Data Sheet
SS/264XF_5

Field IT

2600T Series Pressure Transmitters

Model 264DF Differential (fast)
Model 264PF Gauge (fast)
Model 264VF Absolute (fast)
maximum working pressure up to 21MPa, 3045psi

Industrial IT enabled

- **Base accuracy : ±0.075%**
- **Span limits**
  – 0.14 to 160kPa; 0.56 to 642inH_2O
  – 0.27 to 160kPa abs; 2 to 1200mmHg
- **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
- **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
- **Full compliance with PED Category IV**
  – suitable for safety accessory application

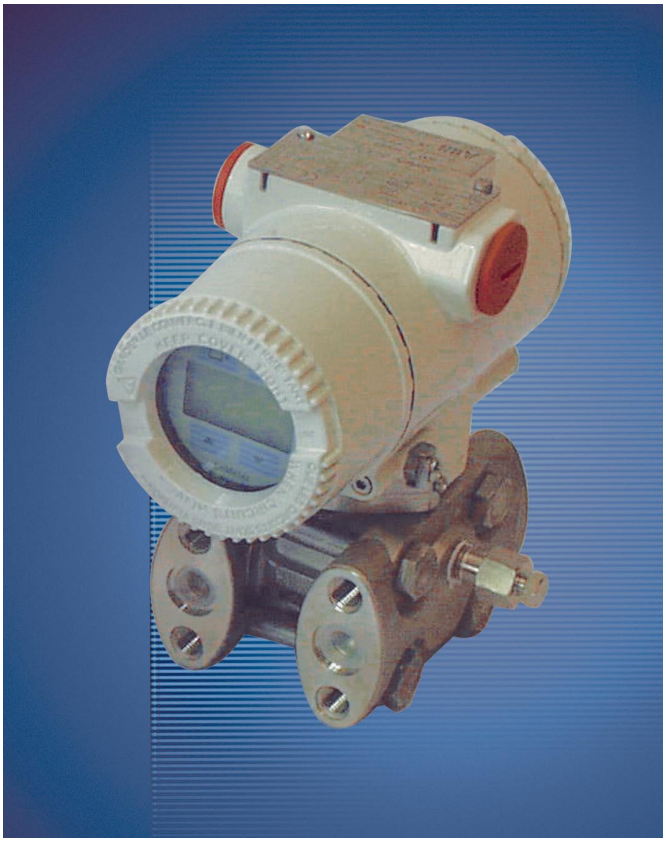


ABB 2600T Series
Engineered solutions
for all applications

ABB

Functional Specifications

Range and span limits

Sensor Code	Upper Range Limit (URL)	Lower Range Limit (LRL)			Minimum span	
		264DF differential	264PF gauge	264VF absolute	264DF differential 264PF gauge	264VF absolute
B	4kPa 40mbar 16inH_2O	–4kPa –40mbar –16inH_2O	–4kPa –40mbar –16inH_2O		0.14kPa 1.4mbar 0.56inH_2O	
E	16kPa 160mbar 64inH_2O	–16kPa –160mbar –64inH_2O	–16kPa –160mbar –64inH_2O	0.07kPa abs (§) 0.7mbar abs (§) 0.5mmHg (§)	0.27kPa 2.7mbar 1.08inH_2O	0.27kPa 2.7mbar 2mmHg
F	40kPa 400mbar 160inH_2O	–40kPa –400mbar –160inH_2O	–40kPa –400mbar –160inH_2O	0.07kPa abs (§) 0.7mbar abs (§) 0.5mmHg (§)	0.4kPa 4mbar 1.6inH_2O	0.67kPa 6.7mbar 5mmHg
G	65kPa 650mbar 260inH_2O	–65kPa –650mbar –260inH_2O	–65kPa –650mbar –260inH_2O	0.07kPa abs (§) 0.7mbar abs (§) 0.5mmHg (§)	0.65kPa 6.5mbar 2.6inH_2O	1.1kPa 11mbar 8mmHg
H	160kPa 1600mbar 642inH_2O	–160kPa –1600mbar –642inH_2O	1kPa abs 10mbar abs 0.15 psia	0.07kPa abs (§) 0.7mbar abs (§) 0.5mmHg (§)	1.6kPa 16mbar 6.4inH_2O	2.67kPa 26.7mbar 20mmHg

(§) Lower Range Limit is 0.135kPa abs, 1.35mbar abs, 1mmHg for inert Galden or 0.4kPa abs, 4mbar abs, 3mmHg for inert Halocarbon.

