not available for hygienic options



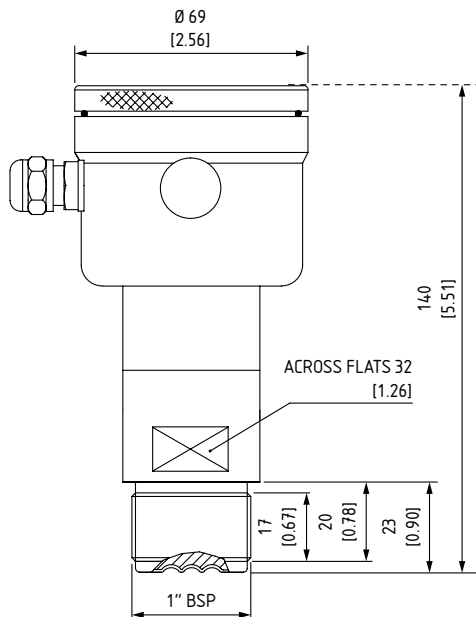
**PB55-CB55 Pressure Transmitters Bronze Series
Process and Cleanline**

**BRONZE SERIES - PROCESS
DIMENSIONS IN MM [INCH]**

For reference only, consult Ashcroft for specific dimensional drawings

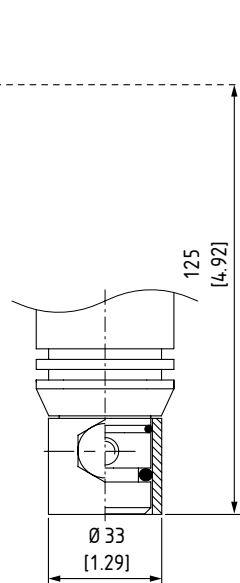
THREADED

Code: MG6F
G 1" with flush diaphragm



WELD-ON NIPPLE

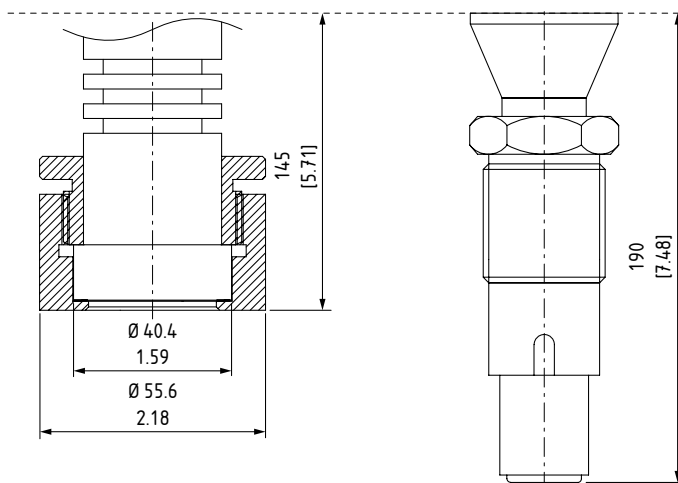
Code: W33
Ø 33 mm connection nipple



MANUFACTURER COMPATIBILITY

Code: X2 (left)
M44x1,25 threaded lock ring
(1-1/2" PMC and Rosemount)

Code: X12 (right)
PASVE 1" BSP
(Satron/Valmet)



PB55-CB55 Pressure Transmitters Bronze Series

Process and Cleanline

BRONZE SERIES - CLEANLINE (SANITARY) DIMENSIONS IN MM [INCH]

For reference only, consult Ashcroft for specific dimensional drawings

