

Data Sheet

PS55-CS55 Pressure Transmitters Silver Series Process and Cleanline

FEATURES

- All stainless steel design
- 0,2 % accuracy of adjusted span (opt. 0,1 %)
- Strong flush mounted diaphragm
- Active temperature compensation
- Optional HART® protocol with 4-20 mA / 2 wire output
- Digital local display with several options
- Easy local adjustments using 3 pushbuttons
- HART DTM available for Microsoft Windows® OS
- 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



Silver series
PS55-CS55



PERFORMANCE SPECIFICATIONS

Reference Temperature:	21 °C ±2 °C (70 °F ±2 °F)
Accuracy:	± 0.2 % of adjusted span optional: 0.1 %
Stability:	≤ ±0.08 % of span / year
Adjustable Pressure Span:	0.04 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)

SOFTWARE SPECIFICATIONS

Driver and Software:	Microsoft Windows® 7 or higher
Interfaces:	PACTware™
Response Time (Output):	700 ms

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

KEY BENEFITS

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

ELECTRICAL SPECIFICATIONS

Output:	4-20 mA (2-wire configuration)
Electrical Connection:	PG9 Cable gland for more see "Ordering Code" at page 5
Power Supply:	Standard: 12 - 36 Vdc HART®: 17 - 36 Vdc min. 250 Ω

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

- + Zero adjustment (4 mA)
- + Span adjustment (20 mA)
- + Cancel mounting position effect
- + Switch pressure units
- + Output current display
 - 4-20 mA
 - 20-4 mA (Reverse output)
- + Adjustable damping (0 to 25 sec)
- + Operational settings (protection, display, HART® versions)
- + Read out on display:
 - Current (4 - 20 mA)
 - Pressure unit (Conversion table)
 - Percentages
 - Temperature
- + Burst mode settings
- + Data and information overview

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:

PS55
 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)

CS55
 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 ... 0.1 bar	0P1BR	0 ... 40 mbar to 0 ... 100 mbar	3 bar	not available for PS55
0 ... 0.4 bar	0P4BR	0 ... 0.1 bar to 0 ... 0.4 bar	6.4 bar	
0 ... 1.6 bar	1P6BR	0 ... 0.4 bar to 0 ... 1.6 bar	10.5 bar	
0 ... 4 bar	4BR	0 ... 1 bar to 0 ... 4 bar	16 bar	
0 ... 10 bar	10BR	0 ... 2 bar to 0 ... 10 bar	30 bar	
0 ... 24 bar	24BR	0 ... 6 bar to 0 ... 24 bar	100 bar	
0 ... 100 bar	100BR	0 ... 20 bar to 0 ... 100 bar	200 bar	



PS55-CS55 Pressure Transmitters Silver Series Process and Cleanline

ORDERING CODE		EXAMPLE:	CS55	010	20	150	RF	FN	HA	KV1	G	10BR	S	XC3
Model														
PS55	Process pressure transmitter silver series													
CS55	Cleanline pressure transmitter silver series (sanitary)		CS55											
Accuracy														
010	0,1% of adjusted span			010										
020	0,2% of adjusted span													
Connection size														
Process series PS55														
Threaded; for more connection types use MG6F and select option at category "Reducing Nipple"														
	G ½" (½" BSP) with flush diaphragm													
MG4F	(available for 1.6, 4, 10, 24 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 4, 10, 24 and 80 bar range)													
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													
Cleanline series CS55														
Threaded; for more connections types use W62 and select option at category "Reducing Nipple"														
85	G 1-½" with flush diaphragm													
71	G 2" with flush diaphragm													
67	1-½" NPT with flush diaphragm													
IC20	2" IDF coupling nut													
SU85	SMS-Union 1-½"													
SU71	SMS-Union 2"													
Milk coupling														
MD25	Milk coupling DN25 (DIN 11851) (available for 4, 10, 24 and 80 bar range)													
MD40	Milk coupling DN40 (DIN 11851)													
MD50	Milk coupling DN50 (DIN 11851)													
Tri-Clamp														
S15	1-½" Tri-Clamp (DIN 32676) (available for ranges > 0,1 bar) (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)													