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 264DF - 264PF		Model 264VF	
	Sensors F to H	Sensors B to E	Sensors F to H	Sensor code E
Silicone oil	–40 and +85 (–40 and +185)	–25 and +85 (–13 and +185)	–40 and +85 (–40 and +185)	–15 and +70 (+5 and +158)
Inert Galden	–20 and +85 (–4 and +185)	–10 and +85 (+14 and +185)	–10 and +65 (+14 and +150)	not applicable
Inert Halocarbon	–20 and +85 (–4 and +185)	–10 and +85 (+14 and +185)	–10 and +65 (+14 and +150)	not applicable

Inert fillings not available for sensor B

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

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

Upper limit

– Silicone oil: 121°C (250°F) (1)

– Inert fluid: 100°C (212°F) (2)

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

(2) 65°C (150°F) for application below atmospheric pressure

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 (0.135kPa abs, 1.35mbar abs, 1mmHg for inert Galden or 0.4kPa abs, 4mbar abs, 3mmHg for inert Halocarbon) to

– 7MPa, 70bar, 1015psi for sensor code B

– 16MPa, 160bar, 2320psi for sensor code E

– 21MPa, 210bar, 3045psi for sensor codes F to H

Static pressure

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

– sensor code B:
1.3kPa abs,13mbar abs, 0.2psia and 7MPa, 70bar, 1015psi

– sensor code E:
1.3kPa abs,13mbar abs, 0.2psia and 16MPa, 160bar, 2320psi

– sensor codes F to H:
1.3kPa abs,13mbar abs, 0.2psia and 21MPa, 210bar, 3045psi

Proof pressure

The transmitter can be exposed without leaking to line pressure of up to 48MPa, 480bar, 6960psi. Meet ANSI/ISA–S 82.03 hydrostatic test requirements and SAMA PMC 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 Category IV Modules D and B.

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

Acceleration: 50g

Duration: 11ms

(according to IEC 60068–2–27)

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
– 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)
– CANADIAN STANDARDS ASSOCIATION and FACTORY MUTUAL:
– 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
- Dust ignitionproof DIP A21 Ta T6 (–20°C ≤ Ta ≤+80°C)
– INTRINSIC SAFETY/CHINA
NEPSI approval Ex ia IIC T4-T6
– GOST (Russia), GOST (Kazakistan), Inmetro (Brazil)
based on ATEX

Electrical Characteristics and Options

HART digital communication and 4 to 20mA output

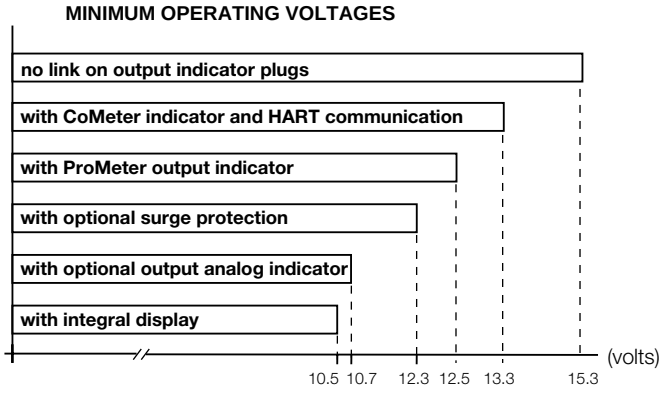
Power Supply

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



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 ARitmetic 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 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 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: 40ms

Time constant (63.2% of total step change):

– sensor H: ≤40ms

– sensor G: 50ms

– sensor F: 60ms

Response time (total) = dead time + time constant

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

Model 264DF, 264PF
– ±0.075% for TD from 1:1 to 15:1
(±0.10% for sensor code B for TD from 1:1 to 10:1)

