

2600T Series Pressure Transmitters

Model 264DG Differential/Gauge

Model 264HG Gauge

Model 264NG Absolute

with sanitary, food and beverage direct mount seal

IndustrialIT
enabled™



- **Base accuracy : $\pm 0.075\%$**
- **Reliable sensing system coupled with very latest digital technologies**
- **Span limits**
 - 0.54 to 8000kPa; 2.14inH₂O to 1160psi
 - 1.1 to 8000kPa abs; 8mmHg to 1160psia
- **Comprehensive sensor choice**
 - optimize in-use total performance and stability
- **5-year 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
- **Application specific process interfaces complete of process spud**
- **PED compliance to sound engineering practice (SEP)**



ABB 2600T Series
Engineered solutions
for all applications

General Description

Model 264DG and 264HG/NG detailed in this data sheet apply for those transmitters which include on high pressure measuring side, a direct mount seal which is integral to the transducer by a short capillary connection inside a protective rigid tube.

This construction forms a standalone single assembly suitable to be mounted to the process by the seal mounting facilities.

By properly selecting the high and low pressure side variant in the ordering codes, model 264DG can be in the following versions :

- a) one direct mount seal and one flange for process connection, direct $\frac{1}{4}$ – 18 NPT or $\frac{1}{2}$ – 14 NPT through adapter; this allows also to connect the other leg (wet or dry) for differential measurement.

A proper filter is supplied as standard when $\frac{1}{4}$ – 18 NPT connection is selected, in order to plug the unused entry, leaving it vented for gauge measurement with reference to atmosphere.

- b) one direct mount seal and one remote seal with capillary; the two seals allow again a differential measurement and must be selected of same type/size.

Model 264HG and 264NG have the direct mount seal on the positive side, respectively with the reference at atmospheric or vacuum pressure, for gauge or absolute measurements. Allowed types of direct mount seal are those mainly used for sanitary, food and beverage application:

- union nut
- Triclamp
- Cherry Burrell
- sanitary flush or extended
- beverage bolted

These are suitable for food, beverage and sanitary applications, using FDA approved filling, which are defined as food fills and are Generally Recognized As Safe (GRAS) by the US Food and Drug Administration (FDA).

Refer to seal data sheet for all data and details relevant to seal element. The following table list the types of standard seal which can be mounted with 264DG/HG/NG transmitters (the mnemonic is used as reference in the compatibility table).

Seal type	Size	Mnemonic
Beverage bolted	1 1/2in	K1.5
Union Nut, Triclamp, Sanitary, Cherry Burrell	2in / F50 3in / F80 4in	S2 S3 S3

All following specification data apply for identical characteristics of the two seals when the transmitter has the remote seal in addition to the direct mount one.

Functional Specifications

Range and span limits

Sensor Code	Upper Range Limit (URL)	Lower Range Limit (LRL)			Minimum span	Compatibility (allowed seal for 264DG)	
		264DG Direct mount differential	264DG Direct mount gauge	264HG/NG Direct mount gauge/absolute		Direct mount seal only	Direct mount and one remote seal (max length in m.)
E	16kPa 160mbar 64inH ₂ O	-16kPa -160mbar -64inH ₂ O	-16kPa -160mbar -64inH ₂ O		0.54kPa 5.4mbar 2.14inH ₂ O	S3	S3 (3) (●)
F	40kPa 400mbar 160inH ₂ O	-40kPa -400mbar -160inH ₂ O	-40kPa -400mbar -160inH ₂ O		0.67kPa 6.7mbar 2.67inH ₂ O	S2 (●), S3	S3 (4)
G	65kPa 650mbar 260inH ₂ O	-65kPa -650mbar -260inH ₂ O	-65kPa -650mbar -260inH ₂ O	-65kPa/0.07kPa abs -650mbar/0.7mbar abs -260inH ₂ O/0.5mmHg	1.1kPa 11mbar 4.35inH ₂ O	S2 (●), S3	S3 (4)
H	160kPa 1600mbar 642inH ₂ O	-160kPa -1600mbar -642inH ₂ O	0.07kPa abs 0.7mbar abs 0.5mmHg	0.07kPa abs 0.7mbar abs 0.5mmHg	2.67kPa 26.7mbar 10.7inH ₂ O	S2, S3	S2 (3), S3 (8)
M	600kPa 6bar 87psi	-600kPa -6bar -87psi	0.07kPa abs 0.7mbar abs 0.5mmHg	0.07kPa abs 0.7mbar abs 0.5mmHg	10kPa 0.1bar 1.45psi	S2, S3	S2 (6), S3 (8)
P	2400kPa 24bar 348psi	-2400kPa -24bar -348psi	0.07kPa abs 0.7mbar abs 0.5mmHg	0.07kPa abs 0.7mbar abs 0.5mmHg	40kPa 0.4bar 5.8psi	S2, S3	S2 (6), S3 (8)
Q	8000kPa 80bar 1160psi	-8000kPa -80bar -1160psi	0.07kPa abs 0.7mbar abs 0.5mmHg	0.07kPa abs 0.7mbar abs 0.5mmHg	134kPa 1.34bar 19.4psi	S2, S3	S2 (6), S3 (8)

The combinations sensor code/seal type marked (●) modify the base accuracy rating and static pressure effect; refer to performance specifications.

ALL AVAILABLE SEALS FOR DIRECT MOUNT ARE SUITABLE FOR LISTED RANGES OF MODELS 264HG/NG WITHOUT LIMITATION.

Span limits

Maximum span = URL
 (can be further adjusted up to ± URL (TD = 0.5) for differential models, within the range limits)

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 ≥ minimum span

Damping

Selectable time constant : 0, 0.25, 0.5, 1, 2, 4, 8 or 16s.
 This is in addition to sensor response time

Turn on time

Operation within specification in less than 1s with minimum damping.

Insulation resistance

> 100MΩ at 1000VDC (terminals to earth)

Operative limits

Temperature limits °C (°F) :

Ambient (is the operating temperature)

Filling	Models 264DG		Models 264HG/NG
	Sensors F to Q	Sensor E	Sensors G to Q
Silicone oil	-40 and +85	-25 and +85	-40 and +85
DC 200	(-40 and +185)	(-13 and +185)	(-40 and +185)

Lower ambient limit for LCD indicators: -20°C (-4°F)

Upper ambient limit for LCD indicators: +70°C (+158°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 (side without seal for 264DG only)

- refer to lower ambient limits; -20°C (-4°F) for Viton gasket

Upper limit (side without seal for 264DG only)

- Silicone oil : 121°C (250°F) (1)

(1) 100°C (212°F) for application below atmospheric pressure

The following table show characteristics of fill fluids when used in transmitters with direct mount seal on high pressure side.

FILL FLUIDS (APPLICATION)	OPERATING CONDITIONS			
	Tmax @ Pabs>of	Pmin mbar abs (psia)	Tmax @ P min	Tmin
Silicone oil-DC200 (General purpose)	200 (390) @ 35mbar	0.7 (0.01)	160 (320)	-40 (-40)
Vegetable oil-Neobee M-20 (Food-Sanitary) FDA	200 (390) @ 1bar	130 (1.9)	150 (300)	-18 (0)
Glycerin Water (70%) (Food-Sanitary) FDA	93 (200) @ 1bar	1000 (14.5)	93 (200)	-7 (+20)
Mineral oil-MARCOL 82 (Food-Sanitary) FDA	200 (390) @ 200mbar	33 (0.5)	40 (104)	-40 (-40)

Note

Maximum temperature is 150°C (300°F) for beverage bolted seal version

Storage

Lower limit: -50°C (-58°F); -40°C (-40°F) for LCD indicators

Upper limit: +85°C (+185°F)

Pressure limits

Overpressure limits (without damage to the transmitter)

0.07kPa abs, 0.7mbar abs, 0.01psia to transmitter sensor limit or rating of seal/fitting, whichever is less:

- 16MPa, 160bar, 2320psi for all sensor codes of model 264DG
- 14MPa, 140bar, 2030psi for sensor codes G,H,M of model 264HG/NG
- 21MPa, 210bar, 3045psi for sensor codes P,Q of models 264HG/NG
- 3.8MPa, 38bar, 550psi for 2in Triclamp
- 2.4MPa, 24bar, 350psi for 3in Triclamp
- 1.7MPa, 17bar, 250psi for 4in Triclamp
- 2.5MPa, 25bar, 360psi for F50/F80 Union nut
- 1.9MPa, 19bar, 275psi for Cherry Burrell
- 1.9MPa, 19bar, 275psi for 4in Sanitary flush or extended
- 4MPa, 40bar, 580psi for 1 1/2in beverage bolted
- 1MPa, 10bar, 145psi for 4in V-band clamp option
- 0.7MPa, 7bar, 100psi @ 21°C for 4in schedule 5 V-band clamp option

Static pressure

Transmitters for differential pressure model 264DG operates within specifications between the following limits:

- 1.3kPa abs, 13mbar abs, 0.2psia and 16MPa, 160bar, 2320psi or rating of seal/fitting as above, whichever is less
- 0.07kPa abs, 0.7mbar abs, 0.01psia and 16MPa, 160bar, 2320psi or rating of seal/fitting as above, whichever is less, using a second seal remote on negative pressure side.

Proof pressure

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

- 28MPa, 280bar, 4000psi for model 264DG and for sensor codes G, H, M of models 264HG and 264NG
- 40MPa, 400bar, 5900psi for sensor codes P,Q of model 264HG/NG or two times the rating of seal/fitting whichever is less.

Meet ANSI/ISA-S 82.03 hydrostatic test requirements and SAMAPMC 27.1.

Environmental limits

Electromagnetic compatibility (EMC)

Comply with EN 61000-6-3 for emission and EN 61000-6-2 for immunity requirements and test;

Radiated electromagnetic immunity level: 30V/m
(according to IEC 1000-4-3, EN61000-4-3)

Conducted electromagnetic immunity level : 30V
(according to IEC 1000-4-6, EN 61000-4-6)

Surge immunity level (with surge protector): 4kV
(according to IEC 1000-4-5 EN 61000-4-5)

Fast transient (Burst) immunity level: 4kV
(according to IEC 1000-4-4 EN 61000-4-4)

Pressure equipment directive (PED)

Comply with 97/23/EEC following sound engineering practice (SEP)

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 60068-2-6)

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 EN 60529 (1989) to IP 67 (IP 68 on request) or by NEMA to 4X or by JIS to C0920. IP65 with Harting Han connector.

