

Data Sheet

PP55-CP55 Pressure Transmitters Platinum Series Process and Cleanline

FEATURES

- All stainless steel design
- 0,1% accuracy of adjusted span (optional 0,075%)
- Strong flush mounted diaphragm
- Active temperature compensation
- Optional HART® protocol with 4-20 mA / 2 wire output or PROFIBUS® PA protocol
- Digital local graphic display with several options
- Easy local adjustments using 1 joystick
- HART DTM available for Microsoft Windows® OS
- Wide selection of electrical & process connections
- IP66/68 Ingress rating
- Approval for use in hazardous area

TYPICAL USES

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

PERFORMANCE SPECIFICATIONS

Reference Temperature:	21 °C ±2 °C (70 °F ±2 °F)
Accuracy:	± 0.1 % of adjusted span optional: ± 0.075 %
Stability:	≤ ±0.05 % of span / year
Adjustable pressure span:	0.1 to 100 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 $T_{amb} < 0^{\circ}\text{C}$
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):	900 ms
On-field Adjustment:	Check table "On-field Adjustments" on page 2

PHYSICAL SPECIFICATION

Pressure:	Max. Overpressure: See 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.


 II 1G
 Ex ia IIC T4 Ga
 Ex ia IIC T5 Ga
 Ex ia IIC T6 Ga



Platinum series
PP55-CP55



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) PROFIBUS® - PA Slave Profile v3.02 Floating point IEEE754
Electrical Connection:	M20x1,5 for more see "Ordering Code" on page 5
Power Supply:	Standard: 12 - 36 Vdc 12 - 30 Vdc (ATEX) HART®: 17 - 36 Vdc min. 250 Ω 17 - 30 Vdc (ATEX) min. 250 Ω PROFIBUS® PA: 12 - 30 Vdc
PROFIBUS® Specification:	Transmission speed: 31,25 kB/s Consumption: 13 mA ± 1 mA Fault current: 13 mA ± 1 mA
Intrinsically safe: (max. values)	$U_{max} = 30\text{ Vdc}$ $I_{max} = 110\text{ mA}$ $P_{max} = 0,9\text{ W}$ (Linear source) $L_{max} = 0.08\text{ mH}$ $C_{max} = 41\text{ nF}$

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 316 (1.4404)
----------	--

Data Sheet

PP55-CP55 Pressure Transmitters Platinum Series Process and Cleanline

ON-FIELD ADJUSTMENTS

- + Zero adjustment (4 mA)
- + Span adjustment (20 mA)
- + Cancel mounting position effect
- + Switch pressure units & conversion table (volume and weight)
- + Output current display
 - 4-20 mA
 - 20-4 mA (Reverse output)
 - 0-100 % / 100-0 % (PROFIBUS®)
- + Adjustable damping (0 to 25 sec)
- + Language selection
- + Operational settings (protection, display, HART® versions, PROFIBUS® PA)
- + Read out on display:
 - Current (4 - 20 mA)
 - Pressure unit & conversions
 - Percentages
 - Temperature
- + Simulation of current (2 wire and HART®)
- + Linearization:
 - Horizontal tank
 - Vertical tank (cone, spherical or truncated bottom)
 - Customer specific linearization
- + Burst mode settings (2 wire and HART®)
- + Data and information overview
- + PROFIBUS® PA address selection
- + Calibration
- + Factory settings

TEMPERATURE LIMITS

Ambient/Storage:	Standard	-20 °C to 70 °C (-4 °F to 158 °F)
	ATEX T5-T1	-20 °C to 70 °C (-4 °F to 158 °F)
	ATEX T6	-20 °C to 31 °C (-4 °F to 104 °F)
Process:	-20 °C to 80 °C (-4 °F to 176 °F) optional up to 100 °C (210 °F)	
	ATEX T5-T1:	-20 °C to 100 °C (-4 °F to 158 °F)
	ATEX T6:	-20 °C to 50 °C (-4 °F to 122 °F)
Active Temp. compensation on process side:	PP55	
	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)
	CP55	
	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
Accuracy 0,1 %	Process transmitter PP55	0 ... 1,2 bar	1P2BR	0 ... 0,12 bar to 0 ... 1,2 bar	6,4 bar
		0 ... 10 bar	10BR	0 ... 1 bar to 0 ... 10 bar	50 bar
		0 ... 100 bar	100BR	0 ... 10 bar to 0 ... 100 bar	200 bar
	Cleanline transmitter CP55	0 ... 1,2 bar	1P2BR	0 ... 0,12 bar to 0 ... 1,2 bar	6,4 bar
		0 ... 10 bar	10BR	0 ... 1 bar to 0 ... 10 bar	50 bar
		0 ... 100 bar	100BR	0 ... 10 bar to 0 ... 100 bar	200 bar
optional Accuracy 0,075 %	Process transmitter PP55	0 ... 1,2 bar	1P2BR	0 ... 0,1 bar to 0 ... 1,2 bar	10 bar
		0 ... 10 bar	10BR	0 ... 0,5 bar to 0 ... 10 bar	50 bar
		0 ... 100 bar	100BR	0 ... 5 bar to 0 ... 100 bar	200 bar
	Cleanline transmitter CP55	0 ... 1,2 bar	1P2BR	0 ... 0,05 bar to 0 ... 1,2 bar	10 bar
		0 ... 10 bar	10BR	0 ... 0,5 bar to 0 ... 10 bar	50 bar
		0 ... 100 bar	100BR	0 ... 5 bar to 0 ... 100 bar	200 bar