– $\pm 0.005\% \times \frac{URL}{Span}$ for TD from 15:1 to 60:1
(30:1 for sensor code E)

$(\pm 0.01\% \times \frac{URL}{Span}$ for sensor code B for TD from 10:1 to 20:1)

Models 264VF
– ±0.075% for TD from 1:1 to 10:1

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

Operating influences

Ambient temperature

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

Model	Sensor Code	for TD up to	
264DF 264PF	E to H	15:1	± (0.04% URL + 0.065% span)
	B	10:1	± (0.06% URL + 0.10% span)
264VF	E to H	10:1	± (0.08% URL + 0.13% span)

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)

per 2MPa, 20bar or 290psi (sensor code B)

per 7MPa, 70bar or 1015psi (sensor codes E to H)

Model 264DF
– zero error: ±0.08% of URL
– span error: ±0.08% of reading
Multiply by 2 the errors for sensor code E.

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

Mounting position

Rotations in plane of diaphragm have negligible effect. A tilt to 90° from vertical causes a zero shifts up to 0.5kPa, 5mbar or 2inH_2O, which can be corrected with the zero adjustment. No span effect.

Stability

±0.15% of URL over a five years 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 (*)

AISI 316 L ss; Monel 400™; Tantalum;

Hastelloy C276™; Hastelloy C276™ on AISI 316 L ss gasket seat.

Process flanges, adapters, plugs and drain/vent valves (*)

AISI 316 L ss; Hastelloy C276™; Monel 400™.

Blind flange (reference side of 264PF, 264VF)

AISI 316 L ss.

Sensor fill fluid

Silicone oil (DC200™); inert fill (Halocarbon™4.2 or Galden™).

Mounting bracket (**)

Zinc plated carbon steel with chrome passivation;

AISI 316 L ss.

Gaskets (*)

Viton™; PTFE.

Sensor housing

AISI 316 L ss.

Bolts and nuts

AISI 316 ss bolts Class A4–80 and nuts Class A4–70 per UNI 7323 (ISO 3506);

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

Plated alloy steel bolts per ASTM-A-193-77a grade B7M and nuts per ASTM A194/A 194 M-90 grade 2HM, in compliance with NACE MR0175 Class II.

Electronic housing and covers

Barrel version

– Copper-free content aluminium alloy with baked epoxy finish;

– 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

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

Mounting brackets

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

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)

Cleaning procedure for oxygen service

Hydrogen or special service preparation

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

Tag and manual language

Communication connectors

Process connections

on flanges : 1/4 – 18 NPT on process axis

on adapters : 1/2 – 14 NPT on process axis

centre distance (264DF): 54mm (2.13in) on flange;
51,54 or 57mm (2.01, 2.13 or 2.24in) as per adapters fittings

fixing threads: 7/16 – 20 UNF at 41.3mm centre distance

Electrical connections

Two 1/2 – 14 NPT or M20x1.5 or PG 13.5 or 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 or 7/8.

Terminal block

HART version: three terminals for signal/external meter wiring up to 2.5mm^2 (14AWG) and three connection points for test and communication purposes.

Fieldbus versions: two terminals for signal wiring (bus connection) up to 2.5mm^2 (14AWG)

Grounding

Internal and external 6mm^2 (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)

3.5kg approx (8lb); add 1.5kg (3.4lb) for AISI housing.
Add 650g (1.5lb) for packing.

Packing

Carton 26 x 26 x 18cm approx (10 x 10 x 7in).

(*) Wetted parts of the transmitter.

(**) U-bolt material: AISI 400 ss; screws material: high-strength alloy steel or AISI 316 ss.