Hazardous atmospheres

With or without output meter/integral display

- COMBINED ATEX (Intrinsic safety and flameproof), FM and CSA ZELM approval. See below detailed classifications.
- COMBINED INTRINSIC SAFETY and FLAMEPROOF/EUROPE: ATEX/ZELM approval
 - II 1 GD T50°C, EEx ia IIC T6 (–40°C ≤ Ta ≤ +40°C) T95°C, EEx ia IIC T4 (–40°C ≤ Ta ≤ +85°C)
 - II 1/2 GD T85°C, EEx d IIC T6 (–40°C ≤ Ta ≤ +75°C)
- INTRINSIC SAFETY/EUROPE: ATEX/ZELM approval
 - II 1 GD T50°C, EEx ia IIC T6 (–40°C ≤ Ta ≤ +40°C) T95°C, EEx ia IIC T4 (–40°C ≤ Ta ≤ +85°C)
- TYPE "N"/EUROPE: ATEX/ZELM type examination (for HART)
 - II 3 GD T50°C, EEx nL IIC T6 (–40°C ≤ Ta ≤ +40°C) T95°C, EEx nL IIC T4 (–40°C ≤ Ta ≤ +85°C)
- FLAMEPROOF/EUROPE: ATEX/CESI approval
 - II 1/2 GD T85°C, EEx d IIC T6 (–40°C ≤ Ta ≤ +75°C)
- CANADIAN STANDARDS ASSOCIATION and FACTORY MUTUAL:
 - Explosionproof: Class I, Div. 1, Groups A, B, C, D
 - Dust ignitionproof : Class II, Div. 1, Groups E, F, G
 - Suitable for : Class II, Div. 2, Groups F, G; Class III, Div. 1, 2
 - Nonincendive: Class I, Div. 2, Groups A, B, C, D
 - Intrinsically safe: Class I, II, III, Div. 1, Groups A, B, C, D, E, F, G AEx ia IIC T6/T4, Zone 0 (FM)
- STANDARDS AUSTRALIA (SAA): TS Approval
 - Intrinsically safe Ex ia IIC T4/T5 (–20°C ≤ Ta ≤ +80°C) only HART
 - No sparking Ex n IIC T4/T6 (–20°C ≤ Ta ≤ +80°C) only HART
 - Flameproof Ex d IIC T4/T6 (–20°C ≤ Ta ≤ +80°C)
 - Dust ignitionproof DIP A21 Ta T6 (–20°C ≤ Ta ≤ +80°C)
- INTRINSIC SAFETY/CHINA NEPSI approval Ex ia IIC T4-T6
- FLAMEPROOF/CHINA NEPSI approval Ex d IIC T6
- GOST (Russia), GOST (Kazakistan), Inmetro (Brazil) based on ATEX

Electrical Characteristics and Options

HART digital communication and 4 to 20mA output

Power Supply

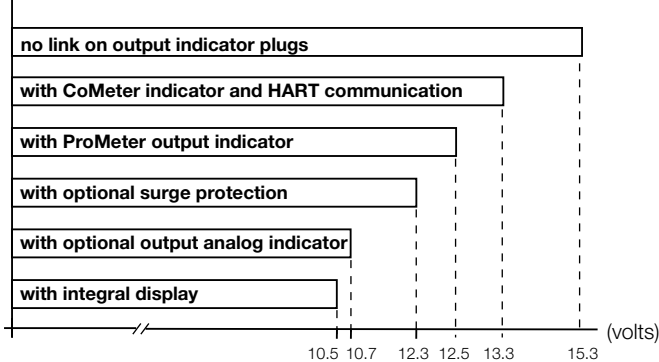
The transmitter operates from 10.5 to 42VDC with no load and is protected against reverse polarity connection (additional load allows operations over 42VDC).

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

Ripple

20mV max on a 250Ω load as per HART specifications

MINIMUM OPERATING VOLTAGES



Load limitations

4 to 20mA and HART total loop resistance :

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

A minimum of 250Ω is required for HART communication.

Optional indicators

Output meter

CoMeter and Prometer LCD :

5-digit (±99999 counts) programmable with 7.6mm. high (3in), 7-segment numeric characters plus sign and digital point for digital indication of output value in percentage, current or engineer unit;

10-segment bargraph display (10% per segment) for analog indication of output in percentage;

7-digit with 6mm. high (2.3in), 14-segment alphanumeric characters, for engineer units and configuration display

Analog : 36mm (1.4in) scale on 90°.

Integral display

LCD, 15 lines x 56 column dot matrix providing 2 lines indication as

- top: 5-digit (numeric) plus sign or 7-digit alphanumeric
- bottom: 7-digit alphanumeric

and additional 50-segment bargraph for indication of analog output in percentage.

User-definable matrix display mode with HART communication:

- process variable in pressure unit or
- output signal as percentage, current or engineering units

Display also indicates in/out transfer function, static pressure, sensor temperature and diagnostic messages and provides configuration facilities.

Optional surge protection

Up to 4kV

- voltage 1.2 μs rise time / 50 μs delay time to half value
- current 8 μs rise time / 20 μs delay time to half value

Output signal

Two-wire 4 to 20mA, user-selectable for linear or square root output, power of ³/₂ or ⁵/₂, 5th order or two 2nd order switching point selectable programmable polynomial 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
- Upper limit: 20.5mA

Transmitter failure mode (to NAMUR standard)

The output signal can be user-selected to a value of 3.7 or 22mA on gross transmitter failure condition, detected by self-diagnostics.

In case of CPU failure the output is driven <3.7mA or >22mA.

PROFIBUS PA output

Device type

Pressure transmitter compliant to Profiles 3.0 Class A & B; ident. number 052B HEX.

Power supply

The transmitter operates from 9 to 32VDC, polarity independent.

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

Current consumption

operating (quiescent): 10.5mA

fault current limiting: 20mA 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

25ms

Function blocks

2 analog input, 1 transducer, 1 physical

Integral display

LCD, 15 lines x 56 column dot matrix providing 2 lines indication as

– top: 5-digit (numeric) plus sign or 7-digit alphanumeric

– bottom: 7-digit alphanumeric

and additional 50-segment bargraph for indication of output in percentage of the analog input function block assigned to the primary variable.

User-definable matrix display mode:

– process variable in pressure units or

– primary variable in engineering units (output of transducer block) or

– output as percentage or engineering units of analog input function blocks

Display also indicates diagnostic messages and provides configuration facilities.

Secondary variable, static pressure and sensor temperature can be read.

Transmitter failure mode

On gross transmitter failure condition, detected by self-diagnostics, the output signal can be driven to defined conditions, selectable by the user as safe, last valid or calculated value. If electronic failure or short circuit occur the transmitter consumption is electronically limited at a defined value (20mA approx), for safety of the network.

FOUNDATION Fieldbus output

Device type

LINK MASTER DEVICE

Link Active Scheduler (LAS) capability implemented.

Power supply

The transmitter operates from 9 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): 10.5mA

fault current limiting: 20mA 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 enhanced Analog Input blocks/25ms max (each)

1 enhanced PID block/40ms max.

1 standard ARithmetic block/25ms

1 standard Input Selector block/25ms

1 standard Control Selector block/25ms

1 standard Signal Characterization block/25ms

1 standard Integrator/Totalizer block/25ms

Additional blocks

1 enhanced Resource block

1 custom Pressure with calibration transducer block

1 custom Advanced Diagnostics transducer block including Plugged Input Line Detection

1 custom Local Display transducer block

Number of link objects

35

Number of VCRs

35

Output interface

FOUNDATION fieldbus digital communication protocol to standard H1, compliant to specification V. 1.6; FF registration in progress.

Integral display

LCD, 15 lines x 56 column dot matrix providing 2 lines indication as

– top: 5-digit (numeric) plus sign or 7-digit alphanumeric

– bottom: 7-digit alphanumeric

and additional 50-segment bargraph for percentage indication of the analog input function block output, assigned to the primary variable.

User-definable matrix display mode:

– process variable in pressure units or

– primary variable in engineering units (output of transducer block) or

– output as percentage or engineering units of one or more selected function blocks

Display also indicates diagnostic messages. Secondary variable, static pressure and sensor temperature can be read.

Transmitter failure mode

The output signal is "frozen" to the last valid value on gross transmitter failure condition, detected by self-diagnostics which also indicate a BAD conditions. If electronic failure or short circuit occur the transmitter consumption is electronically limited at a defined value (20mA approx), for safety of the network.

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), mounting position with vertical diaphragm and zero based range for transmitter with isolating diaphragms in AISI 316 L ss 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 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.

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

Using direct mount seal sizes <F80/3in

- ±0.075% for TD from 1:1 to 10:1
(±0.10% for sensor code F
±0.10% for sensor code E for TD from 1:1 to 5:1)

- $\pm 0.0075\% \times \frac{\text{URL}}{\text{Span}}$ for TD from 10:1 to 20:1

$$(\pm 0.01\% \times \frac{\text{URL}}{\text{Span}} \text{ for sensor code F}$$

$$\pm 0.02\% \times \frac{\text{URL}}{\text{Span}} \text{ for sensor code E for TD from 5:1 to 10:1)$$

Using direct mount seal sizes ≥F80/3in

- ±0.075% for TD from 1:1 to 10:1
(±0.10% for sensor code E for TD from 1:1 to 5:1)

- $\pm 0.0075\% \times \frac{\text{URL}}{\text{Span}}$ for TD from 10:1 to 20:1

$$(\pm 0.02\% \times \frac{\text{URL}}{\text{Span}} \text{ for sensor code E for TD from 5:1 to 10:1)$$

Multiply the values by 1.5 for sensor/seal combination marked (●) and for transmitter with direct mount seal plus one remote seal.

Operating influences

Temperature effect

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

Transmitter effect:

- ±(0.04% URL + 0.065% span)

Direct mount seal additional effect:

Seal type size	Error		
	kPa	mbar	inH ₂ O
Sanitary 2in/F50	0.9	9	3.6
Sanitary 3–4in/F80	0.02	0.2	0.08

- 1 1/2in beverage seal (tx + seal effect): ± (0.15% URL + 0.15% span)

per 20K (36°F) process temperature change on seal diaphragm between the process operating temperature limits

Seal type size	Error		
	kPa	mbar	inH ₂ O
Sanitary 2in/F50	0.9	9	3.6
Sanitary 3–4in/F80	0.06	0.6	0.24

per 20K (36°F) process temperature change on seal diaphragm between the process operating temperature limits of –25 to 120°C (–13 to 248°F)

- 1 1/2in beverage seal: 0.2kPa, 2mbar, 0.8inH₂O

Multiply by 1.5 the above values for 20K (36°F) change between the limits of –40 to –25°C (–40 to –13°F) and of +120 to +150°C (+248 to 302°F).

Optional CoMeter and ProMeter ambient temperature

Total reading error per 20K (36°F) change between the ambient limits of –20 and +70°C (–4 and +158°F) :

- ±0.15% of max span (16mA).

Static pressure (zero errors can be calibrated out at line pressure)

seal effect additional to transmitter sensor effect applicable for differential measurement per 2MPa, 20bar or 290psi.

Model 264DG direct mount seal only

- zero error: ±0.15% of URL
- span error: ±0.15% of reading

Model 264DG direct mount plus remote seal

- zero error: ±0.20% of URL
- span error: ±0.20% of reading

Multiply by 1.5 the errors for sensor seal combinations marked (●)

Supply voltage

Within voltage/load specified limits the total effect is less than 0.005% of URL per volt.

Load

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

Electromagnetic field

Total effect : less than 0.10% of span from 20 to 1000MHz and for field strengths up to 30V/m when tested with shielded conduit and grounding, with or without meter.

Common mode interference

No effect from 100Vrms @ 50Hz, or 50VDC

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**Model 264DG only****Low pressure side process isolating diaphragms (*)**

AISI 316 L ss

A remote seal can be selected with required diaphragm (refer to high pressure side).

Low pressure side process flanges, adapters, plugs and drain/vent valves (*)

AISI 316 L ss

Bolts and nuts

AISI 316 ss bolts and nuts Class A4-50 per UNI 7323 (ISO 3506), in compliance with NACE MR0175 Class II.

Gaskets (*)

Viton™; PTFE.

Model 264DG/HG/NG**High pressure side process diaphragm (direct mount seal) (*)**

AISI 316 L ss.

High pressure side fill fluid (direct mount seal)

Silicone oil-DC200™, Vegetable oil-Neobee M-20™, Glycerin Water, Mineral oil-MARCOL 82™.

Sensor fill fluid

Silicone oil (DC200™).

Sensor housing

AISI 316 L ss.

Electronic housing and covers

Barrel version

- Aluminium alloy with baked epoxy finish;
- Copper-free content aluminium alloy with baked epoxy finish;
- AISI 316 L ss.

DIN version

- Aluminium alloy with baked epoxy finish.

Covers O-ring

Buna N.

Local zero and span adjustments:

Glass filled polycarbonate plastic (removable).

Tagging

AISI 316ss 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.

Optional extras

Output indicator

plug-in rotatable type, LCD or analog.

Supplemental customer tag

AISI 316 ss tag screwed/fastened to the transmitter for customer's tag data up to a maximum of 20 characters and spaces on one line for tag number and tag name, and up to a maximum of 3 spaced strings of 10 characters each for calibration details (lower and upper values plus unit). Special typing evaluated on request for charges.

