

Model 265GS Gauge Model 265AS Absolute

2600T Series Pressure Transmitters Engineered solutions for all applications



Standard overload

Base accuracy

- $\pm 0.04\%$

Span limits

- 0.2 ... 60000 kPa; 0.8 in H₂O ... 8700 psi
- 0.3 ... 3000 kPa abs; 2.25 mm Hg ... 435 psi

Reliable sensing system coupled with very latest digital technologies

- Provides large turn down ratio up to 100:1

Comprehensive sensor choice

- Optimize in-use total performance and stability

Flexible configuration facilities

- Provided locally via local keys combined with LCD indicator or via hand held terminal or PC configuration platform

Multiple protocol availability

- Provides integration with HART®, PROFIBUS PA and FOUNDATION Fieldbus platforms
- Offering interchangeability and transmitter upgrade capabilities

Full compliance with PED category III

Functional Specifications

Range and span limits

Sensor Code	Upper Range Limit (URL)	Lower Range Limit (LRL) for 265GS	Minimum span	
			265GS gauge	265AS absolute
C	6kPa 60mbar 24inH ₂ O	-6kPa -60mbar -24inH ₂ O	0.2kPa 2mbar 0.8inH ₂ O	0.3kPa 3mbar 2.25mmHg
F	40kPa 400mbar 160inH ₂ O	-40kPa -400mbar -160inH ₂ O	0.4kPa 4mbar 1.6inH ₂ O	2kPa 20mbar 15mmHg
L	250kPa 2500mbar 1000inH ₂ O	0 abs	2.5kPa 25mbar 10inH ₂ O	12.5kPa 125mbar 93.8mmHg
D	1000kPa 10bar 145psi	0 abs	10kPa 0.1bar 1.45psi	50kPa 0.5bar 375mmHg
U	3000kPa 30bar 435psi	0 abs	30kPa 0.3bar 4.35psi	150kPa 1.5bar 21.7psi
R	10000kPa 100bar 1450psi	0 abs	100kPa 1bar 14.5psi	
V	60000kPa 600bar 8700psi	0 abs	600kPa 6bar 87psi	

Note : Lower Range Limit (LRL) for 265AS is 0 abs for all ranges.

Span limits

Maximum span = URL

IT IS RECOMMENDED TO SELECT THE TRANSMITTER SENSOR CODE PROVIDING THE TURNDOWN VALUE AS LOWEST AS POSSIBLE TO OPTIMIZE PERFORMANCE CHARACTERISTICS.

Zero suppression and elevation

Zero and span can be adjusted to any value within the range limits detailed in the table as long as:

- calibrated span \geq minimum span

Damping

Adjustable time constant : 0 to 60s.

This is in addition to sensor response time

Turn on time

Operation within specification in less than 2.5s with minimum damping.

Insulation resistance

> 100M Ω at 1000VDC (terminals to earth)

Operative limits

Temperature limits °C (°F) :

Ambient (is the operating temperature)

Silicone oil filling: -40°C and +85°C (-40°F and +185°F)

Inert filling: -20°C and +85°C (-4°F and +185°F)

White oil filling: -6°C and +85°C (+21°F and +185°F)

Lower limit for Viton gasket: -20°C (-4°F)

Lower limit for perfluoroelastomer gasket: -15°C (+5°F), -25 resp. -15°C (-13°F resp. +5°F) - (see section Pressure limits)

Upper limit for perfluoroelastomer gasket: +80°C (+176°F)

Note : For Hazardous Atmosphere applications see the temperature range specified on the certificate/approval relevant to the aimed type of protection.

Process

Lower limit

- -50°C (-58°F); -20°C (-4°F) for Viton gasket.

- -6°C (+21°F) with white oil filling

- -25 resp. -15°C (-13°F resp. +5°F) for perfluoroelastomer gasket - (see section Pressure limits)

Upper limit

- Silicone oil, inert fluid and white oil: 120°C (250°F)

- Perfluoroelastomer gasket: +80°C (+176°F)

Storage

Lower limit: -50°C (-58°F); -40°C (-40°F) for LCD indicators
-6°C (+21°F) with white oil filling

Upper limit: +85°C (+185°F)

Pressure limits

Overpressure limits (without damage to the transmitter)

0 absolute to

- 1MPa, 10bar, 145psi for sensor codes C, F

- 0.5MPa, 5bar, 72.5psi for sensor code L

- 2MPa, 20bar, 290psi for sensor code D

- 6MPa, 60bar, 870psi for sensor code U

- 20MPa, 200bar, 2900psi for sensor code R

- 90MPa, 900bar, 13050psi for sensor code V

- 0.18MPa abs, 1.8bar abs, 26psia for perfluoroelastomer gasket,
Temp \geq -25°C (-13°F)

Proof pressure

The transmitter can be exposed without leaking to line pressure of up to

- 1MPa, 10bar, 145psi for sensor codes C, F

- 0.5MPa, 5bar, 72.5psi for sensor code L

- 2MPa, 20bar, 290psi for sensor code D

- 6MPa, 60bar, 870psi for sensor code U

- 20MPa, 200bar, 2900psi for sensor code R

- 90MPa, 900bar, 13050psi for sensor code V

- 0.18MPa abs, 1.8bar abs, 26psia for perfluoroelastomer gasket,
Temp \geq -25°C (-13°F)

Environmental limits

Electromagnetic compatibility (EMC)

Definition	Class 3
Radio suppression (according to EN 550011)	Limit class B
Fulfills NAMUR recommendation	

Low voltage directive

Comply with 73/23/EEC

Pressure equipment directive (PED)

Comply with 97/23/EEC Category III module H.

Humidity

Relative humidity:	up to 100% annual average
Condensing, icing:	admissible

Vibration resistance

Accelerations up to 2g at frequency up to 1000Hz
(according to IEC 60068–2–26)

Shock resistance (according to IEC 60068–2–27)

Acceleration:	50g
Duration:	11ms

Wet and dust-laden atmospheres

The transmitter is dust and sand tight and protected against immersion effects as defined by IEC EN60529 (1989) to IP 67 (IP 68 on request) or by NEMA to 4X or by JIS to C0920.

Hazardous atmospheres

- Transmitters of the type of protection "Intrinsically safe EEx ia" according to the directions 94 / 9 / EC (ATEX)
Transmitter with 4 to 20mA output signal and HART communication
Marking (DIN EN 50 014): II 1/2 GD T50°C EEx ia IIC T6 or resp.
II 1/2 GD T95°C EEx ia IIC T4

Supply and signal circuit type of protection Intrinsic Safety
EEx ib IIB/IIC resp. EEx ia IIB/IIC

for connection to supply units with maximum values:

II 1/2 GD T50°C EEx ia resp. ib IIC T6 resp.

II 1/2 GD T95°C EEx ia resp. ib IIC T4

for Temperature class T4 resp. T95°C:

$U_i = 30V$

$I_i = 200mA$

$P_i = 0.8W$ for T4 with $T_a = (-40 \text{ to } +85)^\circ C / (-40 \text{ to } +185)^\circ F$

$P_i = 1.0W$ for T4 with $T_a = (-40 \text{ to } +70)^\circ C / (-40 \text{ to } +158)^\circ F$

for Temperature class T6 resp. T50°C:

$P_i = 0.7W$ for T6 with $T_a = (-40 \text{ to } +40)^\circ C / (-40 \text{ to } +104)^\circ F$

effective internal capacitance, $C_i \leq 10nF$

effective internal inductance, negligible.

The capacitive measuring element (range code C, F) supplied with an intrinsically safe circuit EEx ib IIB/IIC must not be mounted into the separation wall between category 1G and category 2G.

Fieldbus transmitters (PROFIBUS PA / FOUNDATION Fieldbus)

Marking (DIN EN 50 014): II 1/2 GD T50°C EEx ia IIC T6 or resp.