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
inH_2O@4°C, mmH_2O@4°C, psi
inH_2O@20°C, ftH_2O@20°C, mmH_2O@20°C
inHg, mmHg, Torr
g/cm^2, kg/cm^2, atm
mbar, bar

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™ Monel is an International Nickel Co. trademark

™ DC200 is a Dow Corning Corporation trademark

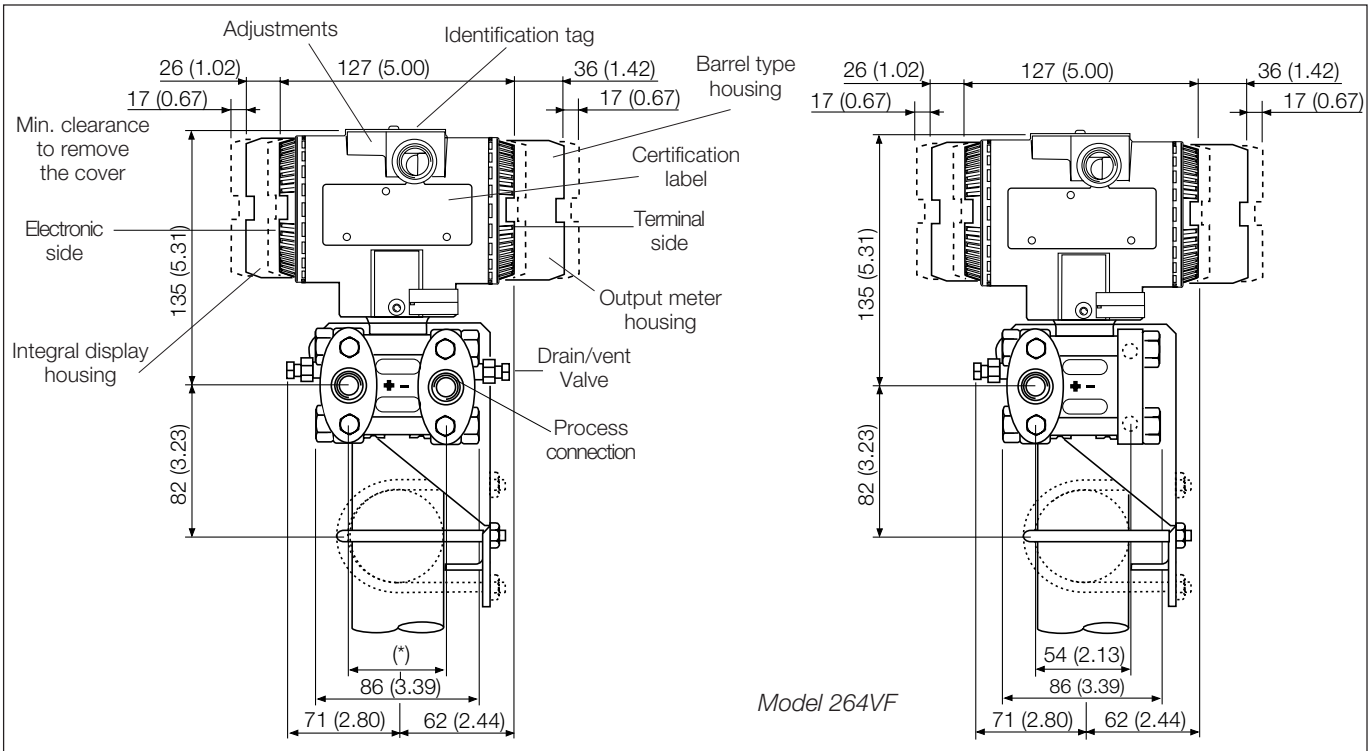