Surge protection (only as external unit for PROFIBUS PA and FF)

Process sealing gasket

V-band clamps and fittings (tank spud)

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

Tag and manual language

Communication connectors

Process connections

on conventional flanges : $\frac{1}{4}$ – 18 NPT on process axis

on adapters : $\frac{1}{2}$ – 14 NPT on process axis

fixing threads: $\frac{7}{16}$ – 20 UNF at 41.3mm centre distance

on seal side

Triclamp: 2in, 3in or 4in

Union nut: F50 or F80 to DIN 11851

Cherry Burrell: 2in, 3in or 4in

Sanitary: 4in flush diaphragm or 4in extended (2in, 4in or 6in) diaphragm

Beverage bolted: 1 $\frac{1}{2}$ in flush diaphragm with integral 6 holes flanged connection

Electrical connections

Two $\frac{1}{2}$ – 14 NPT or M20x1.5 or PG 13.5 or $\frac{1}{2}$ GK threaded conduit entries, direct on housing.

Special communication connector (on request)

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

– FOUNDATION Fieldbus, PROFIBUS PA: M12x1 and 7/8.

Terminal block

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

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

Grounding

Internal and external 6mm² (10AWG) ground termination points are provided.

Mounting position

Transmitter can be mounted in any position.

Electronics housing may be rotated to any position. A positive stop prevents over travel.

Mass (without options)

5kg to 8kg approx (11 to 18lb) according to specified seal(s)

options; add 1.5kg (3.4lb) for AISI housing.

Add 650g (1.5lb) for packing.

Packing

Carton

TM Hastelloy is a Cabot Corporation trademark

TM Monel is an International Nickel Co. trademark

TM Viton is a Dupont de Nemour trademark

TM DC200 is a Dow Corning Corporation trademark

TM Neobee M20 is a Stepan Company trademark

TM Marcol is a Esso Italiana 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 tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and configured as follows:

Engineering Unit	kPa
4 mA	Zero
20 mA	Upper Range Limit (URL)
Output	Linear
Damping	1 sec.
Transmitter failure mode	Upscale
Software tag (8 characters max)	Blank
Optional LCD indicator/display	0 to 100.0% linear

Any or all the above configurable parameters, including Lower range-value and Upper range-value which must be the same unit of measure, 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 drain/vent materials and meter code option.

Custom configuration (option)

The following data may be specified in addition to the standard configuration parameters:

Descriptor	16 alphanumeric characters
Message	32 alphanumeric characters
Date	Day, month, year

Transmitter with PROFIBUS PA communication

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

Measure Profile	Pressure
Engineering Unit	kPa
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 sec.
Address (settable by local key)	126
Tag	32 alphanumeric characters

Any or all the above configurable parameters, including Lower range-value and Upper range-value which must be the same unit of measure, 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 drain/vent materials and meter code option.

Custom configuration (option)

The following data may be specified in addition to the standard configuration parameters:

Descriptor	32 alphanumeric characters
Message	32 alphanumeric characters
Date	Day, month, year

Transmitter with FOUNDATION Fieldbus communication

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and the analog input function block FB1 is configured as follows:

Measure Profile	Pressure
Engineering Unit	kPa
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 time	0 sec.
Tag	32 alphanumeric characters

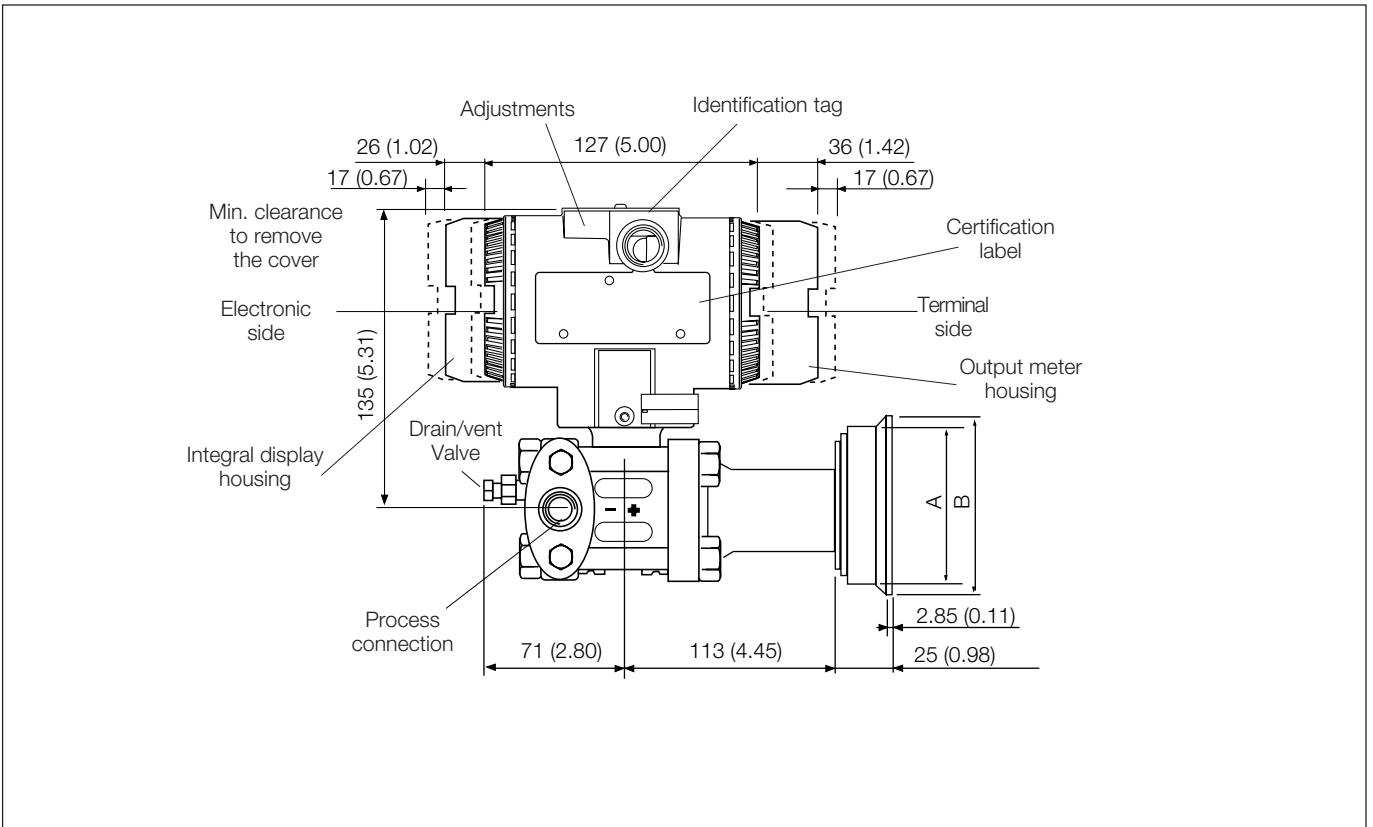
The analog input function block FB2 is configured for the sensor temperature measured in °C. Any or all the above configurable parameters, including the range values, can be changed using any host compliant to FOUNDATION fieldbus. The transmitter database is customized with specified flange type and material, O-ring and drain/vent materials and meter code option.

For any protocol available engineering units of pressure measure are :

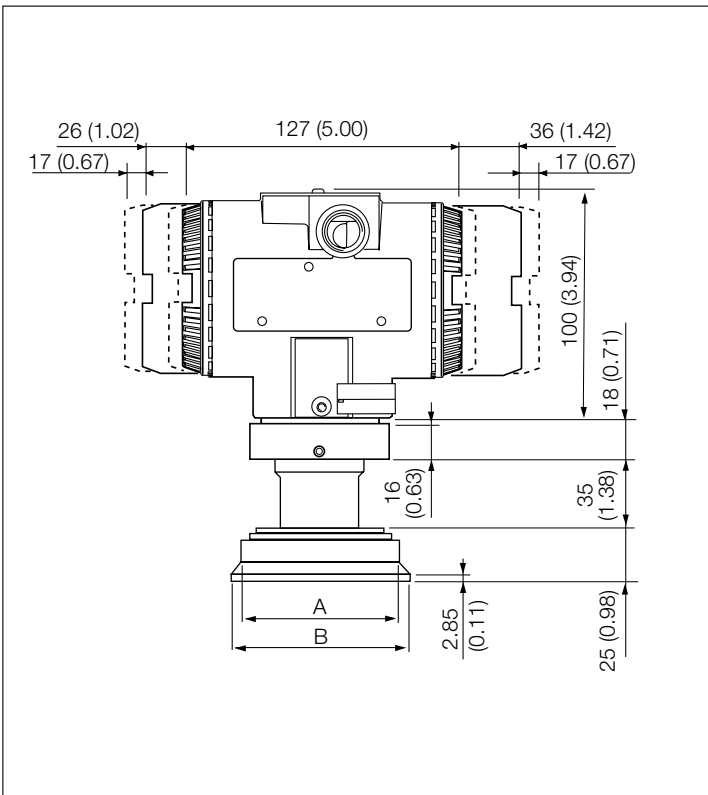
Pa, kPa, MPa
 inH₂O@4°C, mmH₂O@4°C, psi
 inH₂O@20°C, ftH₂O@20°C, mmH₂O@20°C
 inHg, mmHg, Torr
 g/cm², kg/cm², atm
 mbar, bar