II 1/2 GD T95°C EEx ia IIC T4

Supply and signal circuit type of protection Intrinsic Safety

EEx ib IIB/IIC resp. EEx ia IIB/IIC

for connection to FISCO supply units with rectangular or trapezoidal characteristics with maximum values:

II 1/2 G EEx ia respectively ib IIC T4/T6

$U_i = 17.5V$ $I_i = 360mA$ $P_i = 2.52W$

II 1/2 G EEx ia respectively ib IIB T4/T6

$U_i = 17.5V$ $I_i = 380mA$ $P_i = 5.32W$

resp. for connection to supply unit or barrier with linear characteristics with maximum values:

II 1/2 G EEx ia respectively ib IIC T4/T6

$U_i = 24V$ $I_i = 250mA$ $P_i = 1.2W$

effective internal inductance $L_i \leq 10 \mu H$,

effective internal capacitance $C_i \approx 0$

Maximum permissible ambient temperatures depending on the temperature class:

T4: $-40^\circ C$ to $+85^\circ C$ ($-40^\circ F$ to $+185^\circ F$)

T5, T6: $-40^\circ C$ to $+40^\circ C$ ($-40^\circ F$ to $+104^\circ F$)

The capacitive measuring element (range code C, F) supplied with an intrinsically safe circuit EEx ib IIB/IIC must not be mounted into the separation wall between category 1G and category 2G.

- Transmitters of the type of protection "flameproof enclosure EEx d" according to the directions 94 / 9 / EC (ATEX)

Transmitter with 4 to 20mA output signal and HART communication and Fieldbus transmitters (PROFIBUS PA / FOUNDATION Fieldbus)

Marking (DIN EN 50 014): II 1/2 G EEx d IIC T6

Ambient temperature range: $-40^\circ C$ to $+75^\circ C$ ($-40^\circ F$ to $+167^\circ F$)

- Transmitters of category 3 for the application in "Zone 2"
Transmitter with 4 to 20mA output signal and HART communication
according to the directions 94 / 9 / EC (ATEX)

Marking (DIN EN 50 014): II 3 GD T50°C EEx nL IIC T6 or resp.

II 3 GD T95°C EEx nL IIC T4

Operating conditions:

Supply and signal circuit (terminals signal +/-): $U \leq 45V$

$I \leq 22.5mA$

Ambient temperature range:

Temperature class T4 $T_a = -40^\circ C$ to $+85^\circ C$ ($-40^\circ F$ to $+185^\circ F$)

Temperature class T5, T6 $T_a = -40^\circ C$ to $+40^\circ C$ ($-40^\circ F$ to $+104^\circ F$)

- Factory Mutual (FM)

Transmitter with 4 to 20mA output signal and HART communication

Intrinsically safe: Class I; Division 1; Groups A, B, C, D;
Class I; Zone 0; Group IIC; AEx ia IIC

Degree of protection: NEMA Type 4X (indoor or outdoor)

Permissible ambient temperature depending on temperature class

$U_{max} = 30V, C_i = 10.5nF, L_i = 10\mu H$			
Ambient Temperature	Temperature class	I_{max}	P_i
-40 to $+85^\circ C$ (-40 to $+185^\circ F$)	T4	200mA	0.8W
-40 to $+70^\circ C$ (-40 to $+129^\circ F$)	T4	200mA	1W
-40 to $+40^\circ C$ (-40 to $+104^\circ F$)	T5	25mA	0.75W
-40 to $+40^\circ C$ (-40 to $+104^\circ F$)	T6	25mA	0.5W

Fieldbus transmitters (PROFIBUS PA/FOUNDATION Fieldbus)

Intrinsically Safe: Class I, II and III; Division 1; Groups A, B, C, D, E, F, G;

Class I; Zone 0, AEx ia Group IIC T6; T4

Non-incendive Class I, II and III, Division 2; Groups A, B, C, D, F, G

Transmitter with 4 to 20mA output signal and HART communication and Fieldbus transmitters (PROFIBUS PA/FOUNDATION Fieldbus)

Explosion-Proof: Class I; Division 1; Groups A, B, C, D;

Class II/III, Division 1; Groups E, F, G

Degree of protection: NEMA Type 4X (indoor or outdoor)

- Canadian Standard (CSA)

Transmitter with 4 to 20mA output signal and HART communication and Fieldbus transmitters (PROFIBUS PA/FOUNDATION Fieldbus)

Explosion-Proof: Class I; Division 1; Groups B, C, D

Class II; Division 1; Groups E, F, G

Class III

Degree of protection: NEMA Type 4X (indoor or outdoor)

Electrical Characteristics and Options

HART digital communication and 4 to 20mA output

Power Supply

The transmitter operates from 10.5 to 45VDC with no load and is protected against reverse polarity connection (additional load allows operations over 45VDC).

Minimum power supply is 14VDC with backlit indicator.

For EEx ia and other intrinsically safe approval power supply must not exceed 30VDC.

Ripple

Maximum permissible voltage ripple of power supply during the communication:

7Vpp at f = 50 to 100Hz

1Vpp at f = 100 to 200Hz

0.2Vpp at f = 200 to 300Hz

Load limitations

4 to 20mA and HART total loop resistance :

$$R(\text{k}\Omega) = \frac{\text{Supply voltage} - \text{min. operating voltage (VDC)}}{22.5 \text{ mA}}$$

A minimum of 250Ω is required for HART communication.

Integral display (optional)

2-line, 6-character 19-segment alphanumeric display with additional bar chart display, optionally with back illumination. User-specific display:

percentage of the output current or

output current in mA or

free process variable

Diagnostic message, alarms, measuring range infringements and changes in the configuration are also displayed.

Output signal

Two-wire 4 to 20mA, user-selectable for linear or freely programmable with 20 reference points output.

HART® communication provides digital process variable (% , mA or engineering units) superimposed on 4 to 20mA signal, with protocol based on Bell 202 FSK standard.

Output current limits (to NAMUR standard)

Overload condition

- Lower limit: 3.8mA (configurable down to 3.5mA)

- Upper limit: 20.5mA (configurable up to 22.5mA)

Alarm current

Min. alarm current: configurable from 3.5mA to 4mA,
standard setting: 3.6mA

Max. alarm current: configurable from 20mA to 22.5mA,
standard setting: 21mA

Standard setting: max. alarm current

SIL - Functional Safety (optional)

according to IEC 61508 / 61511 Device with Declaration of SIL Conformity for use in safety related applications up to SIL2.

PROFIBUS PA output**Device type**

Pressure transmitter compliant to Profile 3.0 Class A & B; ident. number 04C2 HEX.

Power supply

The transmitter operates from 10.2 to 32VDC with no polarity.

For EEx ia approval power supply must not exceed 17.5VDC. Intrinsic safety installation according to FISCO model.

Current consumption

operating (quiescent): 11.7mA

fault current limiting: 17.3mA max.

Output signal

Physical layer in compliance to IEC 1158-2/EN 61158-2 with transmission to Manchester II modulation, at 31.25kbit/sec.

Output interface

PROFIBUS PA communication according to Profibus DP50170 Part 2/ DIN 19245 part 1-3.

Output update time

40ms

Function blocks

2 standard Analog Input Function Block,

1 Transducer Block, 1 Physical Block

Integral display

2-line, 6-character 19-segment alphanumeric display with additional bar chart display, optionally with back illumination. User-specific display:

percentage of the output or

OUT (analog input function block)

Diagnostic message, alarms, measuring range infringements and changes in the configuration are also displayed.

Transmitter failure mode

Permanent self-diagnostic; possible errors indicated in diagnostic parameters and in the status of process values.

FOUNDATION Fieldbus output**Power supply**

The transmitter operates from 10.2 to 32VDC polarity independent.

For EEx ia approval power supply must not exceed 24VDC (entity certification) or 17.5VDC (FISCO certification), according to FF-816.

Current consumption

operating (quiescent): 11.7mA

fault current limiting: 17.3mA max.

Output signal

Physical layer in compliance to IEC 1158-2/EN 61158-2 with transmission to Manchester II modulation, at 31.25kbit/sec.