™ Galden is a Montefluos trademark

™ Halocarbon is a Halocarbon Products Co. trademark

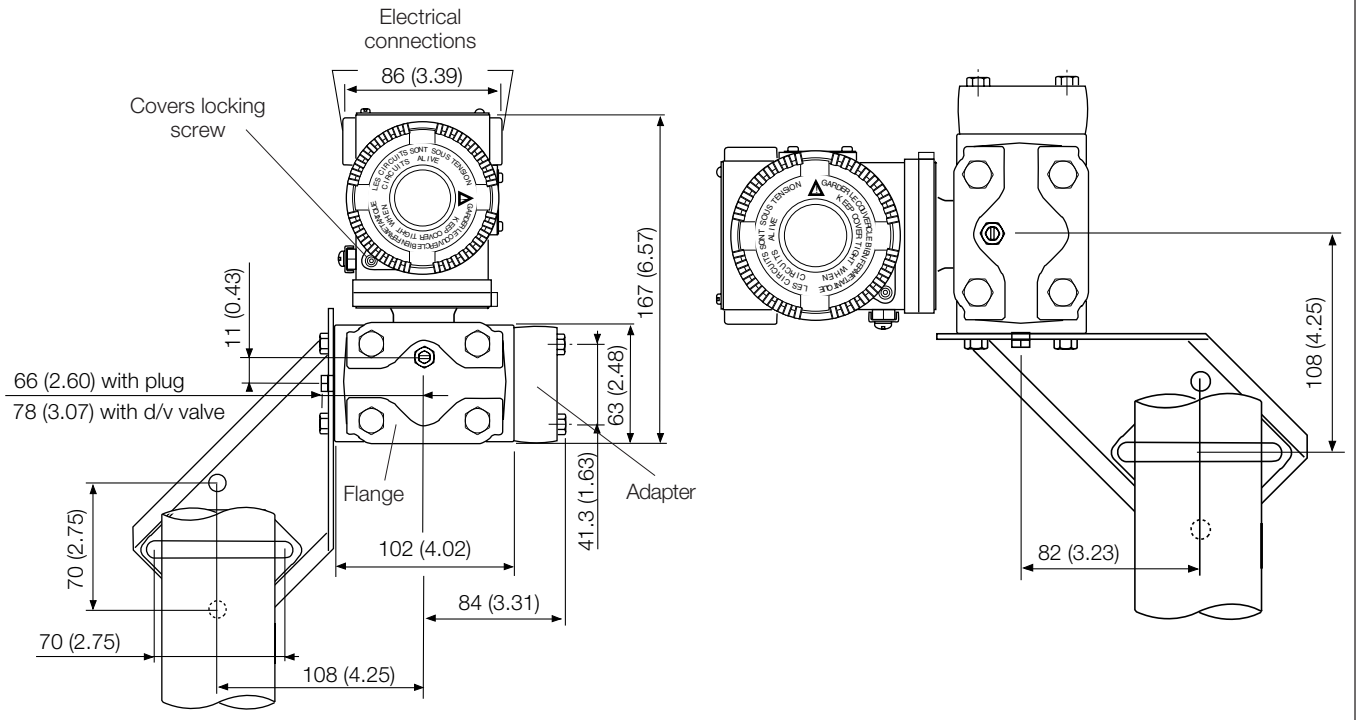
™ Viton is a Dupont de Nemour trademark

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

Transmitter with barrel aluminium housing on bracket for vertical or horizontal 60mm (2in) pipe mounting