continued at page 4



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ORDERING CODE		EXAMPLE:	CS55	010	20	150	RF	FN	HA	KV1	G	10BR	S	XC3
Connection size														
Cleanline series CS55														
Flange according ASME B16.5 or EN1092-1														
10	Flange size 1" (ASME)													
15	Flange size 1-½" (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)													
Manufacturer compatibility														
X1	Universal adapter E+H flush													
X4	Varivent (baseplate from GEA, Tuchenhausen DN50 up to DN125) (3A and EHEDG 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)													
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)													
B1	Raised face form B (EN)													
Diaphragm Size														
FN	Standard diaphragm diameter Ø 35 mm													
FE	Increased diaphragm diameter Ø 76,1 mm													
Output Signal														
42	4 - 20 mA													
HA	4 - 20 mA with HART® protocol													
Electrical Connection														
KV1	PG9 cable gland (standard)													
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)													
A	Sensor connected to reference chamber for absolute pressure													
V	Compound or vacuum ranges													

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PS55-CS55 Pressure Transmitters Silver Series

Process and Cleanline

ORDERING CODE		EXAMPLE:	CS55	010	20	150	RF	FG	HA	KV1	G	10BR	S	XC3
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													
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 PS55														
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 CS55														
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)													

continued at page 6

* Not available for hygienic options



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ORDERING CODE	EXAMPLE:	CS55	010	20	150	RF	FG	HA	KV1	G	10BR	S	XC3
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Options (If choosing an option(s) must include a "X")

Electrical Cable

without cable (standard)
 EC With electrical cable

Electrical Cable Length

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

Digital Indicator

Blind cover (same material as enclosure; standard)
 DG Transparent polycarbonate cover

Remote Sensor *

RE Remote Sensor connected with cable to enclosure and separated electronics

Remote Sensor cable length

3 ... 100 Remote cable length in 0,5 m steps
 CL Calibration according customer requirements

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
 NN Paper tag, bonded to enclosure

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



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SILVER SERIES - PROCESS DIMENSIONS IN MM [INCH]

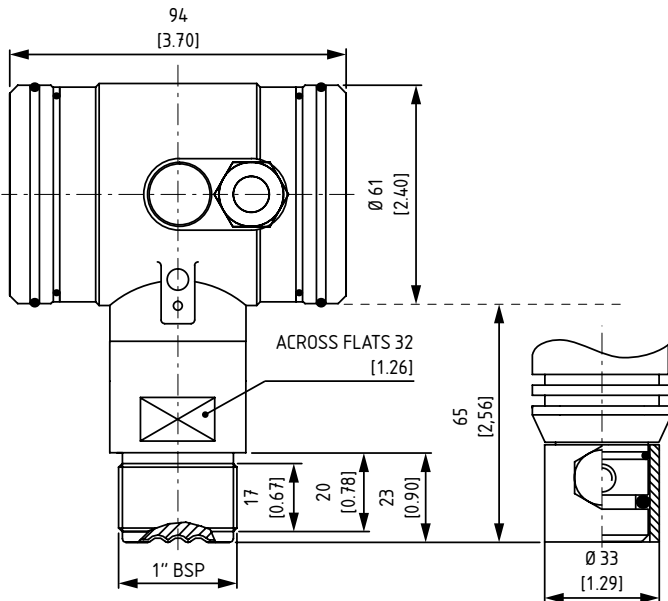
For reference only, consult Ashcroft for specific dimensional drawings