Data Sheet

PP55-CP55 Pressure Transmitters Platinum Series Process and Cleanline

ORDERING CODE		EXAMPLE:	CP55	010	20	150	RF	FN	PA	EMC	G	10BR	S	XC3
Model														
PP55	Process pressure transmitter platinum series													
CP55	Cleanline pressure transmitter platinum series (sanitary)		CP55											
Accuracy														
010	0,1% of adjusted span			010										
007	0,075% of adjusted span													
Connection size														
		Process series PP55												
		Threaded; see category "Reducing Nipple" for more connection options												
MG4F	G ½" (½" BSP) with flush diaphragm (only available for 10 or 100 bar ranges)													
MG6F	G 1" (1" BSP) with flush diaphragm													
08F	1" NPT with flush diaphragm (only available for 10 or 100 bar ranges)													
		Weld-on Nipple												
W33	Ø 33 mm connection nipple													
		Manufacturer compatibility												
X2	M44x1,25 threaded lock ring (matches the 1-½" PMC and Rosemount)													
X10	Valcom process connection, ET 13													
X12	Satron / Valmet PASVE 1" BSP connection													
X37	Valcom process connection, ET 15													
		Cleanline series CP55												
		Threaded; see category "Reducing Nipple" for more connection options												
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) (only available for 10 or 100 bar ranges)													
MD40	Milk coupling DN40 (DIN 11851)													
MD50	Milk coupling DN50 (DIN 11851)													
		Tri-Clamp												
S15	1-½" Tri-Clamp (DIN 32676)													
S20	2" Tri-Clamp (DIN 32676)													
S30	3" Tri-Clamp (DIN 32676)													
		Weld-on Nipple												
W62	Ø62 mm connection hygienic nipple													
W85	Ø85 mm connection hygienic nipple													
		Flange according ASME B16.5 or EN1092-1												
10	Flange size 1" (ASME)													
15	Flange size 1-½" (ASME)													
20	Flange size 2" (ASME)				20									
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)													

continued at page 4



Data Sheet

PP55-CP55 Pressure Transmitters Platinum Series Process and Cleanline

ORDERING CODE		EXAMPLE:	CP55	010	20	150	RF	FN	PA	EMC	G	10BR	S	XC3
Connection size														
Cleanline series CP55														
Manufacturer compatibility														
X1	Universal adapter E+H flush													
X4	Varivent (baseplate from GEA, Tuchenhausen DN50 up to DN125)													
X6	APV baseplate													
X7	DRD flange													
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)													
Diaphragm Size														
FN	Standard diaphragm diameter Ø 35 mm	FN												
FE	Increased diaphragm diameter Ø 76,1 mm													
Output Signal														
42	4 - 20 mA													
HA	4 - 20 mA with HART® protocol													
PA	PROFIBUS® protocol (EMC electrical cable gland required, only available for non-ATEX execution)	PA												
Electrical Connection														
JM	M20x1,5 Female (standard)													
EMC	EMC for PROFIBUS® (standard for option PA)	EMC												
EW	M12, 4-pin in stainless steel 316 (1.4401)													
HM	Hirschmann connector plug (only available for non-ATEX executions)													
JL	1/2 NPT Female conduit													
KV1	PG 9 cable gland													
KV2	PG 11 cable gland													
KV3	PG 13,5 cable gland													
PA8	PROFIBUS® connector with IP68													
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												

continued at page 5



PP55-CP55 Pressure Transmitters Platinum Series Process and Cleanline

ORDERING CODE	EXAMPLE:	CP55	010	20	150	RF	FN	PA	EMC	G	10BR	S	XC3
---------------	----------	------	-----	----	-----	----	----	----	-----	---	------	---	-----