Function blocks/execution period

2 Standard Analog Input Function Block / 25ms max

1 Standard PID Function Block

Additional blocks

1 manufacturer specified Pressure with Calibration Transducer Block,

1 enhanced Resource Block

Number of link objects

10

Number of VCRs

16

Output interface

FOUNDATION fieldbus digital communication protocol to standard H1, compliant to specification V. 1.5; FF registration in progress.

Integral display

2-line, 6-character 19-segment alphanumeric display with additional bar chart display, optionally with back illumination. User-specific display:

percentage of the output or

OUT (analog input)

Diagnostic message, alarms, measuring range infringements and changes in the configuration are also displayed.

Transmitter failure mode

Permanent self-diagnostic; possible errors indicated in diagnostic parameters and in the status of process values.

Performance specifications

Stated at reference condition to IEC 60770 ambient temperature of 20°C (68°F), relative humidity of 65%, atmospheric pressure of 1013hPa (1013mbar), zero based range for transmitter with isolating diaphragms ceramic or Hastelloy and silicone oil fill and HART digital trim values equal to 4–20mA span end points, in linear mode.

Unless otherwise specified, errors are quoted as % of span.

Some performance data (based to URL) are affected by the actual turndown (TD) as ratio between Upper Range Limit (URL) and calibrated span.

IT IS RECOMMENDED TO SELECT THE TRANSMITTER SENSOR CODE PROVIDING THE TURNDOWN VALUE AS LOWEST AS POSSIBLE TO OPTIMIZE PERFORMANCE CHARACTERISTICS.

Dynamic performance (according to IEC 61298–1 definition)

Dead time: 30ms

Time constant (63.2% of total step change):

– 150 ms for all sensors

Accuracy rating

% of calibrated span, including combined effects of terminal based linearity, hysteresis and repeatability.

For fieldbus versions SPAN refer to Analog Input Function Block outscale range

– ±0.04% for TD from 1:1 to 10:1

– $\pm(0.04 + 0.005 \times \frac{\text{URL}}{\text{Span}} - 0.05)\%$ for TD greater than 10:1

Operating influences

Ambient temperature (for turndown up to 15:1)

per 20K (36°F) change between the limits of –20°C to +65°C (–4 to +150°F)

– ±(0.03% URL + 0.05% span)

Supply voltage

Within voltage/load specified limits the total effect is less than 0.001% of URL per volt.

Load

Within load/voltage specified limits the total effect is negligible.

Electromagnetic field

Total effect : less than 0.05% of span from 80 to 1000MHz and for field strengths up to 10V/m when tested with unshielded conduit, with or without meter.

Common mode interference

No effect from 250Vrms @ 50Hz, or 50VDC

Stability

±0.15% of URL over a sixty-month period

Vibration effect

±0.10% of URL (according to IEC 61298–3)

Physical Specification

(Refer to ordering information sheets for variant availability related to specific model or versions code)

Materials

Process isolating diaphragms (*)

Ceramic (Al2O3) gold-plated; Hastelloy C276™;

Hastelloy C276™ gold-plated; AISI 316 L ss.

Process connection (*)

AISI 316 L ss; Hastelloy C276™.

Gasket (only for sensor codes C, F) (*)

Viton™, Perfluoroelastomer, Perbunan (NBR).

Sensor fill fluid

Silicone oil; inert fill (Carbon fluoride); white oil (FDA).

Mounting bracket

AISI 316 L ss.

Sensor housing

AISI 316 L ss.

Electronic housing and covers

Barrel version

– Low-copper content aluminium alloy with baked epoxy finish;

– AISI 316 L ss.

DIN version

– Low-copper content aluminium alloy with baked epoxy finish.

Covers O-ring

Viton™.

Local zero and span adjustments

Glass filled polycarbonate plastic (removable).

No local zero and span adjustments with housing made of stainless steel.

Tagging

AISI 316ss or plastic data plate attached to the electronics housing.

Calibration

Standard: at maximum span, zero based range, ambient temperature and pressure;

Optional: at specified range and ambient conditions; or at operating temperature.

Optional extras

Mounting brackets

For vertical and horizontal 60mm. (2in) pipes or wall mounting.

Integral display

plug-in rotatable LCD indicator

Supplemental customer tag

AISI 316 ss tag fastened to the transmitter with stainless steel wire for customer's tag data up to a maximum of 30 characters and spaces.

Surge protection (optional)

– current 8 μ s rise Time / 20 μ s delay time to half value

not available with ATEX-EEx nL or PROFIBUS PA / FOUNDATION Fieldbus with Intrinsic Safety EEx i or FM-Intrinsically Safe.

Cleaning procedure for oxygen service (not for sensor V)

Test Certificates (test, design, calibration, material traceability)

Tag and manual language

Process connections

$\frac{1}{2}$ – 14 NPT female or male; DIN EN837–1 G $\frac{1}{2}$ B or G $\frac{1}{2}$ B (HP) for convex seal; front bonded diaphragm; for ball valve.

Electrical connections

Two $\frac{1}{2}$ – 14 NPT or M20x1.5 threaded conduit entries, direct on housing, or plug connector:

– HART: straight or angle Harting Han 8U connector and one plug.

– PROFIBUS PA, FOUNDATION Fieldbus : M12x1 or 7/8in (without mating female plug)

Terminal block

HART version: four terminals for signal/external meter wiring up to 2.5mm² (14AWG) and four connection points for test and communication purposes.

Fieldbus versions: two terminals for signal (bus connection) wiring up to 2.5mm² (14AWG).

Grounding

Internal and external 4mm² (12AWG) ground termination points are provided.

Mounting position

Transmitter can be mounted in any position.

Electronics housing may be rotated by 360°. A positive stop prevents over travel.

Mass (without options)

1.2kg approx (3lb); add 1.5kg (3.4lb) for AISI housing.

Add 650g (1.5lb) for packing.

Packing

Carton 24 x 14 x 19cm approx (10 x 6 x 8in).

™ Hastelloy is a Cabot Corporation trademark

™ Viton is a Dupont de Nemour trademark

(*) Wetted parts of the transmitter.

Configuration

Transmitter with HART communication and 4 to 20 mA

Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the type plate. If calibration range and tag data are not specified, the transmitter will be supplied configured as follows:

4 mA	Zero
20 mA	Upper Range Limit (URL)
Output	Linear
Damping	0.125s
Transmitter failure mode	21mA
Optional LCD-indicators	0 to 100% linear

Any or all the above configurable parameters, including Lower range-value and Upper range-value can be easily changed using the HART hand-held communicator or by a PC, running the configuration software SMART VISION with DTM for 2600T.

The transmitter database is customized with specified flange type and material, o-ring and filling liquid.

Transmitter with PROFIBUS PA communication

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the type plate. If calibration range and tag data are not specified, the transmitter will be supplied configured as follows:

Measure Profile	Pressure
Engineering Unit	mbar/bar
Output scale 0%	Lower Range Limit (LRL)
Output scale 100%	Upper Range Limit (URL)
Output	Linear
Hi-Hi Limit	Upper Range Limit (URL)
Hi Limit	Upper Range Limit (URL)
Low Limit	Lower Range Limit (LRL)
Low-Low Limit	Lower Range Limit (LRL)
Limits hysteresis	0.5% of output scale
PV filter	0.125s.
Address	126

Any or all the above configurable parameters, including Lower range-value and Upper range-value can be easily changed by a PC, running the configuration software SMART VISION with DTM for 2600T.

The transmitter database is customized with specified flange type and material, o-ring and filling liquid.