THREADED

Code: MG6F
G 1" with flush diaphragm

WELD-ON NIPPLE

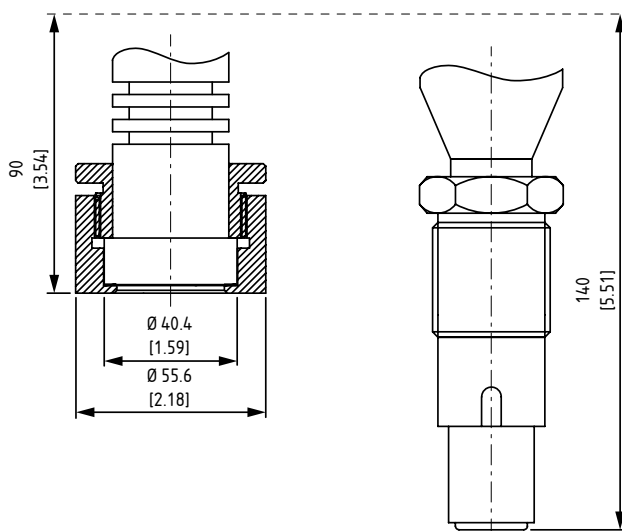
Code: W33
Ø 33 mm connection nipple



MANUFACTURER COMPATIBILITY

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

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



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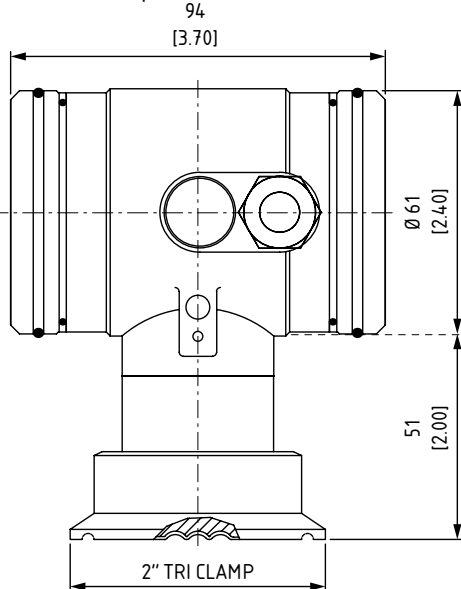
SILVER SERIES - CLEANLINE DIMENSIONS IN MM [INCH]

For reference only, consult Ashcroft for specific dimensional drawings

TRI-CLAMP

Code: S20

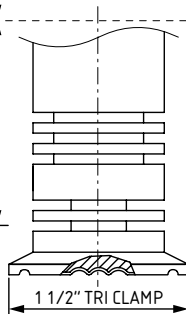
Tri-Clamp 2"



TRI-CLAMP

Code: S15

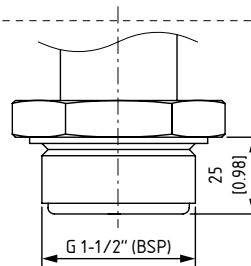
Tri-Clamp 1-1/2" with
cooling tower



FLUSH DIAPHRAGM

Code: 85

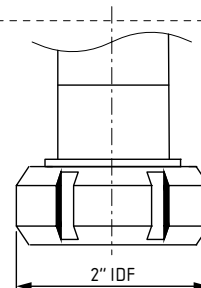
G 1-1/2" threaded with flush
diaphragm



IDF

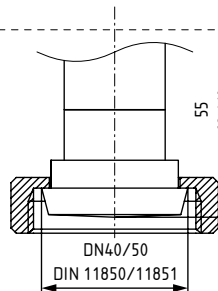
Code: IC20

2" IDF coupling nut



MILK-COUPLING

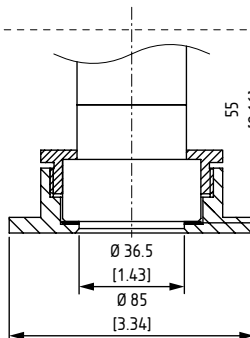
Code: MD25, MD40 or
MD50



WELD-ON NIPPLE

Code: W85

Ø 85 Hygenic nipple connection

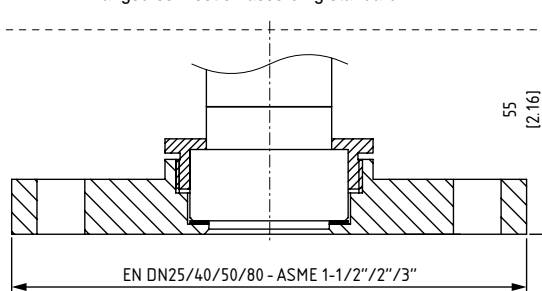


FLANGED

Code for EN 1092-1: DN25, DN40, DN50 or DN80

Code for ASME B16.5: 15, 20 or 30

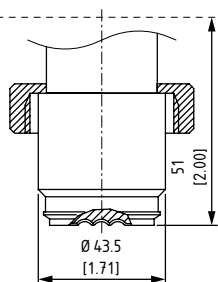
Flanged connection according standard



MANUFACTURER COMPATIBILITY

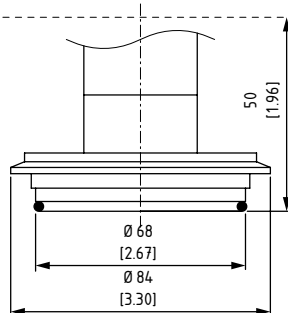
Code: X1

Universal flush diaphragm
(Endress & Hauser)



Code: X4

GEA Tuchenhausen Varivent®
DN50 (up to DN125)



Code: X13

VEGA "LA" DN40