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

264DG with direct mount Triclamp seal

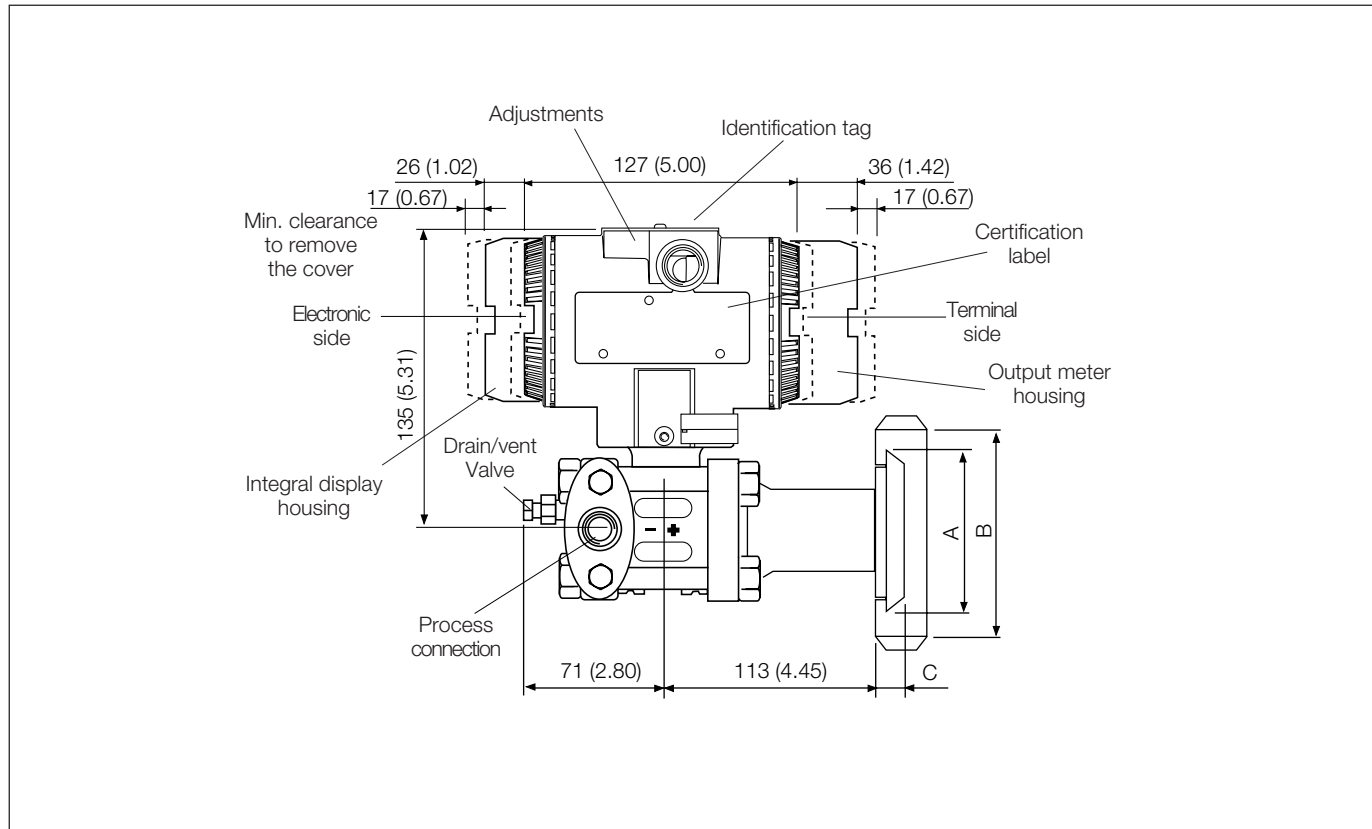


264HG/NG with direct mount Triclamp seal

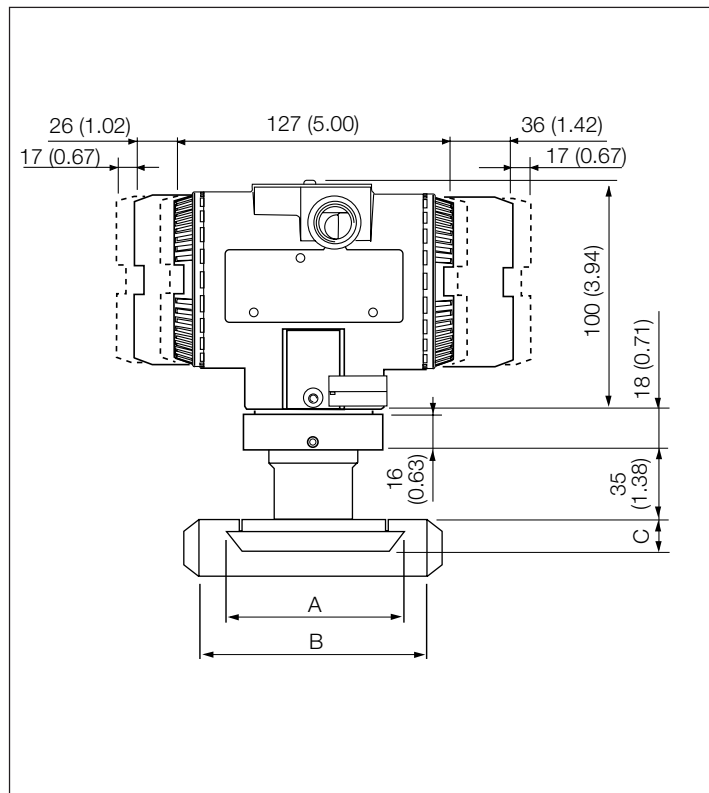


	Triclamp		
	2in	3in	4in
A (dia)	56.3 (2.2)	83 (3.26)	110.3 (4.34)
B (dia)	64 (2.5)	91 (3.58)	119 (4.68)

264DG with direct mount Union Nut seal

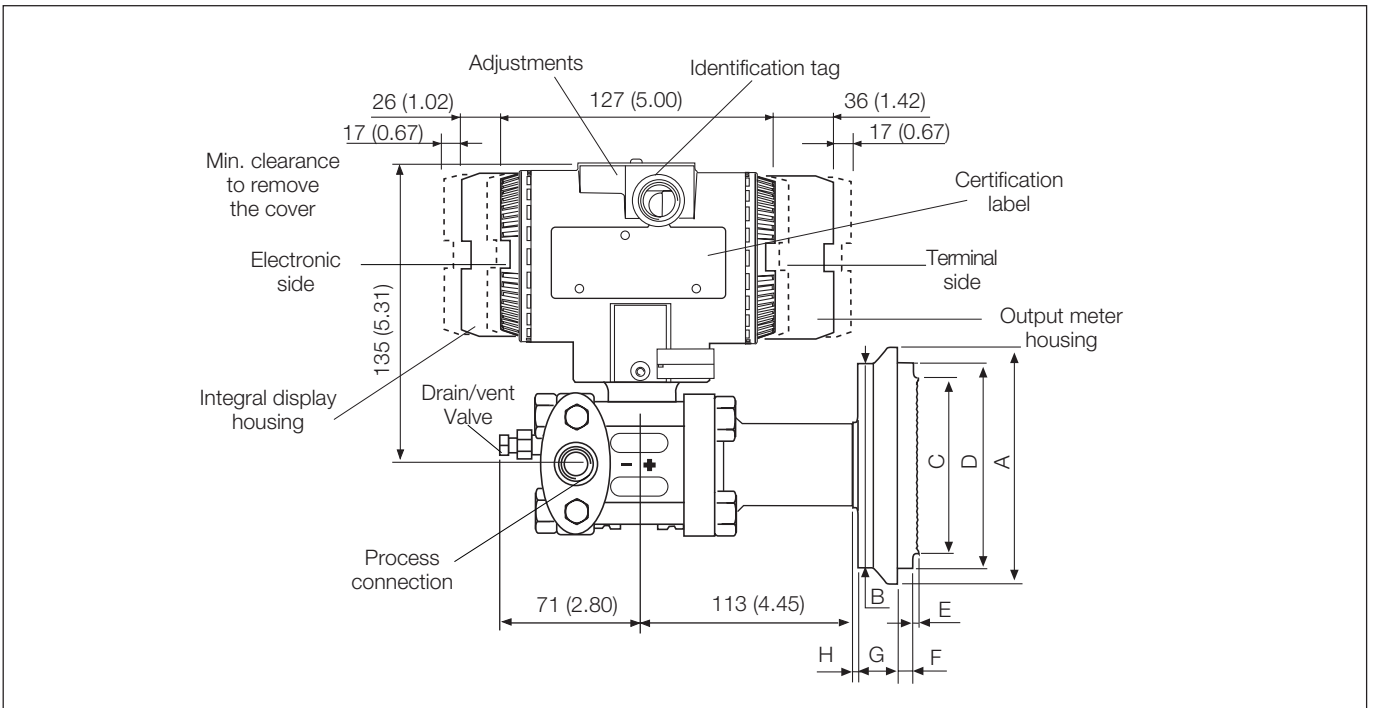


264HG/NG with direct mount Union Nut seal

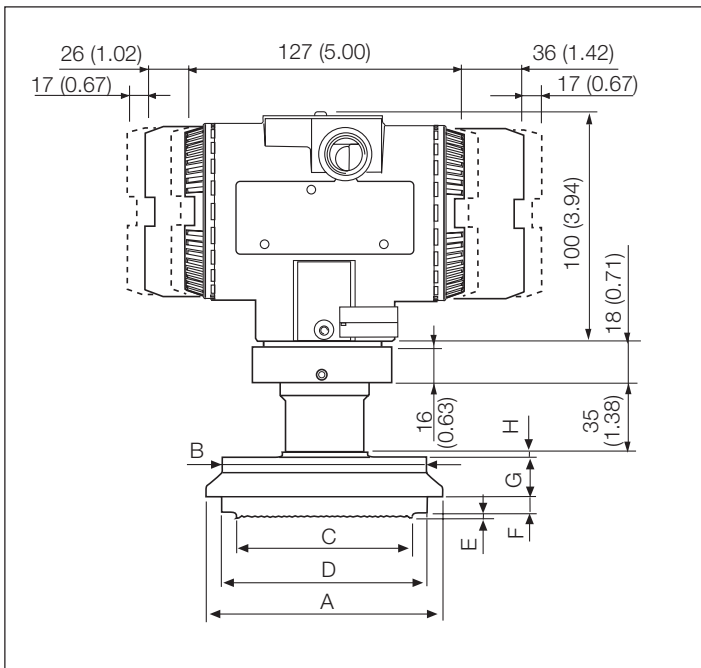


	Union Nut	
	F50	F80
A (dia)	68 (2.68)	100 (3.93)
B (RD)	78 (3.07)	110 (4.33)
C	16 (0.63)	19 (0.74)

264DG with direct mount Cherry Burrell seal

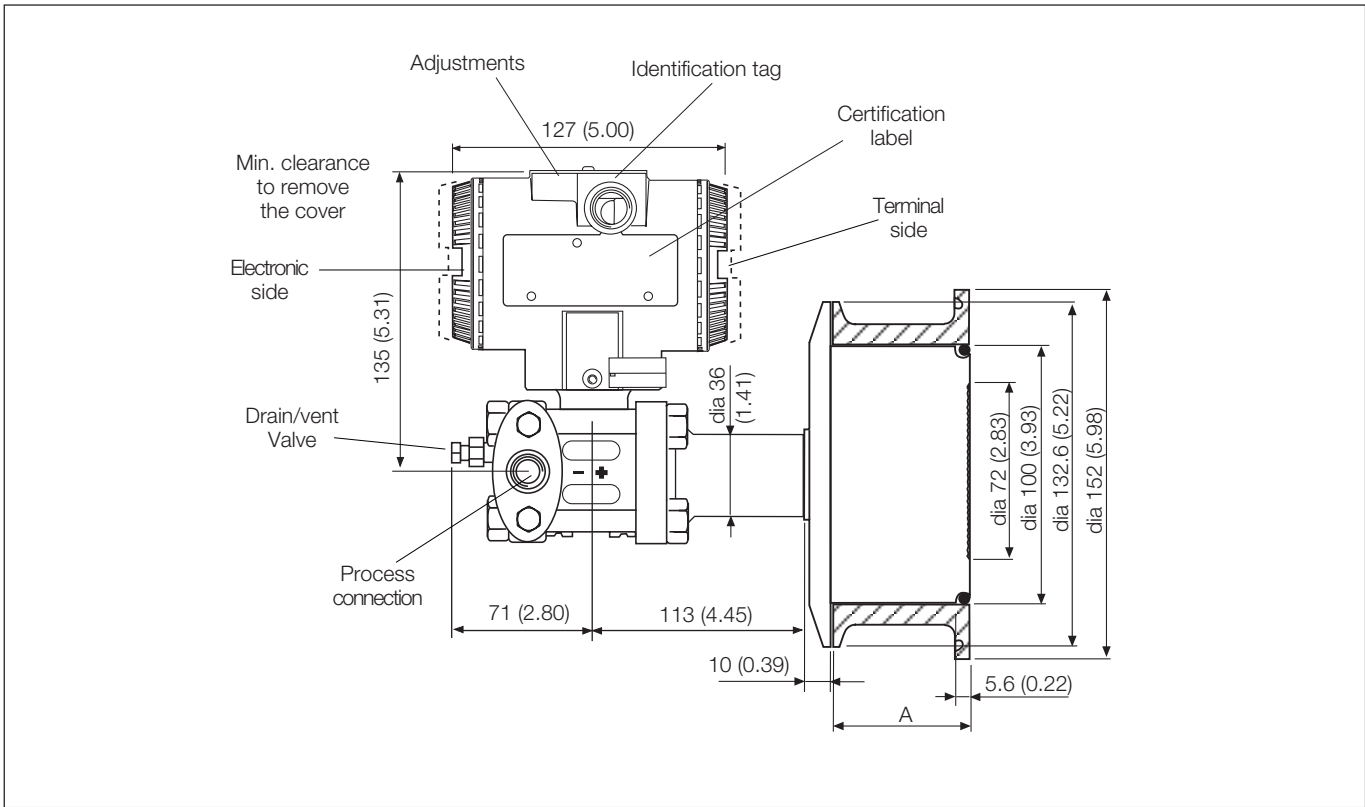


264HG/NG with direct mount Cherry Burrell seal

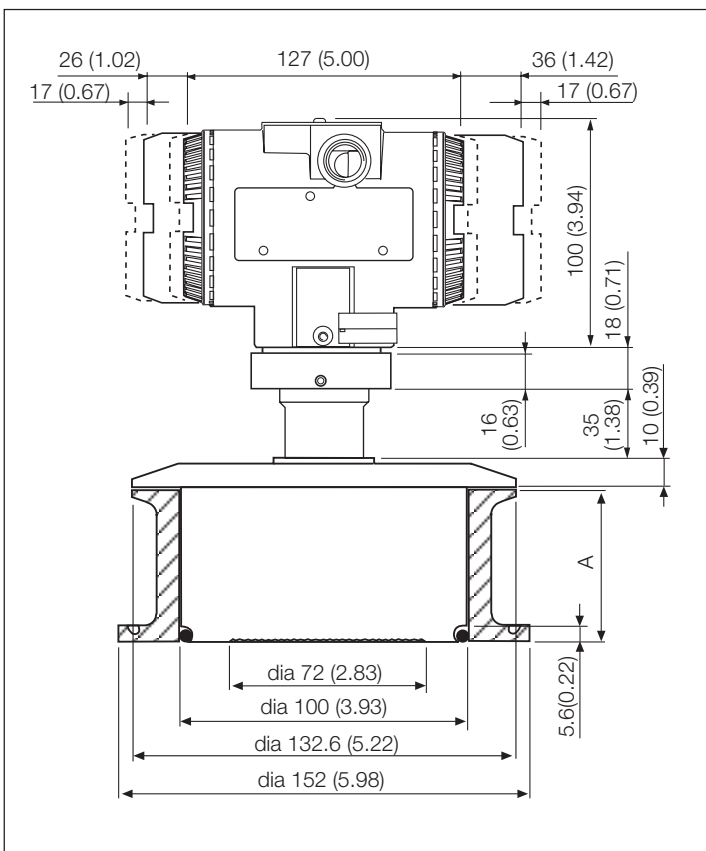


Size	DIMENSIONS mm (in)							
	A (dia)	B (dia)	C (dia)	D (dia)	E	F	G	H
2in	67 (2.64)	56 (2.2)	42 (1.65)	57(2.24)	3.2 (0.13)	6.5 (0.26)	12.5 (0.49)	3 (0.12)
3in	98.4 (3.87)	81 (3.19)	72.42 (2.85)	83.8 (3.3)	2.4 (0.09)	7.9 (0.31)	15 (0.59)	3 (0.12)
4in	124 (4.88)	111.25 (4.38)	72.42 (2.85)	109.3 (4.3)	2.4 (0.09)	7.9 (0.31)	15 (0.59)	3 (0.12)

