ASHCROFT®
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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
- EHEDG approved connections available

Platinum series
PP55-CP55

TYPICAL USES

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

KEY BENEFITS

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

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 $T_{amb} < 0$ °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: Proof:	See on page 2 75% of Max. Overpressure
Process Connection Size:	Check coding table "Process Connection" on page 3/4	
Weather Protection:	Ingress Protection IP66 (optinal 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.	

CE 2813 Ex II 1G
Ex ia IIC T4 Ga
Ex ia IIC T5 Ga
Ex ia IIC T6 Ga

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: HART®: PROFIBUS® PA:	12 - 36 Vdc 12 - 30 Vdc (ATEX) 17 - 36 Vdc min. 250 Ω 17 - 30 Vdc (ATEX) min. 250 Ω 12 - 30 Vdc
PROFIBUS® Specification:	Transmission speed: Consumption: Fault current:	31,25 kB/s 13 mA ± 1 mA 13 mA ± 1 mA
Instrinsically safe: (max. values)	U_{max} = 30 Vdc I_{max} = 110 mA P_{max} = 0,9 W (Linear source) L_{max} = 0.08 mH C_{max} = 41 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)

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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 212 °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

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; *for more connection types use MG6F and select option at category "Reducing Nipple"*

MG4F	G ½" (½" BSP) with flush diaphragm (only available for 10 or 100 bar ranges) (not admissible for seal assembly)
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; *for more connection 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) (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

continued at page 4

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	
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)	
Manufacturer compatibility		
X1	Universal adapter E+H flush	
X4	Varivent (baseplate from GEA, Tuchenhagen DN50 up to DN125) (EHEDG approved version available)	
X6	APV baseplate	
X7	DRD flange	
X13	VEGA "LA" DN40	
X25	Anderson	
Flange Pessure 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	

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
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												
Options (If choosing an option(s) must include a "X")													X__
Hygenic Option													
EH	EHEDG Hygenic standards (only available with cleanline process connection X4 and wetted parts S, H)												
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 availabe for ATEX)												
LT	Low temperature execution (Temperature range: < 0 °C)												
Reducing Nipple													
	Process series PP55												
	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 CP55												
	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 Blind cover (same material as enclosure; standard)												
DG	Transparent polycarbonate cover												

continued at page 6

* Not available for hygenic options

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")		X__
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	
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	
NT	Nameplate in Stainless steel, fixed with rivets	
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	C3
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	

* Not available for hygenic options

PP55-CP55 Pressure Transmitters Platinum Series Process and Cleanline

PLATINUM SERIES - PROCESS DIMENSIONS IN MM [INCH]

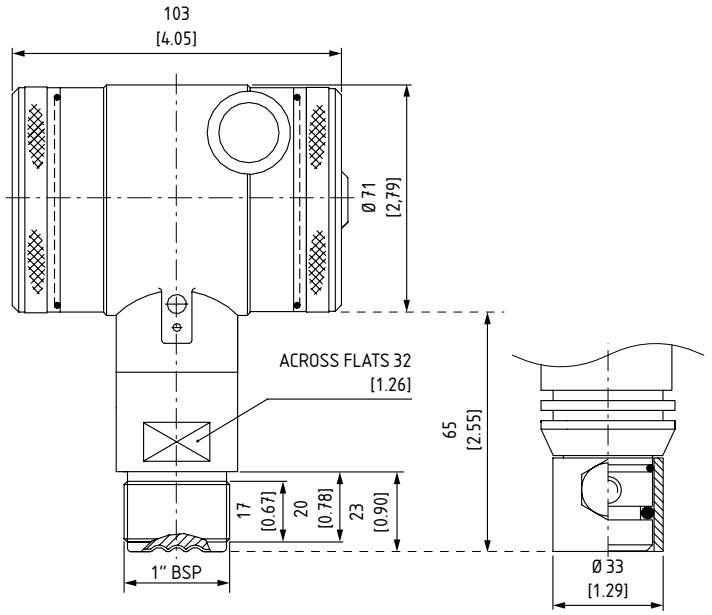
For reference only, consult Ashcroft for specific dimensional drawings