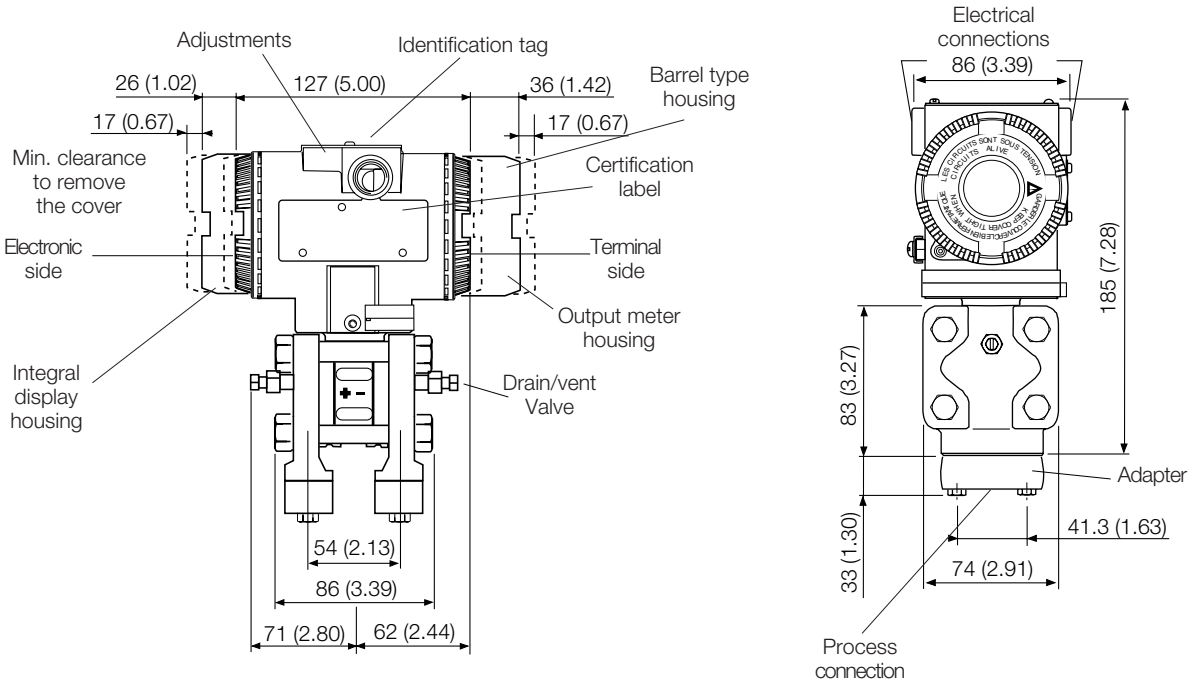


(*) FOR MODEL 264DF
51 (2.01), 54 (2.13) or 57 (2.24) mm (in) according to 1/2 – 14 NPT adapters fitting; 54 (2.13) mm (in) on 1/4 – 18 NPT process flange
FOR MODEL 264PF
54 (2.13) mm (in) with low pressure side flange without process connection (a filter is fitted) and drain/vent valve

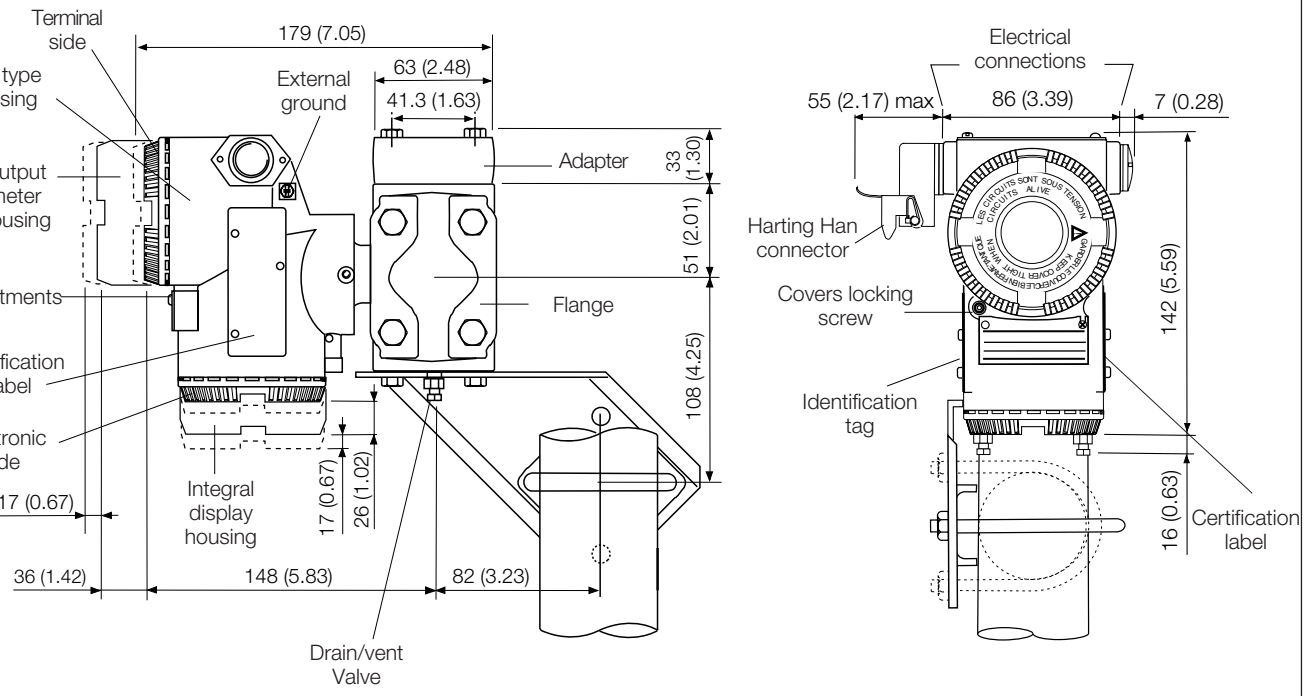


NOTE : Process connection, gasket groove and gaskets are in accordance with DIN 19213. Bolting threads for fixing adapter or other devices (i.e. manifold etc.) on process flange is 7/16 – 20 UNF.