264DG with direct mount Sanitary Extended seal

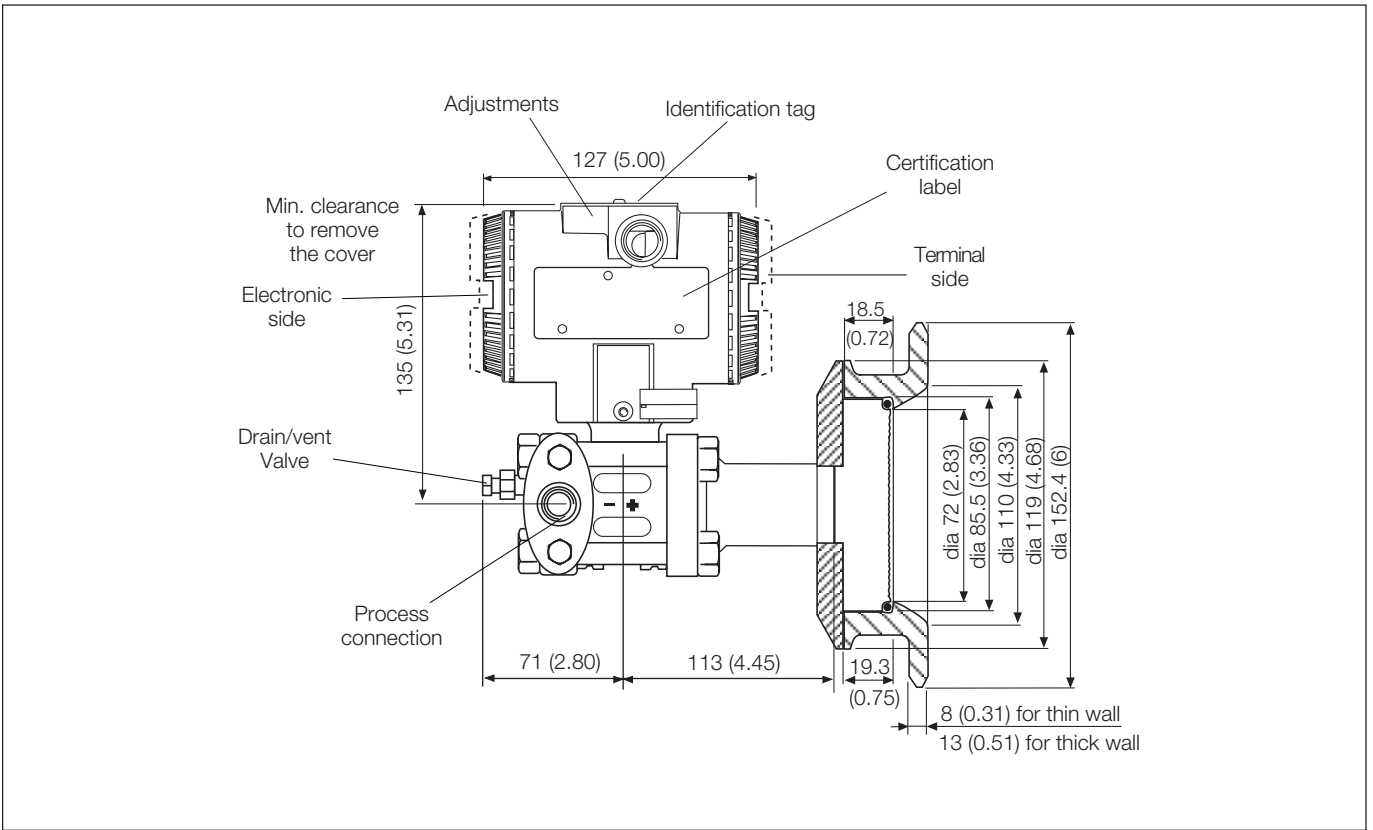


264HG/NG with direct mount Sanitary Extended seal

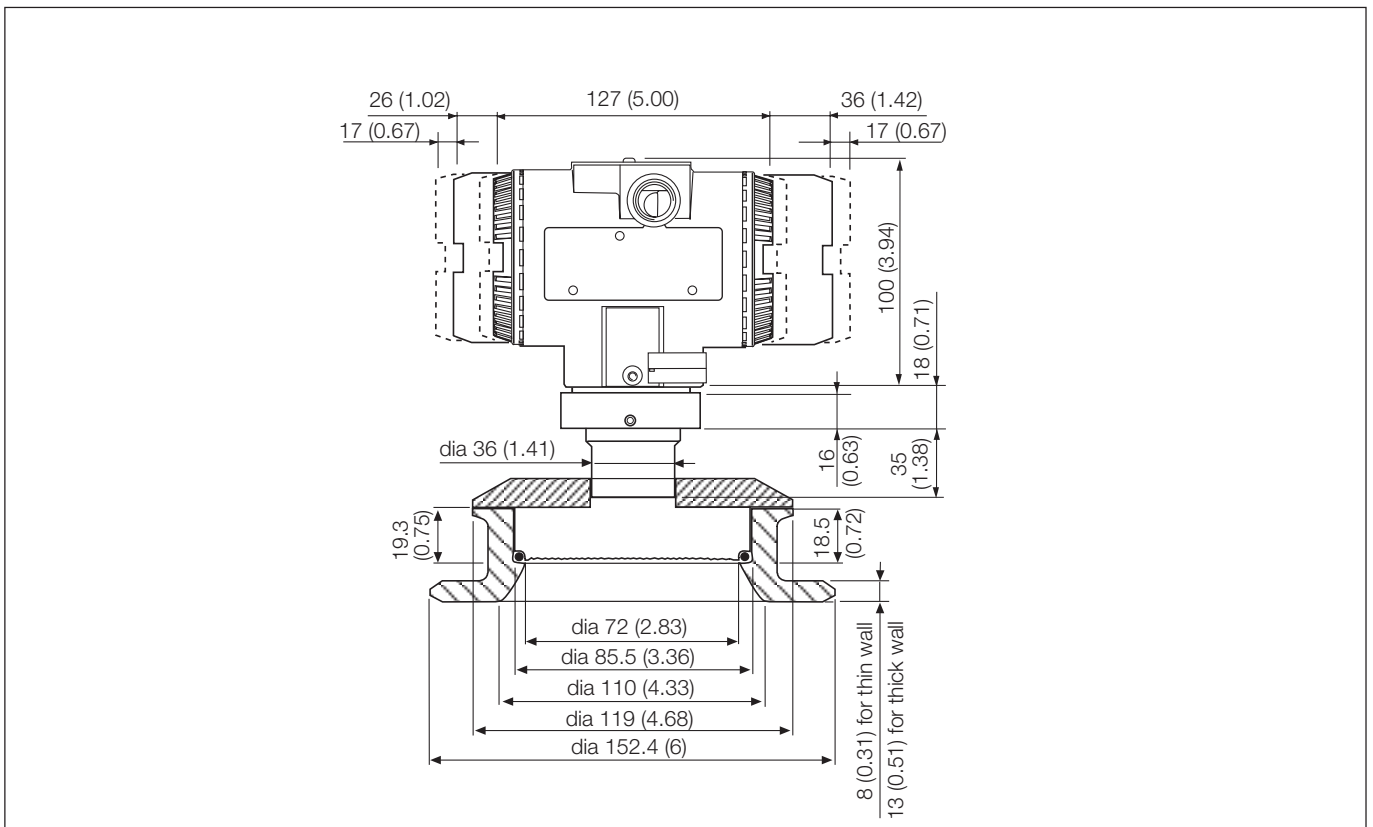


Size	Dimensions mm (in)
	A
2in	53.3 (2.1)
4in	104.1 (4.1)
6in	154.9 (6.1)

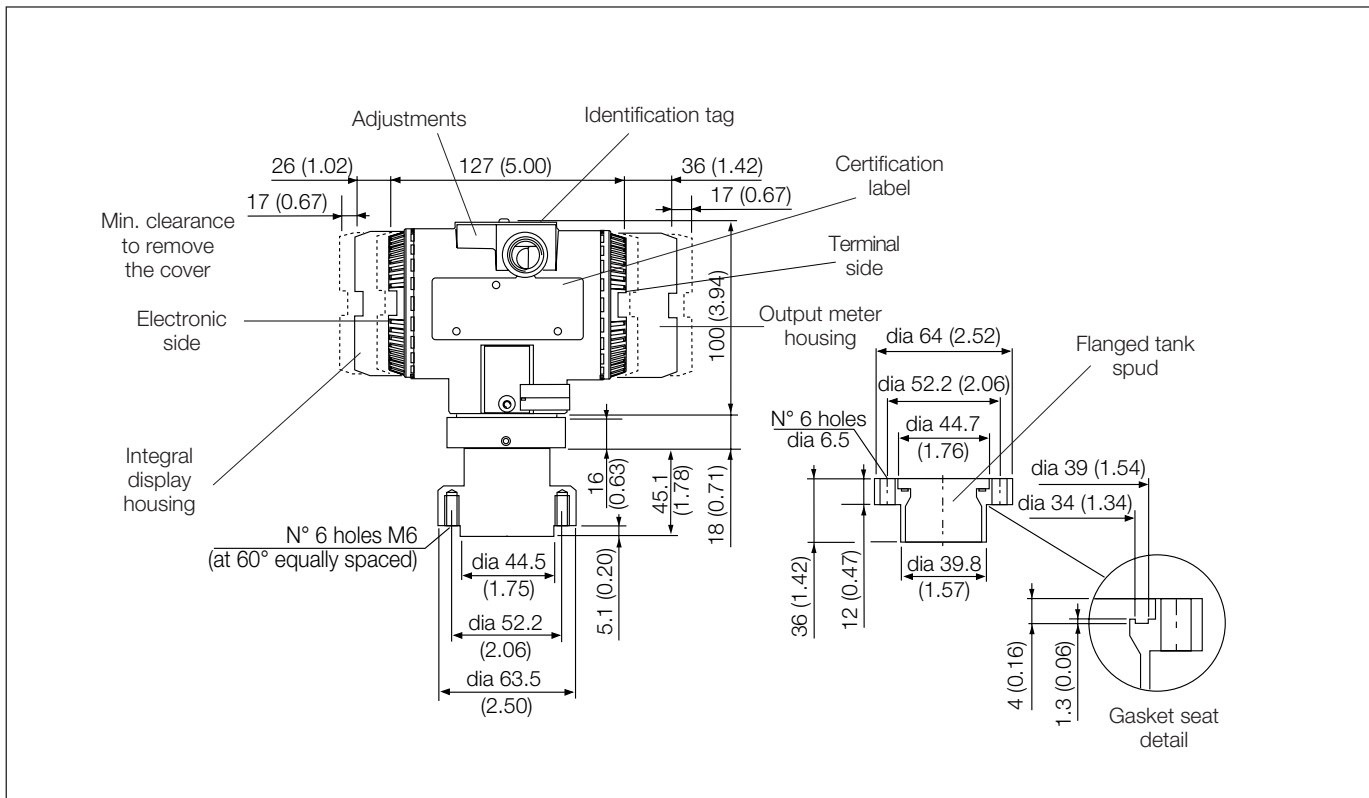
264DG with direct mount Sanitary Flush seal