Transmitter with FOUNDATION Fieldbus communication

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the type plate. If calibration range and tag data are not specified, the transmitter will be supplied configured as follows:

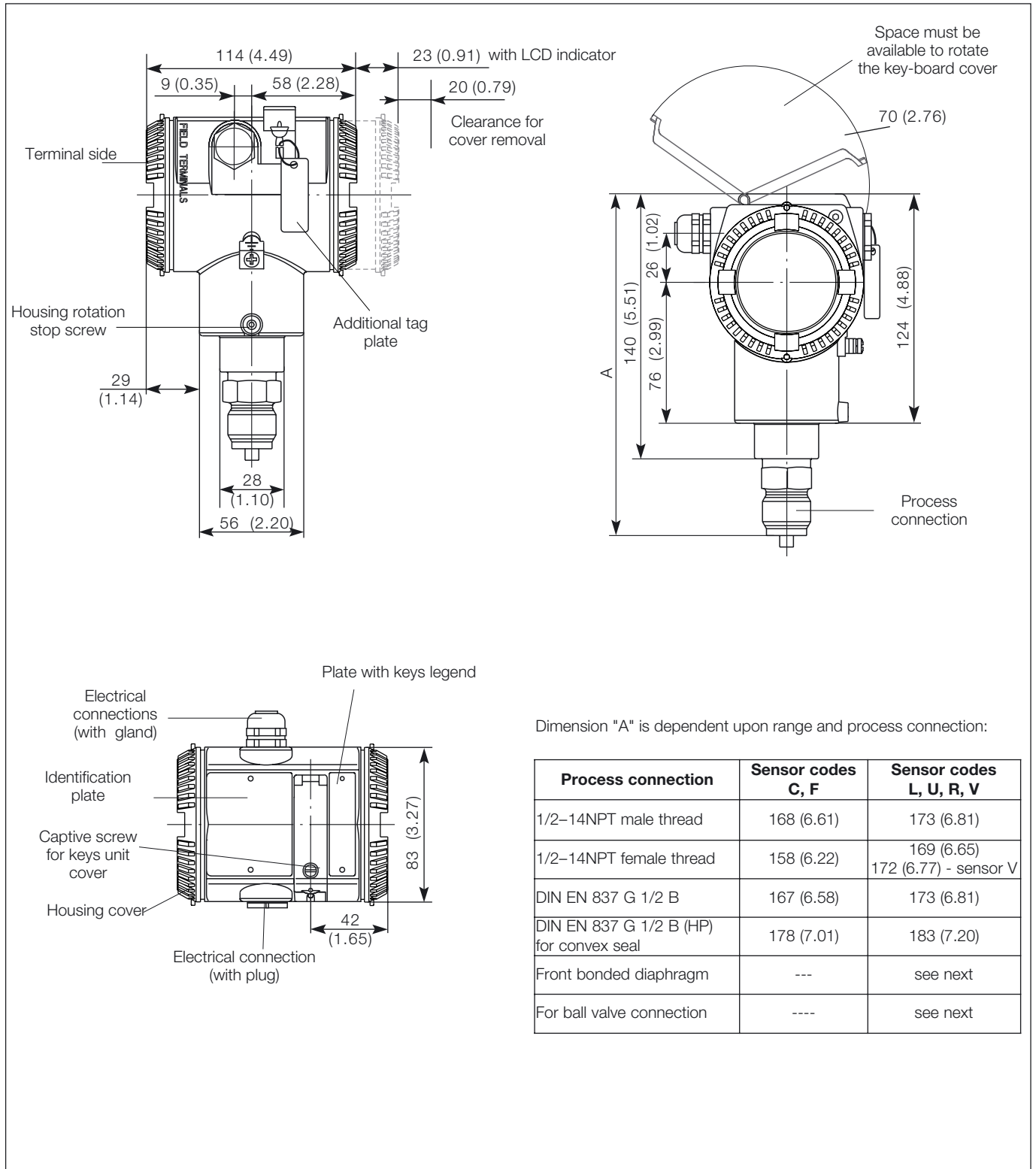
Measure Profile	Pressure
Engineering Unit	mbar/bar
Output scale 0%	Lower Range Limit (LRL)
Output scale 100%	Upper Range Limit (URL)
Output	Linear
Hi-Hi Limit	Upper Range Limit (URL)
Hi Limit :	Upper Range Limit (URL)
Low Limit	Lower Range Limit (LRL)
Low-Low Limit	Lower Range Limit (LRL)
Limits hysteresis	0.5% of output scale
PV filter	0.125s
Address	Not necessary

Any or all the above configurable parameters, including lower range value and upper range value can be changed by any FOUNDATION Fieldbus compatible configurator.

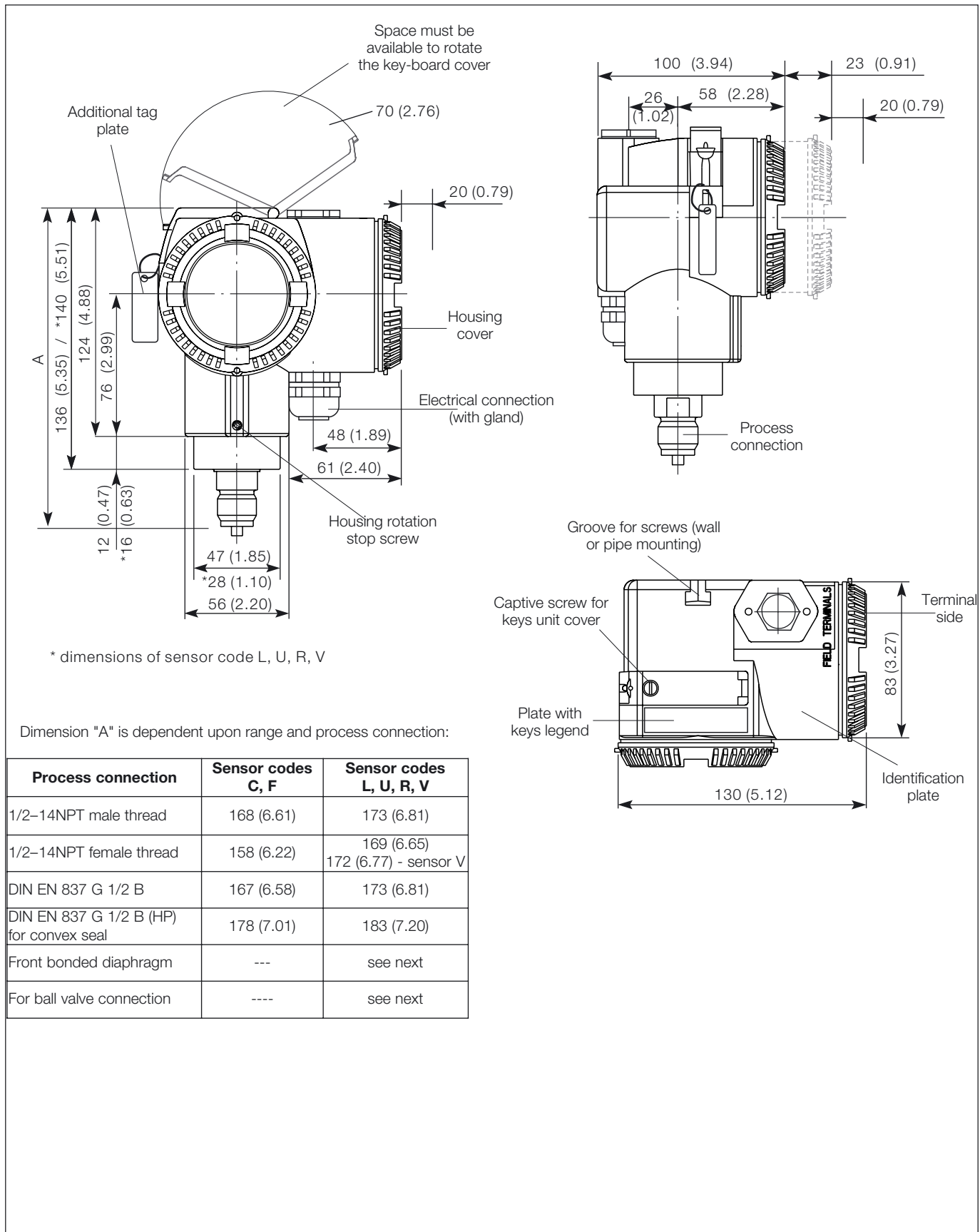
The transmitter database is customized with specified flange type and material, o-ring and filling liquid.