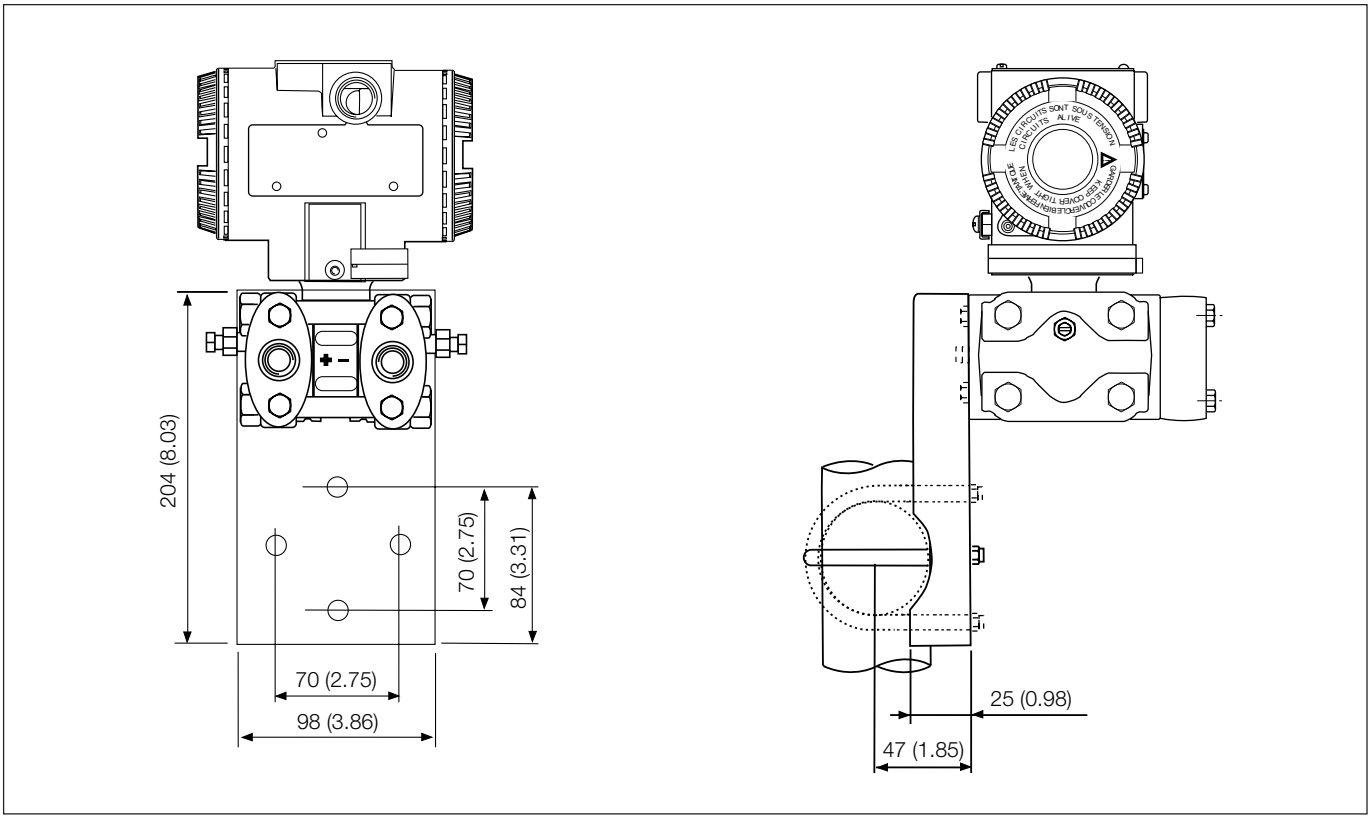
Transmitter with flanges for vertical connection (Barrel housing)