264HG/NG with direct mount Sanitary Flush seal

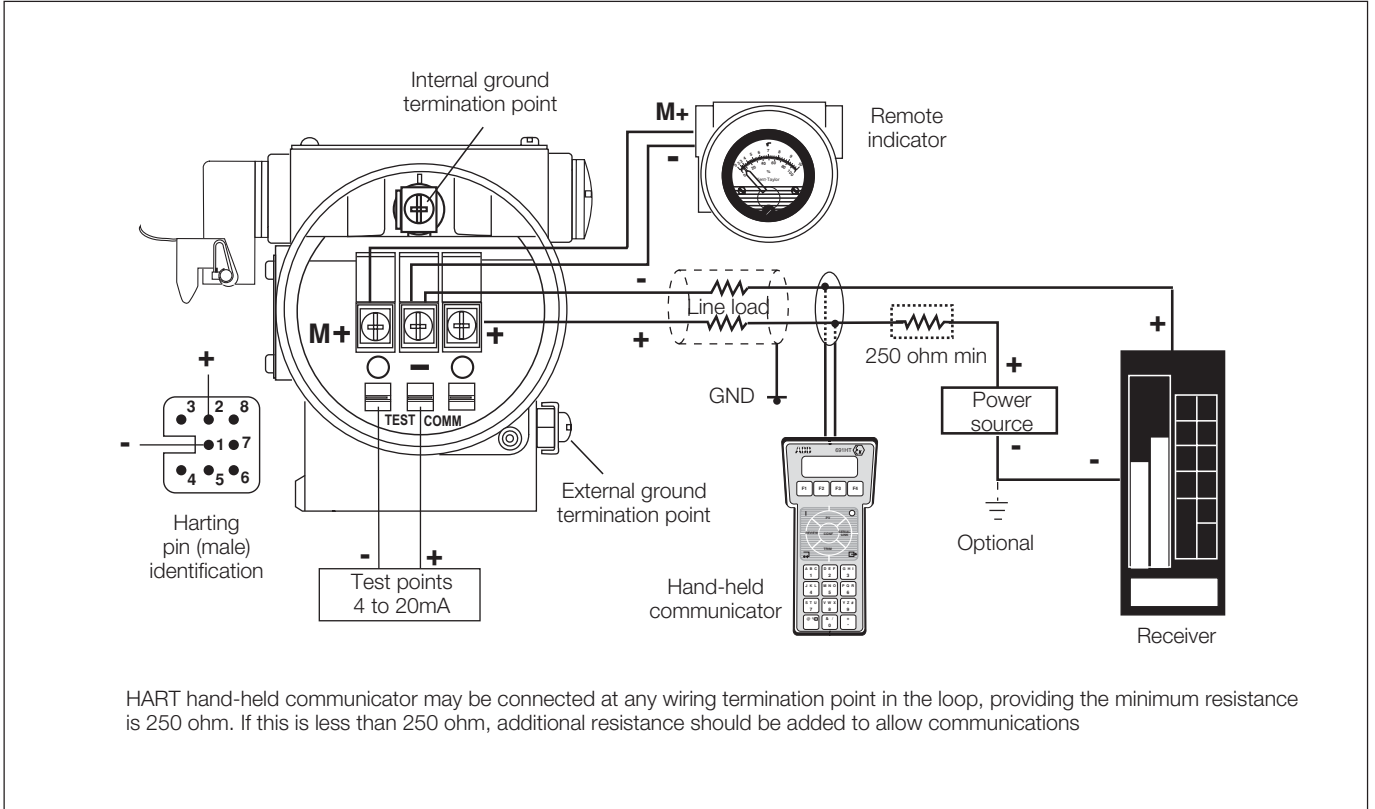


264HG/NG with direct mount Beverage seal

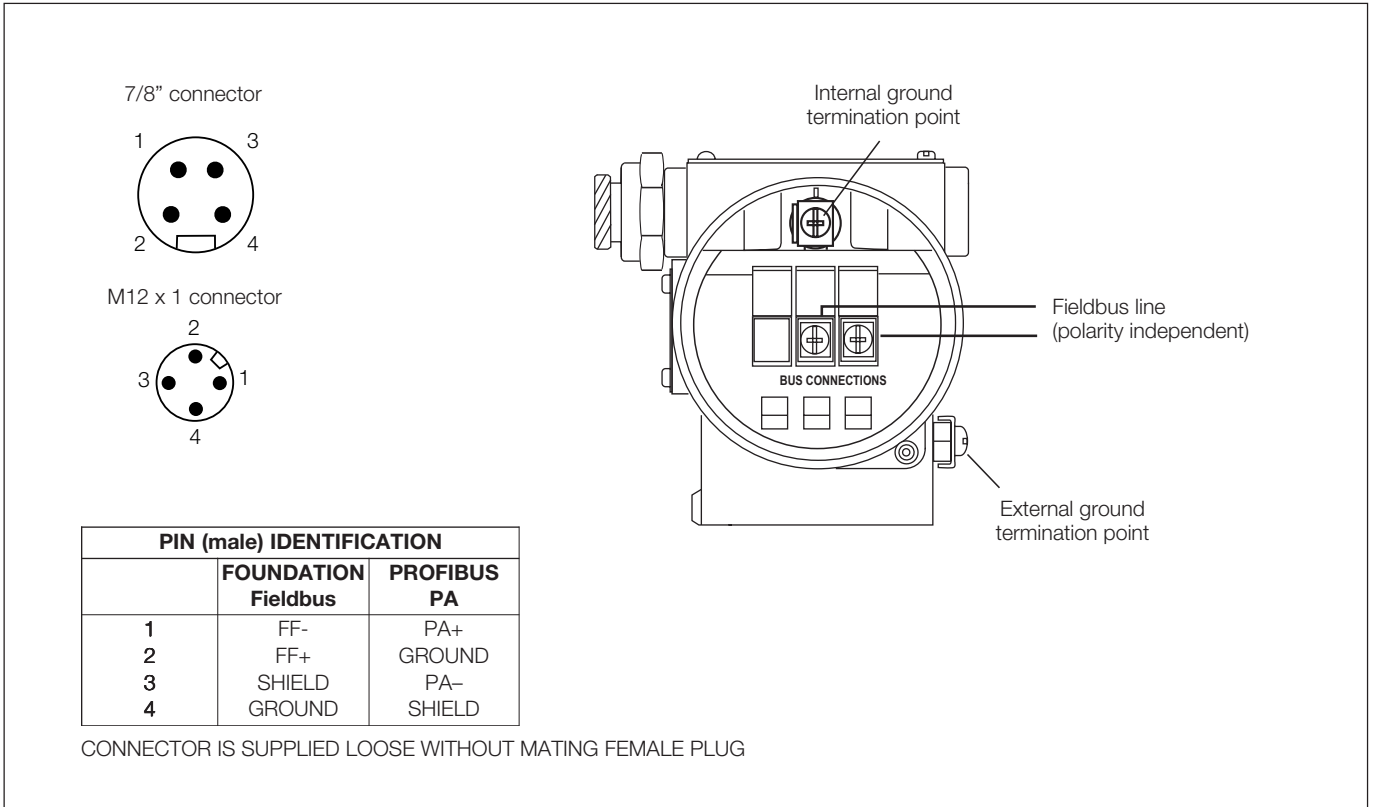


Electrical connections

HART Version



FIELDBUS Versions



BASIC ORDERING INFORMATION model 264DG Differential /Gauge Pressure Transmitter with Sanitary and Food direct mount seal

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.

	2	6	4	D	G	X	X	X	X	X	X	Cont'd
BASE MODEL – 1 st to 5 th characters												
Differential Gauge Pressure Transmitter with sanitary and food direct mount seal – BASE ACCURACY 0.075%												
SENSOR - Span limits – 6 th character												
0.54 and 16 kPa												
0.67 and 40kPa												
1.1 and 65kPa												
2.67 and 160kPa												
10 and 600kPa												
40 and 2400kPa												
134 and 8000kPa												
HIGH PRESSURE SIDE - Size/Mounting connection – 7 th character												
Union nut DIN 11851 – F50												
Union nut DIN 11851 – F80												
2in Triclamp												
3in Triclamp												
4in Triclamp												
2in Cherry Burrell												
3in Cherry Burrell												
4in Cherry Burrell												
4in Sanitary flush diaphragm												
4in Sanitary extended (2in) diaphragm												
4in Sanitary extended (4in) diaphragm												
4in Sanitary extended (6in) diaphragm												
HIGH PRESSURE SIDE – Fill fluid – 8 th character												
Silicone oil												
Mineral oil (FDA approved)												
Vegetable oil (FDA approved)												
Glycerin-Water (FDA approved)												
Low pressure side diaphragm material / Fill fluid (wetted parts) – 9 th character												
AISI 316 L ss												
AISI 316 L ss (not wetted)												
Low side process flanges/adapters material and connection (wetted parts) – 10 th character												
AISI 316 L ss (Horizontal connection)												
AISI 316 L ss (Horizontal connection)												
AISI 316 closing flange for two seals construction												
Bolts/Low side gasket (wetted parts) – 11 th character												
AISI 316 ss (NACE) – (MWP = 16MPa)												
AISI 316 ss (NACE) – (MWP = 16MPa)												
AISI 316 ss (NACE) – (MWP = 16MPa) without gasket for two seals construction												

2600T Pressure Transmitters

Model 264DG, 264HG, 264NG

SS/264XG_5

BASIC ORDERING INFORMATION model 264DG				X	X
Housing material and electrical connection – 12th character					
Aluminium alloy (Barrel version)	1/2 – 14 NPT			A	
Aluminium alloy (Barrel version)	M20 x 1.5 (CM 20)			B	
Aluminium alloy (Barrel version)	Pg 13.5			D	
Aluminium alloy (Barrel version)	1/2 GK			C	
Aluminium alloy (Barrel version)	Harting Han connector	(general purpose only)	(Note 3)	E	
Aluminium alloy (Barrel version)	Fieldbus connector	(general purpose only)	(Note 3)	G	
Aluminium alloy copper-free (Barrel version)	1/2 – 14 NPT			H	
Aluminium alloy copper-free (Barrel version)	M20 x 1.5 (CM 20)			L	
Aluminium alloy copper-free (Barrel version)	Pg 13.5			N	
Aluminium alloy copper-free (Barrel version)	1/2 GK			M	
Aluminium alloy copper-free (Barrel version)	Harting Han connector	(general purpose only)	(Note 3)	P	
Aluminium alloy copper-free (Barrel version)	Fieldbus connector	(general purpose only)	(Note 3)	R	
AISI 316 L ss (Barrel version)	1/2 – 14 NPT			S	
AISI 316 L ss (Barrel version)	M20 x 1.5 (CM20)			T	
AISI 316 L ss (Barrel version)	Pg 13.5			V	
AISI 316 L ss (Barrel version)	1/2 GK			U	
AISI 316 L ss (Barrel version)	Fieldbus connector	(general purpose only)	(Note 3)	Z	
Aluminium alloy (DIN version)	M20 x 1.5 (CM 20)	(general purpose only)		J	
Aluminium alloy (DIN version)	Pg 13.5	(general purpose only)		Y	
Aluminium alloy (DIN version)	Harting Han connector	(general purpose only)	(Note 3)	K	
Output/Additional options – 13th character					
HART digital communication and 4 to 20mA	No additional options		(Notes 4, 5)	H	
HART digital communication and 4 to 20mA	Options requested (to be ordered by "Additional ordering code")		(Note 4)	1	
PROFIBUS PA	No additional options		(Notes 4, 5)	P	
PROFIBUS PA	Options requested (to be ordered by "Additional ordering code")		(Note 5)	2	
FOUNDATION Fieldbus	No additional options		(Notes 4, 5)	F	
FOUNDATION Fieldbus	Options requested (to be ordered by "Additional ordering code")		(Note 5)	3	