MOUNTING DIMENSIONS (not for construction unless certified) - dimensions in mm (in)

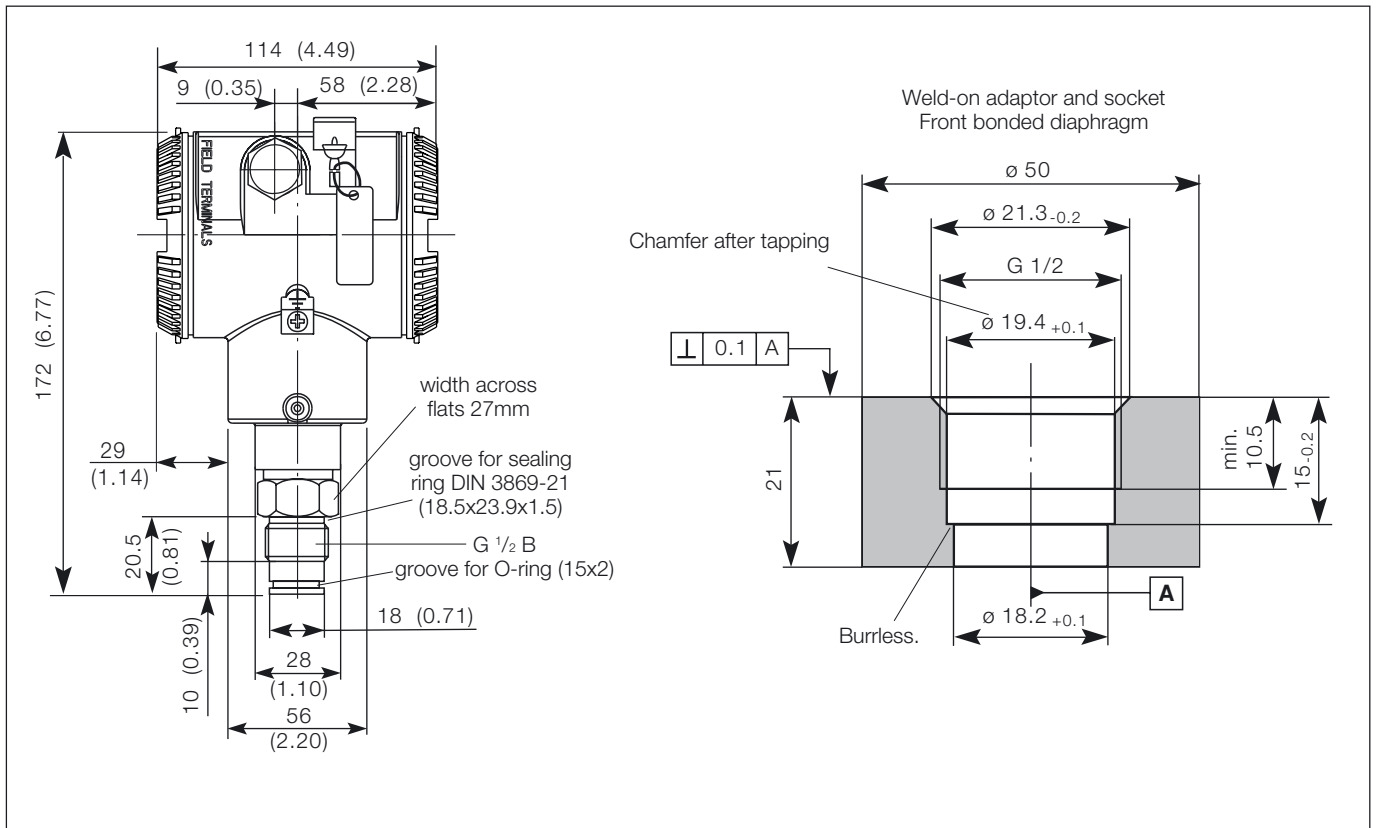
Transmitter with barrel housing



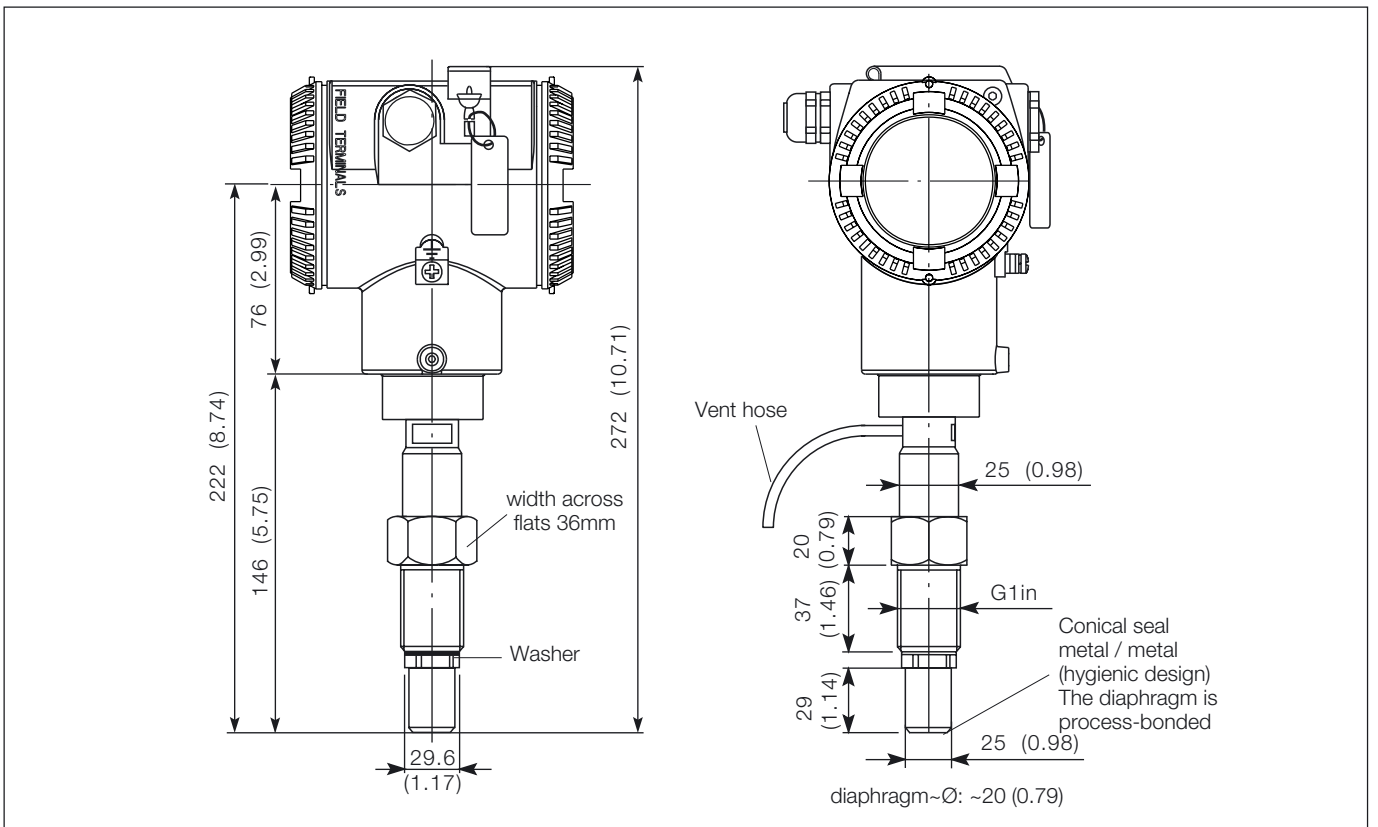
Transmitter with DIN housing



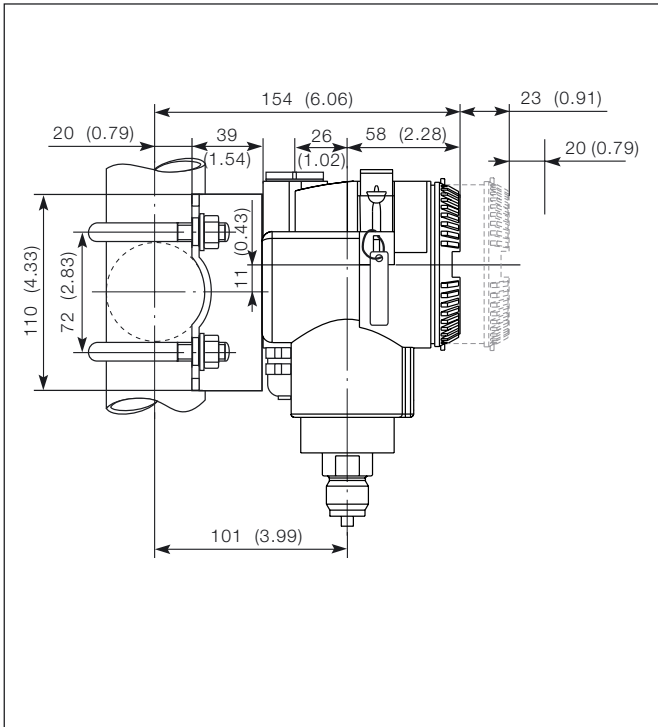
Transmitter with front bonded diaphragm (Barrel housing)