THREADED

Code: MG6F
G 1" with flush diaphragm

WELD-ON NIPPLE

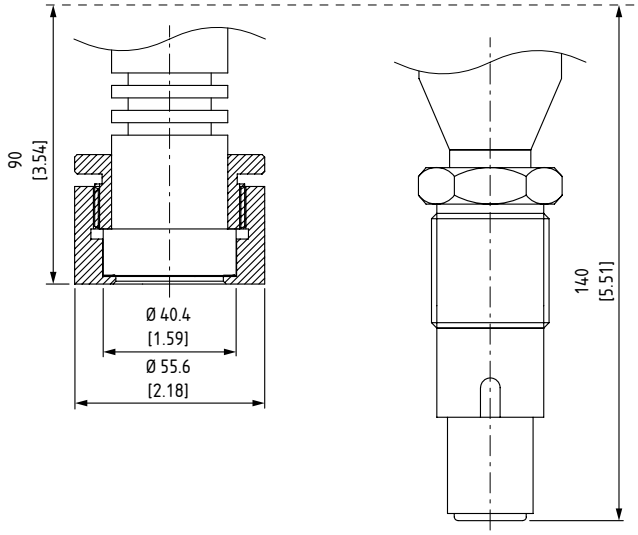
Code: W33
Ø 33 mm connection nipple



MANUFACTURER COMPATIBILITY

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

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



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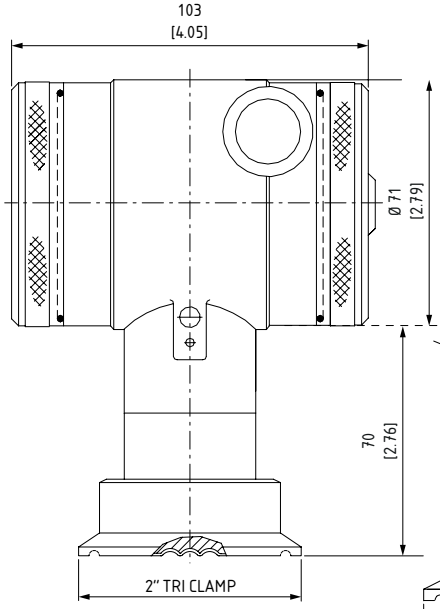
PLATINUM SERIES - CLEANLINE
DIMENSIONS IN MM [INCH]

For reference only, consult Ashcroft for specific dimensional drawings

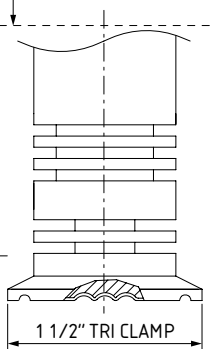
TRI-CLAMP

Code: S20
Tri-Clamp 2"



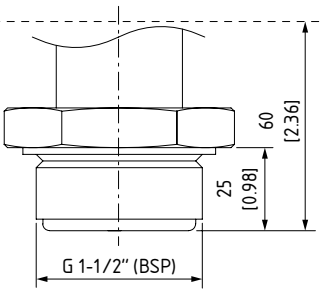
TRI-CLAMP

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



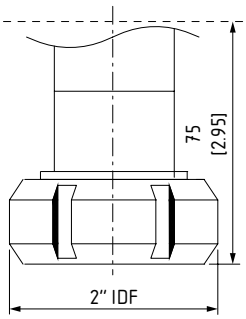
FLUSH DIAPHRAGM

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



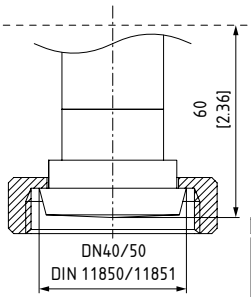
IDF

Code: IC20
2" IDF coupling nut



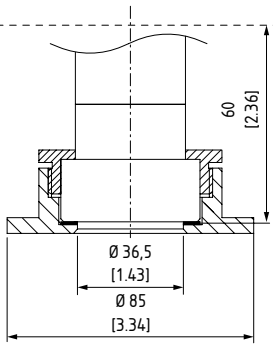
MILK-COUPLING

Code: MD25, MD40 or MD50



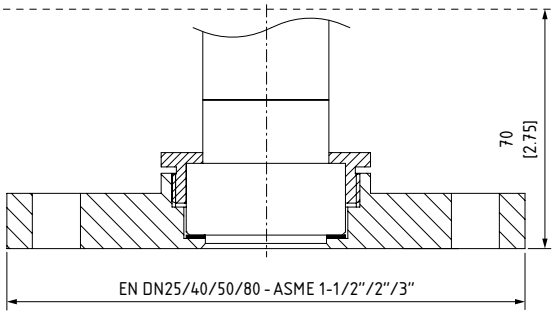
WELD-ON NIPPLE

Code: W85
Ø 85 Hygenic nipple connection



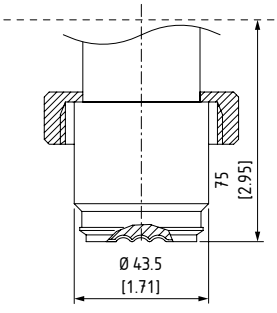
FLANGED

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

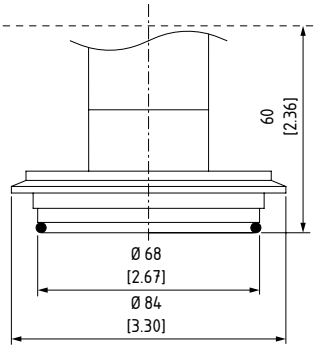


MANUFACTURER COMPATIBILITY

Code: X1
Universal flush diaphragm (Endress & Hauser)



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



Code: X13
VEGA "LA" DN40