Wetted Parts

S	Diaphragm in Stainless steel 316L (1.4404) (standard)	S
H	Diaphragm in Hastelloy® C-276 (2.4819)	
H1	Wetted parts (diaphragm and flange) in Hastelloy® C-276 (2.4819)	
U	Wetted parts (diaphragm and flange) 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")

Temperatur Option

HT	High temperature execution with integrated cooling tower (Temperature range: 100 - 200 °C) (CP55 only; ATEX (Ex) max. 100 °C)
UT	Ultra High temperature execution with integrated cooling tower (Temperature range: 150 - 280 °C) (CP55 only; not available for ATEX)
LT	Low temperature execution (Temperature range: < 0 °C)

Reducing Nipple

Process series PP55

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

Process series CP55

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

Electrical Cable

	without cable (standard)
EC	With electrical cable

Electrical Cable Length

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

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

continued at page 6



PP55-CP55 Pressure Transmitters Platinum Series Process and Cleanline

ORDERING CODE	EXAMPLE:	CP55	010	20	150	RF	FG	FN	PA	10BR	XC3
---------------	----------	------	-----	----	-----	----	----	----	----	------	-----

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

Agency Approval

EX4 ATEX: II 1 G Ex ia IIC T4 Ga and IECEx: Ex ia IIC T4 Ga
 EX5 ATEX: II 1 G Ex ia IIC T5 Ga and IECEx: Ex ia IIC T5 Ga
 EX6 ATEX: II 1 G Ex ia IIC T6 Ga and IECEx: Ex ia IIC T6 Ga

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
 C3 Material report according to EN 10204 / 3.1
 C4 Individual calibration chart
 CL Calibration according customer requirements

X__

C3



Data Sheet

PP55-CP55 Pressure Transmitters Platinum Series Process and Cleanline

PLATINUM SERIES - PROCESS DIMENSIONS IN MM [INCH]

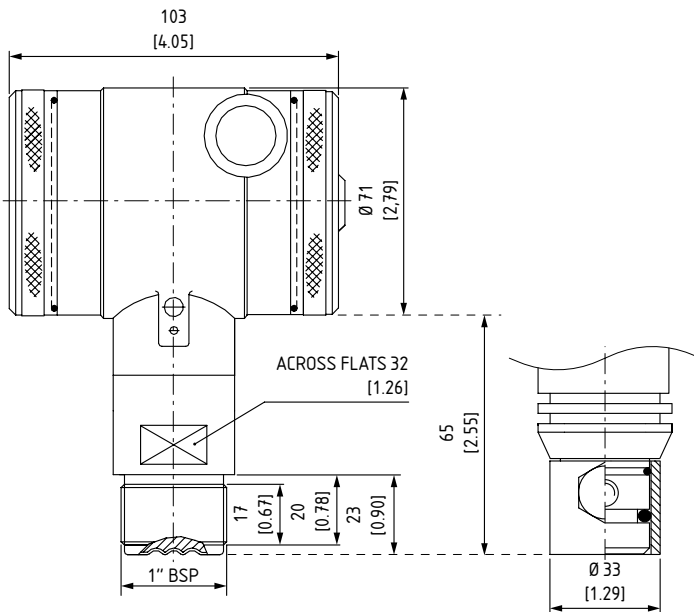
For reference only, consult Ashcroft for specific dimensional drawings