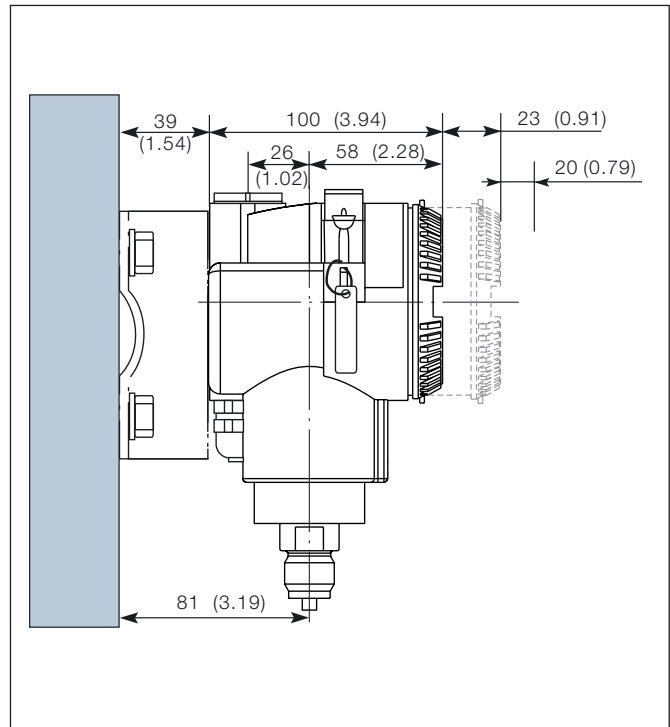
Transmitter with ball valve connection (Barrel housing)



Possible mounting with bracket (optional) for DIN housing

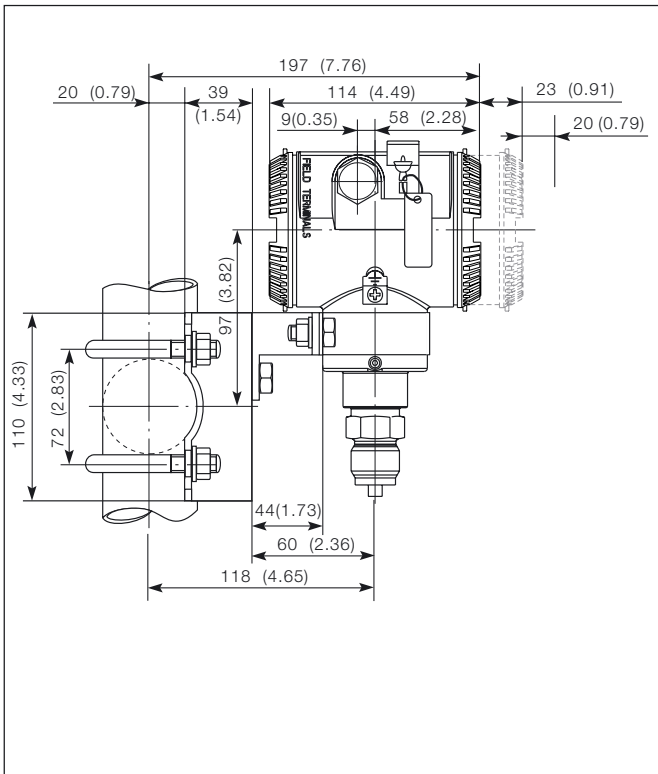


Pipe mounting

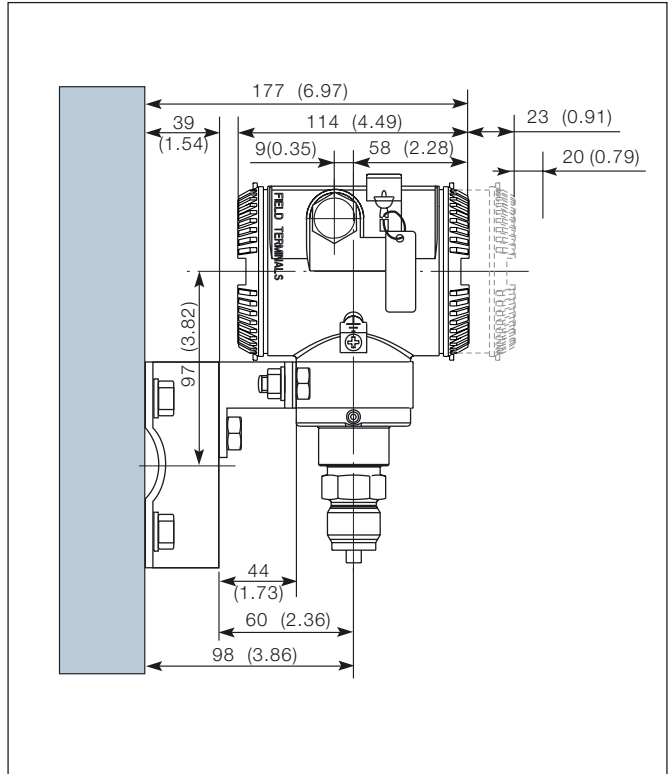


Wall mounting

Possible mounting with bracket (optional) for Barrel housing



Pipe mounting



Wall mounting

Note : Bracket both for pipe and wall mounting provides four holes of 11mm (0.44in) diameter on square with 72mm (2.84in) side

Electrical connections

Standard Terminal block and fieldbus connector versions

7/8in connector

M12 x 1 connector

PIN (male) IDENTIFICATION		
	FOUNDATION Fieldbus	PROFIBUS PA
1	FF-	PA+
2	FF+	GROUND
3	SHIELD	PA-
4	GROUND	SHIELD

Mating female plug NOT SUPPLIED

Harting Han 8U connector

89 (3.5)

51 (2.01)

Harting pin identification
(view onto socket)

26 (1.02)

BASIC ORDERING INFORMATION model 265GS Gauge Pressure Transmitter

Select one character or set of characters from each category and specify complete catalog number.

Refer to additional ordering information code and specify one or more codes for each transmitter if additional options are required.