ADDITIONAL ORDERING INFORMATION for model 264DG

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	XX	XX	XX	Cont'd
Drain/vent valve (material and position) (wetted parts)															
AISI 316 L ss on process axis (Note 6) NACE V1															
AISI 316 L ss on flange side top (Note 6) NACE V2															
AISI 316 L ss on flange side bottom (Note 6) NACE V3															
Electrical certification															
ATEX Group II Category 1 GD – Intrinsic Safety EEx ia															E1
ATEX Group II Category 1/2 GD – Flameproof EEx d															E2
ATEX Group II Category 3 GD – Type of protection "N" EEx nL design compliance (Note 7)															E3
Canadian Standard Association (CSA) (only 1/2–14NPT, M20 and Pg 13.5 electrical connection)															E4
Standards Australia SAA (Not Ex ia and Ex n for PROFIBUS PA and FOUNDATION Fieldbus)															E5
Factory Mutual (FM) approval (only with 1/2–14NPT, M20 and Pg 13.5 electrical connection)															E6
Combined ATEX - Intrinsic Safety and Flameproof															E7
Combined ATEX, FM and CSA (only with 1/2–14NPT, M20 and Pg 13.5 electrical connection) (Note 7)															EN
NEPSI (China) - Intrinsic Safety Ex ia															EY
NEPSI (China) - Flameproof Ex d															EZ
GOST (Russia) EEx ia															W1
GOST (Russia) EEx d															W2
GOST (Kazakistan) EEx ia															W3
GOST (Kazakistan) EEx d															W4
Inmetro (Brazil) EEx ia (Note 7)															W5
Inmetro (Brazil) EEx d (Note 7)															W6
Inmetro (Brazil) EEx nL (Note 7)															W7
Output meter															
ProMeter, Standard calibration (Note 7)															D1
ProMeter, Special calibration (Note 7)															D2
Analog output indicator linear 0–100% scale (Note 7)															D3
Analog output indicator square root 0–10 scale (Note 7)															D4
Analog output indicator, special graduation (to be specified for linear scale) (Note 7)															D5
Analog output indicator, special graduation (to be specified for square root scale) (Note 7)															D6
Programmable signal meter and HART configurator (CoMeter) (Note 7)															D7
Programmable signal meter and HART configurator (CoMeter – customer configuration) (Note 7)															D8
Integral LCD															
Digital LCD integral display															L1
Surge															
Surge/Transient Protector (Internal for HART / 4-20mA)															
Surge/Transient Protector (External supplied loose for PROFIBUS PA and FOUNDATION Fieldbus only suitable with 1/2–14NPT and M20 electrical connection and with ATEX, FM and CSA certifications, no DUST)															S1
Operating manual															
German															M1
Italian															M2
Spanish															M3
French															M4
Labels & tag language															
German															T1
Italian															T2
Spanish															T3
French															T4
Additional tag plate															
Laser printing of tag on stainless steel plate															I2
Configuration															
Standard – Pressure = inH ₂ O/psi at 20° C; Temperature = deg. F															N2
Standard – Pressure = inH ₂ O/psi at 4° C; Temperature = deg. F															N3
Standard – Pressure = inH ₂ O/psi at 20° C; Temperature = deg.C															N4
Standard – Pressure = inH ₂ O/psi at 4° C; Temperature = deg. C															N5
Custom															N6
Certificates															
Inspection certificate EN 10204–3.1 of calibration (9-point)															C1
Certificate of compliance with the order EN 10204–2.1 of instrument design															C6
Material traceability															
Certificate of compliance with the order EN 10204–2.1 of process wetted parts															H1
Inspection certificate EN 10204–3.1 of process wetted parts															H3

2600T Pressure Transmitters

Model 264DG, 264HG, 264NG

SS/264XG_5

Additional ordering model 264DG		XX	XX	XX
Connector				
Fieldbus 7/8 (Recommended for FOUNDATION Fieldbus) - (supplied loose without mating female plug)	(Notes 5, 8)	U1		
Fieldbus M12x1 (Recommended for PROFIBUS PA) - (supplied loose without mating female plug)	(Notes 5, 8)	U2		
Harting Han – straight entry	(Notes 4, 8)	U3		
Harting Han – angle entry	(Notes 4, 8)	U4		
Clamp/Fittings				
2in V-band Clamp (for 2in Triclamp)				J1
3in V-band Clamp (for 3in Triclamp)				J2
4in V-band Clamp (for 4in Triclamp, 4in Cherry Burrell and 4in Sanitary flush)				J3
4in Tank spud, tank wall up to 4.7mm (0.18) and 4in V-band Clamp (for 4in Sanitary flush seal)				J4
4in Tank spud, tank wall up to 9.5mm (0.37) and 4in V-band Clamp (for 4in Sanitary flush seal)				J5
4in schedule 5 V-band clamp (for 4in Sanitary extended seal)				J6
Tank spud for 2in extension and 4in schedule 5 V-band clamp (for 4in Sanitary extended 2in seal)				J7
Tank spud for 4in extension and 4in schedule 5 V-band clamp (for 4in Sanitary extended 4in seal)				J8
Tank spud for 6in extension and 4in schedule 5 V-band clamp (for 4in Sanitary extended 6in seal)				J9
Gasket				
Ethylene propylene gasket DN100 (for 4in Sanitary extended seal)				K1
Ethylene propylene gasket DN50 (for F50 Union nut seal)				K3
Ethylene propylene gasket DN80 (for F80 Union nut seal)				K4
Viton™ gasket (for 4in sanitary flush)				K6
Buna gasket (for 4in sanitary flush)				K7

Note 1: Not available with low side diaphragm code R

Note 2: Not available with low side diaphragm code S

Note 3: Select type in additional ordering code

Note 4: Not available with Electronic Housing code Z, R, G

Note 5: Not available with Electronic Housing code P, E, K

Note 6: Not available with Process flanges/adapters code R

Note 7: Not available with PROFIBUS PA and FF output code 2 or 3

Note 8: Not available with Electronic housing code U, S, T, V, H, M, L, N, D, C, A, B, J, Y

™ Hastelloy is a Cabot Corporation trademark

™ Monel is an International Nickel Co. trademark

™ Viton is a Dupont de Nemour trademark

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

- Adapters supplied loose
- Plug on axis (no drain/vent valves)
- General purpose (no electrical certification)
- No meter/display, no mounting bracket, no surge protection
- English manual and labels
- 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 264HG Gauge Pressure Transmitter with sanitary, food and beverage direct mount seal

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	4	H	G	X	X	X	X	X	X
Gauge Pressure Transmitter with sanitary, food and beverage direct mount seal – BASE ACCURACY 0.075%													
SENSOR - Span limits – 6 th character													
1.1 and 65kPa	11 and 650mbar	4.35 and 260inH ₂ O						G					
2.67 and 160kPa	26.7 and 1600mbar	10.7 and 642inH ₂ O						H					
10 and 600kPa	0.1 and 6bar	1.45 and 87psi						M					
40 and 2400kPa	0.4 and 24bar	5.8 and 348psi						P					
134 and 8000kPa	1.34 and 80bar	19.4 and 1160psi						Q					
Diaphragm material/Fill Fluid (not wetted) – 7 th character													
AISI 316 L ss	Silicone oil											R	
HIGH PRESSURE SIDE - Size/Mounting connection – 8 th character													
Union nut DIN 11851 – F50												A	
Union nut DIN 11851 – F80												B	
2in Triclamp												F	
3in Triclamp												G	
4in Triclamp												H	
2in Cherry Burrell												L	
3in Cherry Burrell												M	
4in Cherry Burrell												N	
4in Sanitary flush diaphragm												P	
4in Sanitary extended (2in) diaphragm												Q	
4in Sanitary extended (4in) diaphragm												R	
4in Sanitary extended (6in) diaphragm												S	
Beverage application bolted seal												T	
HIGH PRESSURE SIDE – Fill fluid – 9 th character													
Silicone oil													S
Mineral oil (FDA approved)													W
Vegetable oil (FDA approved)													A
Glycerin-Water (FDA approved)													B
Housing material and electrical connection – 10 th character													
Aluminium alloy (Barrel version)		1/2 – 14 NPT											A
Aluminium alloy (Barrel version)		M20 x 1.5 (CM 20)											B
Aluminium alloy (Barrel version)		Pg 13.5											D
Aluminium alloy (Barrel version)		1/2 GK											C
Aluminium alloy (Barrel version)		Harting Han connector (general purpose only)							(Note 1)				E
Aluminium alloy (Barrel version)		Fieldbus connector (general purpose only)							(Note 1)				G
Aluminium alloy copper-free (Barrel version)		1/2 – 14 NPT											H
Aluminium alloy copper-free (Barrel version)		M20 x 1.5 (CM 20)											L
Aluminium alloy copper-free (Barrel version)		Pg 13.5											N
Aluminium alloy copper-free (Barrel version)		1/2 GK											M
Aluminium alloy copper-free (Barrel version)		Harting Han connector (general purpose only)							(Note 1)				P
Aluminium alloy copper-free (Barrel version)		Fieldbus connector (general purpose only)							(Note 1)				R
AISI 316 L ss (Barrel version)		1/2 – 14 NPT											S
AISI 316 L ss (Barrel version)		M20 x 1.5 (CM20)											T
AISI 316 L ss (Barrel version)		Pg 13.5											V
AISI 316 L ss (Barrel version)		1/2 GK											U
AISI 316 L ss (Barrel version)		Fieldbus connector (general purpose only)							(Note 1)				Z
Output/Additional options – 11 th character													
HART digital communication and 4 to 20mA		No additional options							(Notes 2, 3)				H
HART digital communication and 4 to 20mA		Options requested (to be ordered by "Additional ordering code")							(Note 2)				1
PROFIBUS PA		No additional options							(Notes 2, 3)				P
PROFIBUS PA		Options requested (to be ordered by "Additional ordering code")							(Note 3)				2
FOUNDATION Fieldbus		No additional options							(Notes 2, 3)				F
FOUNDATION Fieldbus		Options requested (to be ordered by "Additional ordering code")							(Note 3)				3