THREADED

Code: MG6F
G 1" with flush diaphragm

WELD-ON NIPPLE

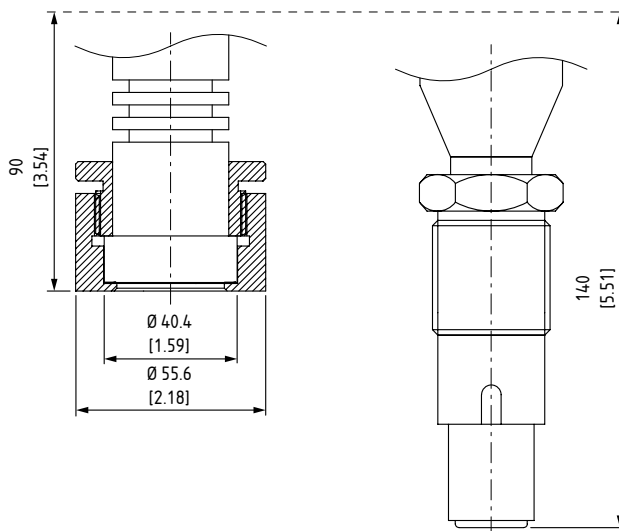
Code: W33
Ø 33 mm connection nipple



MANUFACTURER COMPATIBILITY

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

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



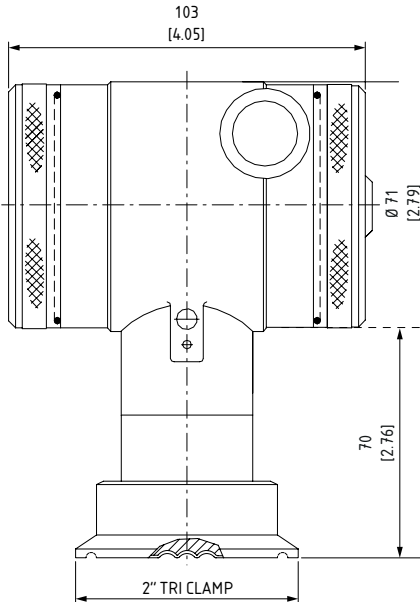
PP55-CP55 Pressure Transmitters Platinum Series Process and Cleanline

PLATINUM SERIES - CLEANLINE DIMENSIONS IN MM [INCH]

For reference only, consult Ashcroft for specific dimensional drawings

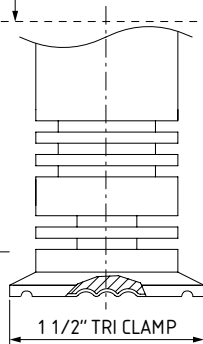
TRI-CLAMP

Code: S20
Tri-Clamp 2"



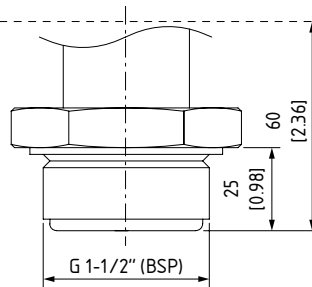
TRI-CLAMP

Code: S15
Tri-Clamp 1-1/2" with
cooling tower



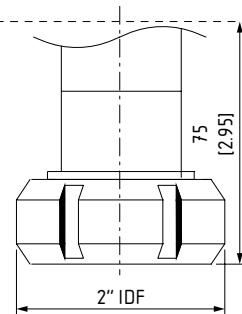
FLUSH DIAPHRAGM

Code: 85
G 1-1/2" threaded with flush
diaphragm



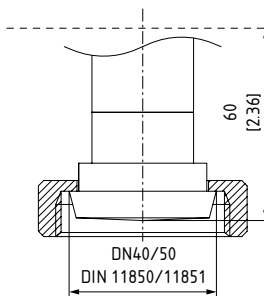
IDF

Code: IC20
2" IDF coupling nut



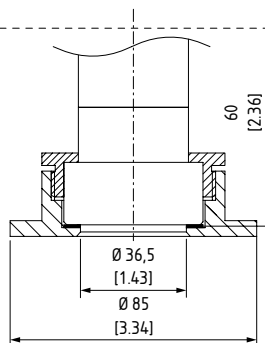
MILK-COUPLING

Code: MD25, MD40 or
MD50



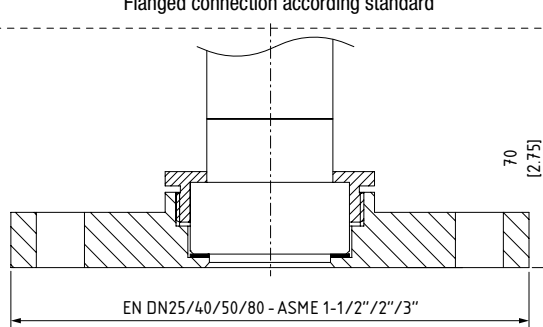
WELD-ON NIPPLE

Code: W85
Ø 85 Hygenic nipple connection



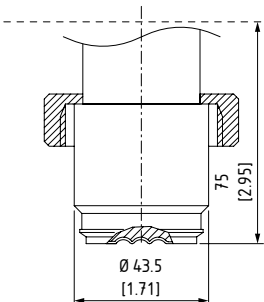
FLANGED

Code for EN 1092-1: DN25, DN40, DN50 or DN80
Code for ASME B16.5: 15, 20 or 30
Flanged connection according standard

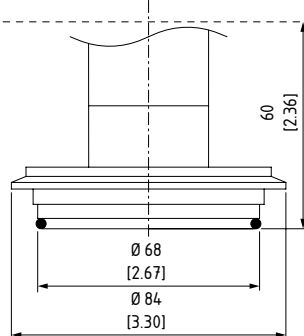


MANUFACTURER COMPATIBILITY

Code: X1
Universal flush diaphragm
(Endress & Hauser)



Code: X4
GEA Tuchenhausen Varivent®
DN50 (up to DN125)



Code: X13
VEGA "LA" DN40