BASE MODEL – 1 st to 5 th characters				2	6	5	G	S	X	X	X	X	X	X
Gauge Pressure Transmitter – BASE ACCURACY 0.04%														
SENSOR - Span limits – 6th character														
0.2 and 6kPa	2 and 60mbar	0.8 and 24inH ₂ O							C					
0.4 and 40kPa	4 and 400mbar	1.6 and 160inH ₂ O							F					
2.5 and 250kPa	25 and 2500mbar	10 and 1000inH ₂ O							L					
10 and 1000kPa	0.1 and 10bar	1.45 and 145psi							D					
30 and 3000kPa	0.3 and 30bar	4.35 and 435psi							U					
100 and 10000kPa	1 and 100bar	14.5 and 1450psi							R					
600 and 60000 kPa	6 and 600bar	87 and 8700psi							V					
Diaphragm material / Fill fluid (wetted parts) – 7th character														
AISI 316 L ss	Silicone oil	(Note 2) only for front bonded diaphragm						NACE	S					
Hastelloy C276™	Silicone oil	(Note 2)						NACE	K					
Hastelloy C276™ gold-plated	Silicone oil	(Note 2)						NACE	G					
AISI 316 L ss	Inert fluid	(Notes 1, 2) only for front bonded diaphragm						NACE	A					
Hastelloy C276™	Inert fluid	(Notes 1, 2)						NACE	F					
Hastelloy C276™ gold-plated	Inert fluid	(Notes 1, 2)						NACE	E					
AISI 316 L ss	White oil (FDA)	(Note 2) only for front bonded diaphragm						NACE	N					
Hastelloy C276™	White oil (FDA)	(Note 2)						NACE	Z					
Ceramic	No filling	(Note 3)						NACE	J					
Process connection material (wetted parts) – 8th character														
AISI 316 L ss	1/2 – 14 NPT female							NACE		B				
AISI 316 L ss	DIN EN837–1 G 1/2 B							NACE		P				
AISI 316 L ss	G 1/2in front bonded diaphragm	(Notes 2, 10)						NACE		S				
AISI 316 L ss	1/2 – 14 NPT male							NACE		T				
AISI 316 L ss	DIN EN837–1 G 1/2 B (HP)							NACE		U				
AISI 316 L ss	For ball valve connection	(Notes 2, 10)						NACE		V				
Hastelloy C276™	1/2 – 14 NPT female							NACE		E				
Hastelloy C276™	DIN EN837–1 G 1/2 B							NACE		D				
Hastelloy C276™	1/2 – 14 NPT male							NACE		K				
Hastelloy C276™	DIN EN837–1 G 1/2 B (HP)							NACE		Y				
Gasket – 9th character														
Viton™	(Notes 1, 3)							NACE					5	
Perfluoroelastomer (MWP=0.6MPa)	(Note 3)							NACE					6	
Perbunan	(Note 3)												8	
None	(Note 2)							NACE					N	
Housing material and electrical connection – 10th character														
Aluminium alloy (Barrel version)	1/2 – 14 NPT													A
Aluminium alloy (Barrel version)	M20 x 1.5 (CM 20)	(Not available FM, CSA)												B
Aluminium alloy (Barrel version)	Harting Han 8U connector	(Not available ATEX EExd, FM, CSA)						(Note 4)						E
Aluminium alloy (Barrel version)	Fieldbus connector	(Not available ATEX EExd, FM, CSA)						(Note 4)						G
AISI 316 L ss (Barrel version)	1/2 – 14 NPT													S
AISI 316 L ss (Barrel version)	M20 x 1.5 (CM 20)	(Not available FM, CSA)												T
Aluminium alloy (DIN version)	M20 x 1.5 (CM 20)	(Not available FM, CSA)												J
Aluminium alloy (DIN version)	Harting Han 8U connector	(Not available ATEX EExd, FM, CSA)						(Note 4)						K
Aluminium alloy (DIN version)	Fieldbus connector	(Not available ATEX EExd, FM, CSA)						(Note 4)						W
Output/Additional options – 11th character														
HART digital communication and 4 to 20mA	No additional options	(Note 5, 6)												H
HART digital communication and 4 to 20mA	Options requested (to be ordered by "Additional ordering code")	(Note 5)												1
PROFIBUS PA	No additional options	(Note 5, 6)												P
PROFIBUS PA	Options requested (to be ordered by "Additional ordering code")	(Note 6)												2
FOUNDATION Fieldbus	No additional options	(Note 5, 6)												F
FOUNDATION Fieldbus	Options requested (to be ordered by "Additional ordering code")	(Note 6)												3

ADDITIONAL ORDERING INFORMATION for model 265GS

Add one or more 2-digit code(s) after the basic ordering information to select all required options

	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
Electrical certification											
ATEX Group II Category 1/2 GD – Intrinsic Safety EEx ia	E1										
ATEX Group II Category 1/2 G – Flameproof EEx d (Note 2)	E2										
ATEX Group II Category 3 GD – Type of protection "N" EEx nL energy limited	E3										
Factory Mutual (FM) – Intrinsically Safe	EA										
Factory Mutual (FM) – Explosion Proof (only with 1/2 – 14 NPT electrical connection and SS label) (Note 2)	EB										
Canadian Standard Association – Intrinsically Safe (pending)	ED										
Canadian Standard Association – Explosion Proof (Note 2)	EE										
Integral LCD											
Digital LCD integral display	L1										
Backlit digital LCD integral display	L2										
Mounting bracket (shape and material)											
For pipe mounting AISI 316 L ss									B2		
For wall mounting AISI 316 L ss									B4		
Surge											
Surge/Transient Protector (Note 7)									S1		
Operating manual											
German									M1		
Labels & tag language											
German in stainless steel (not available with DIN Electronic Housing code J, K, W)									T1		
German and English plastic (not suitable for Factory Mutual - Explosion Proof)									TA		
Additional tag plate											
In stainless steel									I1		
Preparation procedure											
Oxygen service cleaning (only available with inert fill and for sensor code C, F Viton gasket – P _{max} =21MPa/210bar/3045psi; T _{max} =60° C/140° F)									P1		
Certificates											
Inspection certificate EN 10204–3.1.B of calibration											C1
Inspection certificate EN 10204–3.1.B of the cleanliness stage according to DIN 25410											C3
Inspection certificate EN 10204–3.1.B of helium leakage test of the sensor module											C4
Inspection certificate EN 10204–3.1.B of the pressure test											C5
Certificate of compliance with the order EN 10204–2.1 of instrument design											C6
Germanischer Lloyd approval											C8
SIL2–classification											CL
Material traceability											
Certificate of compliance with the order EN 10204–2.1 of process wetted parts											H1
Inspection certificate EN 10204–3.1.B of process wetted parts (small parts with certificate of compliance EN 10204)											H3
Test report EN 10204-2.2 of the pressure bearing and process wetted parts											H4
Connector											
Fieldbus 7/8in (without mating female plug)									Recommended for FOUNDATION Fieldbus	(Notes 6, 8)	U1
Fieldbus M12x1 (without mating female plug)									Recommended for PROFIBUS PA	(Notes 6, 8)	U2
Harting Han 8U – straight entry										(Notes 5, 8)	U3
Harting Han 8U – angle entry										(Notes 5, 9)	U4

- Note 1: Suitable for oxygen service
- Note 2: Not available with Sensor code C, F
- Note 3: Not available with Sensor code L, D, U, R, V
- Note 4: Select type in additional ordering code
- Note 5: Not available with Electronic Housing code G, W
- Note 6: Not available with Electronic Housing code E, K
- Note 7: Not available with ATEX-Ex nL (code E3) or PROFIBUS PA / FOUNDATION Fieldbus (code 2 or 3) with Intrinsic Safety EEx i (code E1) or FM-Intrinsically Safe (code EA).
- Note 8: Not available with Electronic housing code T, S, A, B, J
- Note 9: Not available with Electronic housing code T, S, A, B, J, K
- Note 10: For oxygen service only with O2 approved sealing rings

™ Hastelloy is a Cabot Corporation trademark

™ Viton is a Dupont de Nemour trademark

Standard delivery items (can be differently specified by additional ordering code)

- General purpose (no Ex design)
- No meter/display, no mounting bracket, no surge protection
- English manual and labels (stainless steel nameplate for Barrel housing code A, B, E, G, S, T; plastic nameplate for DIN housing code J, K, W)
- Configuration with kPa and deg. C units
- No test, inspection or material traceability certificates

THE SELECTION OF SUITABLE WETTED PARTS AND FILLING FLUID FOR COMPATIBILITY WITH THE PROCESS MEDIA IS A CUSTOMER'S RESPONSIBILITY, IF NOT OTHERWISE NOTIFIED BEFORE MANUFACTURING.

BASIC ORDERING INFORMATION model 265AS Absolute Pressure Transmitter

Select one character or set of characters from each category and specify complete catalog number.

Refer to additional ordering information code and specify one or more codes for each transmitter if additional options are required.