ADDITIONAL ORDERING INFORMATION for model 264HG

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	Cont'd
Electrical certification												
ATEX Group II Category 1 GD – Intrinsic Safety EEx ia	E1											
ATEX Group II Category 1/2 GD – Flameproof EEx d	E2											
ATEX Group II Category 3 GD – Type of protection "N" EEx nL design compliance (Note 4)	E3											
Canadian Standard Association (CSA) (only 1/2–14NPT, M20 and Pg 13.5 electrical connection)	E4											
Standards Australia SAA (Not Ex ia and Ex n for PROFIBUS PA and FOUNDATION Fieldbus)	E5											
Factory Mutual (FM) approval (only with 1/2–14NPT, M20 and Pg 13.5 electrical connection)	E6											
Combined ATEX - Intrinsic Safety and Flameproof	E7											
Combined ATEX, FM and CSA (only with 1/2–14NPT, M20 and Pg 13.5 electrical connection) (Note 4)	EN											
NEPSI (China) - Intrinsic Safety Ex ia	EY											
NEPSI (China) - Flameproof Ex d	EZ											
GOST (Russia) EEx ia	W1											
GOST (Russia) EEx d	W2											
GOST (Kazakistan) EEx ia	W3											
GOST (Kazakistan) EEx d	W4											
Inmetro (Brazil) EEx ia (Note 4)	W5											
Inmetro (Brazil) EEx d (Note 4)	W6											
Inmetro (Brazil) EEx nL (Note 4)	W7											
Output meter												
ProMeter, Standard calibration (Note 4)	D1											
ProMeter, Special calibration (Note 4)	D2											
Analog output indicator linear 0–100% scale (Note 4)	D3											
Analog output indicator, special graduation (to be specified for linear scale) (Note 4)	D5											
Programmable signal meter and HART configurator (CoMeter) (Note 4)	D7											
Programmable signal meter and HART configurator (CoMeter – customer configuration) (Note 4)	D8											
Integral LCD												
Digital LCD integral display										L1		
Surge												
Surge/Transient Protector (Internal for HART / 4-20mA)												
Surge/Transient Protector (External supplied loose for PROFIBUS PA and FOUNDATION Fieldbus only suitable with 1/2–14NPT and M20 electrical connection and with ATEX, FM and CSA certifications, no DUST)										S1		
Operating manual												
German											M1	
Italian											M2	
Spanish											M3	
French											M4	
Labels & tag language												
German											T1	
Italian											T2	
Spanish											T3	
French											T4	
Additional tag plate												
Laser printing of tag on stainless steel plate											I2	
Configuration												
Standard – Pressure = inH ₂ O/psi at 20° C; Temperature = deg. F											N2	
Standard – Pressure = inH ₂ O/psi at 4° C; Temperature = deg. F											N3	
Standard – Pressure = inH ₂ O/psi at 20° C; Temperature = deg.C											N4	
Standard – Pressure = inH ₂ O/psi at 4° C; Temperature = deg. C											N5	
Custom											N6	
Certificates												
Inspection certificate EN 10204–3.1 of calibration (9-point)											C1	
Certificate of compliance with the order EN 10204–2.1 of instrument design											C6	
Material traceability												
Certificate of compliance with the order EN 10204–2.1 of process wetted parts											H1	
Inspection certificate EN 10204–3.1 of process wetted parts											H3	
Connector												
Fieldbus 7/8 (Recommended for FOUNDATION Fieldbus) - (supplied loose without mating female plug)										(Notes 3, 5)	U1	
Fieldbus M12x1 (Recommended for PROFIBUS PA) - (supplied loose without mating female plug)										(Notes 3, 5)	U2	
Harting Han – straight entry										(Notes 2, 5)	U3	
Harting Han – angle entry										(Notes 2, 5)	U4	

2600T Pressure Transmitters

Model 264DG, 264HG, 264NG

SS/264XG_5

	XX	XX
Clamp/Fittings		
2in V-band Clamp (for 2in Triclamp)	J1	
3in V-band Clamp (for 3in Triclamp)	J2	
4in V-band Clamp (for 4in Triclamp, 4in Cherry Burrell and 4in Sanitary flush)	J3	
4in Tank spud, tank wall up to 4.7mm (0.18) and 4in V-band Clamp (for 4in Sanitary flush seal)	J4	
4in Tank spud, tank wall up to 9.5mm (0.37) and 4in V-band Clamp (for 4in Sanitary flush seal)	J5	
4in schedule 5 V-band clamp (for 4in Sanitary extended seal)	J6	
Tank spud for 2in extension and 4in schedule 5 V-band clamp (for 4in Sanitary extended 2in seal)	J7	
Tank spud for 4in extension and 4in schedule 5 V-band clamp (for 4in Sanitary extended 4in seal)	J8	
Tank spud for 6in extension and 4in schedule 5 V-band clamp (for 4in Sanitary extended 6in seal)	J9	
Flanged tank spud with 6 holes (for 1 1/2in beverage seal)	JA	
Gasket		
Ethylene propylene gasket DN100 (for 4in Sanitary extended seal)		K1
Ethylene propylene gasket (for 1 1/2in beverage seal)		K2
Ethylene propylene gasket DN50 (for F50 Union nut seal)		K3
Ethylene propylene gasket DN80 (for F80 Union nut seal)		K4
Viton™ gasket (for 4in sanitary flush)		K6
Buna gasket (for 4in sanitary flush)		K7

Note 1: Select type in additional ordering code

Note 2: Not available with Electronic Housing code Z, R, G

Note 3: Not available with Electronic Housing code P, E

Note 4: Not available with PROFIBUS PA and FF output code 2 or 3

Note 5: Not available with Electronic housing code U, S, T, V, H, M, L, N, D, C, A, B

™ Viton is a Dupont de Nemour trademark

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

- General purpose (no electrical certification)
- No meter/display, no mounting bracket, no surge protection
- English manual and labels
- 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 264NG Absolute Pressure Transmitter with sanitary, food and beverage direct mount seal

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	4	N	G	X	X	X	X	X	X
Absolute Pressure Transmitter with sanitary, food and beverage direct mount seal – BASE ACCURACY 0.075%													
SENSOR - Span limits – 6th character													
1.1 and 65kPa	11 and 650mbar	8 and 480mmHg						G					
2.67 and 160kPa	26.7 and 1600mbar	20 and 1200mmHg						H					
10 and 600kPa	0.1 and 6bar	1.45 and 87psi						M					
40 and 2400kPa	0.4 and 24bar	5.8 and 348psi						P					
134 and 8000kPa	1.34 and 80bar	19.4 and 1160psi						Q					
Diaphragm material/Fill Fluid (not wetted) – 7th character													
AISI 316 L ss	Silicone oil										R		
HIGH PRESSURE SIDE - Size/Mounting connection – 8th character													
Union nut DIN 11851 – F50												A	
Union nut DIN 11851 – F80												B	
2in Triclamp												F	
3in Triclamp												G	
4in Triclamp												H	
2in Cherry Burrell												L	
3in Cherry Burrell												M	
4in Cherry Burrell												N	
4in Sanitary flush diaphragm												P	
4in Sanitary extended (2in) diaphragm												Q	
4in Sanitary extended (4in) diaphragm												R	
4in Sanitary extended (6in) diaphragm												S	
Beverage application bolted seal												T	
HIGH PRESSURE SIDE – Fill fluid – 9th character													
Silicone oil													S
Mineral oil (FDA approved)													W
Vegetable oil (FDA approved)													A
Glycerin-Water (FDA approved)													B
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)											B
Aluminium alloy (Barrel version)		Pg 13.5											D
Aluminium alloy (Barrel version)		1/2 GK											C
Aluminium alloy (Barrel version)		Harting Han connector (general purpose only)							(Note 1)				E
Aluminium alloy (Barrel version)		Fieldbus connector (general purpose only)							(Note 1)				G
Aluminium alloy copper-free (Barrel version)		1/2 – 14 NPT											H
Aluminium alloy copper-free (Barrel version)		M20 x 1.5 (CM 20)											L
Aluminium alloy copper-free (Barrel version)		Pg 13.5											N
Aluminium alloy copper-free (Barrel version)		1/2 GK											M
Aluminium alloy copper-free (Barrel version)		Harting Han connector (general purpose only)							(Note 1)				P
Aluminium alloy copper-free (Barrel version)		Fieldbus connector (general purpose only)							(Note 1)				R
AISI 316 L ss (Barrel version)		1/2 – 14 NPT											S
AISI 316 L ss (Barrel version)		M20 x 1.5 (CM20)											T
AISI 316 L ss (Barrel version)		Pg 13.5											V
AISI 316 L ss (Barrel version)		1/2 GK											U
AISI 316 L ss (Barrel version)		Fieldbus connector (general purpose only)							(Note 1)				Z
Output/Additional options – 11th character													
HART digital communication and 4 to 20mA		No additional options							(Notes 2, 3)				H
HART digital communication and 4 to 20mA		Options requested (to be ordered by "Additional ordering code")							(Note 2)				1
PROFIBUS PA		No additional options							(Notes 2, 3)				P
PROFIBUS PA		Options requested (to be ordered by "Additional ordering code")							(Note 3)				2
FOUNDATION Fieldbus		No additional options							(Notes 2, 3)				F
FOUNDATION Fieldbus		Options requested (to be ordered by "Additional ordering code")							(Note 3)				3

ADDITIONAL ORDERING INFORMATION for model 264NG

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	Cont'd
Electrical certification												
ATEX Group II Category 1 GD – Intrinsic Safety EEx ia	E1											
ATEX Group II Category 1/2 GD – Flameproof EEx d	E2											
ATEX Group II Category 3 GD – Type of protection "N" EEx nL design compliance (Note 4)	E3											
Canadian Standard Association (CSA) (only 1/2–14NPT, M20 and Pg 13.5 electrical connection)	E4											
Standards Australia SAA (Not Ex ia and Ex n for PROFIBUS PA and FOUNDATION Fieldbus)	E5											
Factory Mutual (FM) approval (only with 1/2–14NPT, M20 and Pg 13.5 electrical connection)	E6											
Combined ATEX - Intrinsic Safety and Flameproof	E7											
Combined ATEX, FM and CSA (only with 1/2–14NPT, M20 and Pg 13.5 electrical connection) (Note 4)	EN											
NEPSI (China) - Intrinsic Safety Ex ia	EY											
NEPSI (China) - Flameproof Ex d	EZ											
GOST (Russia) EEx ia	W1											
GOST (Russia) EEx d	W2											
GOST (Kazakistan) EEx ia	W3											
GOST (Kazakistan) EEx d	W4											
Inmetro (Brazil) EEx ia (Note 4)	W5											
Inmetro (Brazil) EEx d (Note 4)	W6											
Inmetro (Brazil) EEx nL (Note 4)	W7											
Output meter												
ProMeter, Standard calibration (Note 4)	D1											
ProMeter, Special calibration (Note 4)	D2											
Analog output indicator linear 0–100% scale (Note 4)	D3											
Analog output indicator, special graduation (to be specified for linear scale) (Note 4)	D5											
Programmable signal meter and HART configurator (CoMeter) (Note 4)	D7											
Programmable signal meter and HART configurator (CoMeter – customer configuration) (Note 4)	D8											
Integral LCD												
Digital LCD integral display											L1	
Surge												
Surge/Transient Protector (Internal for HART / 4-20mA)												
Surge/Transient Protector (External supplied loose for PROFIBUS PA and FOUNDATION Fieldbus only suitable with 1/2–14NPT and M20 electrical connection and with ATEX, FM and CSA certifications, no DUST)											S1	
Operating manual												
German											M1	
Italian											M2	
Spanish											M3	
French											M4	
Labels & tag language												
German											T1	
Italian											T2	
Spanish											T3	
French											T4	
Additional tag plate												
Laser printing of tag on stainless steel plate											I2	
Configuration												
Standard – Pressure = inH ₂ O/psi at 20° C; Temperature = deg. F											N2	
Standard – Pressure = inH ₂ O/psi at 4° C; Temperature = deg. F											N3	
Standard – Pressure = inH ₂ O/psi at 20° C; Temperature = deg.C											N4	
Standard – Pressure = inH ₂ O/psi at 4° C; Temperature = deg. C											N5	
Custom											N6	
Certificates												
Inspection certificate EN 10204–3.1 of calibration (9-point)											C1	
Certificate of compliance with the order EN 10204–2.1 of instrument design											C6	
Material traceability												
Certificate of compliance with the order EN 10204–2.1 of process wetted parts											H1	
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Fieldbus 7/8 (Recommended for FOUNDATION Fieldbus) - (supplied loose without mating female plug)										(Notes 3, 5)	U1	
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2600T Pressure Transmitters

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4in Tank spud, tank wall up to 9.5mm (0.37) and 4in V-band Clamp (for 4in Sanitary flush seal)		J5
4in schedule 5 V-band clamp (for 4in Sanitary extended seal)		J6
Tank spud for 2in extension and 4in schedule 5 V-band clamp (for 4in Sanitary extended 2in seal)		J7
Tank spud for 4in extension and 4in schedule 5 V-band clamp (for 4in Sanitary extended 4in seal)		J8
Tank spud for 6in extension and 4in schedule 5 V-band clamp (for 4in Sanitary extended 6in seal)		J9
Flanged tank spud with 6 holes (for 1 1/2in beverage seal)		JA
Gasket		
Ethylene propylene gasket DN100 (for 4in Sanitary extended seal)		K1
Ethylene propylene gasket (for 1 1/2in beverage seal)		K2
Ethylene propylene gasket DN50 (for F50 Union nut seal)		K3
Ethylene propylene gasket DN80 (for F80 Union nut seal)		K4
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2600T Pressure Transmitters

Model 264DG, 264HG, 264NG

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