BASE MODEL – 1 st to 5 th characters				2	6	5	A	S	X	X	X	X	X	X
Absolute Pressure Transmitter – BASE ACCURACY 0.04%														
SENSOR - Span limits – 6th character														
0.3 and 6kPa	3 and 60mbar	2.25 and 45mmHg							C					
2 and 40kPa	20 and 400mbar	15 and 300mmHg							F					
12.5 and 250kPa	125 and 2500mbar	93.8 and 1875mmHg							L					
50 and 1000kPa	0.5 and 10bar	7.25 and 145psi							D					
150 and 3000kPa	1.5 and 30bar	21.7 and 435psi							U					
Diaphragm material / Fill fluid (wetted parts) – 7th character														
AISI 316 L ss	Silicone oil	(Note 2) only for front bonded diaphragm							NACE	S				
Hastelloy C276™	Silicone oil	(Note 2)							NACE	K				
Hastelloy C276™ gold-plated	Silicone oil	(Note 2)							NACE	G				
AISI 316 L ss	Inert fluid	(Notes 1, 2) only for front bonded diaphragm							NACE	A				
Hastelloy C276™	Inert fluid	(Notes 1, 2)							NACE	F				
Hastelloy C276™ gold-plated	Inert fluid	(Notes 1, 2)							NACE	E				
AISI 316 L ss	White oil (FDA)	(Note 2) only for front bonded diaphragm							NACE	N				
Hastelloy C276™	White oil (FDA)	(Note 2)							NACE	Z				
Ceramic	No filling	(Note 3)							NACE	J				
Process connection material (wetted parts) – 8th character														
AISI 316 L ss	1/2 - 14 NPT female								NACE		B			
AISI 316 L ss	DIN EN837-1 G 1/2 B								NACE		P			
AISI 316 L ss	G 1/2in front bonded diaphragm	(Notes 2), 10							NACE		S			
AISI 316 L ss	1/2i - 14 NPT male								NACE		T			
AISI 316 L ss	DIN EN837-1 G 1/2 B (HP)								NACE		U			
AISI 316 L ss	For ball valve connection	(Notes 2, 10)							NACE		V			
Hastelloy C276™	1/2i - 14 NPT female								NACE		E			
Hastelloy C276™	DIN EN837-1 G 1/2 B								NACE		D			
Hastelloy C276™	1/2 - 14 NPT male								NACE		K			
Hastelloy C276™	DIN EN837-1 G 1/2 B (HP)								NACE		Y			
Gasket – 9th character														
Viton™	(Notes 1, 3)								NACE			5		
Perfluoroelastomer (MWP=0.6MPa)	(Note 3)								NACE			6		
Perbunan	(Note 3)											8		
None	(Note 2)								NACE			N		
Housing material and electrical connection – 10th character														
Aluminium alloy (Barrel version)	1/2 - 14 NPT													A
Aluminium alloy (Barrel version)	M20 x 1.5 (CM 20)	(Not available FM, CSA)												B
Aluminium alloy (Barrel version)	Harting Han 8U connector	(Not available ATEX EExd, FM, CSA)								(Note 4)				E
Aluminium alloy (Barrel version)	Fieldbus connector	(Not available ATEX EExd, FM, CSA)								(Note 4)				G
AISI 316 L ss (Barrel version)	1/2 - 14 NPT													S
AISI 316 L ss (Barrel version)	M20 x 1.5 (CM 20)	(Not available FM, CSA)												T
Aluminium alloy (DIN version)	M20 x 1.5 (CM 20)	(Not available FM, CSA)												J
Aluminium alloy (DIN version)	Harting Han 8U connector	(Not available ATEX EExd, FM, CSA)								(Note 4)				K
Aluminium alloy (DIN version)	Fieldbus connector	(Not available ATEX EExd, FM, CSA)								(Note 4)				W
Output/Additional options – 11th character														
HART digital communication and 4 to 20mA	No additional options	(Note 5, 6)												H
HART digital communication and 4 to 20mA	Options requested (to be ordered by "Additional ordering code")	(Note 5)												1
PROFIBUS PA	No additional options	(Note 5, 6)												P
PROFIBUS PA	Options requested (to be ordered by "Additional ordering code")	(Note 6)												2
FOUNDATION Fieldbus	No additional options	(Note 5, 6)												F
FOUNDATION Fieldbus	Options requested (to be ordered by "Additional ordering code")	(Note 6)												3

ADDITIONAL ORDERING INFORMATION for model 265AS

Add one or more 2-digit code(s) after the basic ordering information to select all required options

	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
Electrical certification											
ATEX Group II Category 1/2 GD – Intrinsic Safety EEx ia	E1										
ATEX Group II Category 1/2 G – Flameproof EEx d (Note 2)	E2										
ATEX Group II Category 3 GD – Type of protection "N" EEx nL energy limited	E3										
Factory Mutual (FM) – Intrinsically Safe	EA										
Factory Mutual (FM) – Explosion Proof (only with 1/2 – 14 NPT electrical connection and SS label) (Note 2)	EB										
Canadian Standard Association – Intrinsically Safe (pending)	ED										
Canadian Standard Association – Explosion Proof (Note 2)	EE										
Integral LCD											
Digital LCD integral display	L1										
Backlit digital LCD integral display	L2										
Mounting bracket (shape and material)											
For pipe mounting AISI 316 L ss	B2										
For wall mounting AISI 316 L ss	B4										
Surge											
Surge/Transient Protector (Note 7)	S1										
Operating manual											
German	M1										
Labels & tag language											
German in stainless steel (not available with DIN Electronic Housing code J, K, W)	T1										
German and English plastic (not suitable for Factory Mutual - Explosion Proof)	TA										
Additional tag plate											
In stainless steel	I1										
Preparation procedure											
Oxygen service cleaning (only available with inert fill and for sensor code C, F Viton gasket – P _{max} =21MPa/210bar/3045psi; T _{max} =60° C/140° F)	P1										
Certificates											
Inspection certificate EN 10204–3.1.B of calibration	C1										
Inspection certificate EN 10204–3.1.B of the cleanliness stage according to DIN 25410	C3										
Inspection certificate EN 10204–3.1.B of helium leakage test of the sensor module	C4										
Inspection certificate EN 10204–3.1.B of the pressure test	C5										
Certificate of compliance with the order EN 10204–2.1 of instrument design	C6										
Germanischer Lloyd approval	C8										
SIL2–classification	CL										
Material traceability											
Certificate of compliance with the order EN 10204–2.1 of process wetted parts	H1										
Inspection certificate EN 10204–3.1.B of process wetted parts (small parts with certificate of compliance EN 10204)	H3										
Test report EN 10204-2.2 of the pressure bearing and process wetted parts	H4										
Connector											
Fieldbus 7/8in (without mating female plug) Recommended for FOUNDATION Fieldbus (Notes 6, 8)	U1										
Fieldbus M12x1 (without mating female plug) Recommended for PROFIBUS PA (Notes 6, 8)	U2										
Harting Han 8U – straight entry (Notes 5, 8)	U3										
Harting Han 8U – angle entry (Notes 5, 9)	U4										

- Note 1: Suitable for oxygen service
- Note 2: Not available with Sensor code C, F
- Note 3: Not available with Sensor code L, D, U
- Note 4: Select type in additional ordering code
- Note 5: Not available with Electronic Housing code G, W
- Note 6: Not available with Electronic Housing code E, K
- Note 7: Not available with ATEX-EEx nL (code E3) or PROFIBUS PA / FOUNDATION Fieldbus (code 2 or 3) with Intrinsic Safety EEx ia (code E1) or FM-Intrinsically Safe (code EA).
- Note 8: Not available with Electronic housing code T, S, A, B, J, E
- Note 9: Not available with Electronic housing code T, S, A, B, J, K
- Note 10: For oxygen service only with O2 approved sealing rings

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Standard delivery items (can be differently specified by additional ordering code)

- General purpose (no Ex design)
- No meter/display, no mounting bracket, no surge protection
- English manual and labels (stainless steel nameplate for Barrel housing code A, B, E, G, S, T; plastic nameplate for DIN housing code J, K, W)
- Configuration with kPa and deg. C units
- No test, inspection or material traceability certificates

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