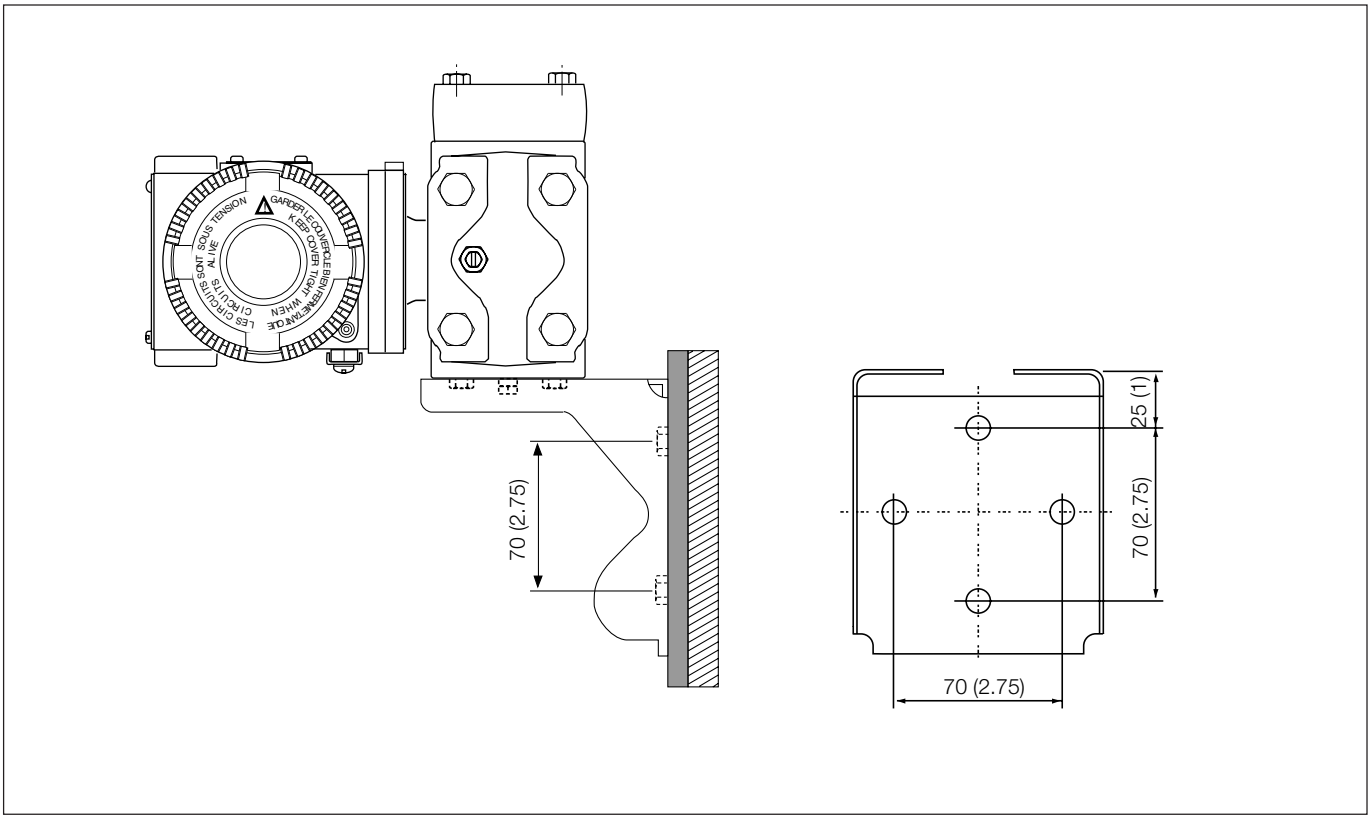
Transmitter on bracket for vertical or horizontal 60 mm (2in) pipe mounting (DIN housing)



Transmitter with barrel AISI ss housing on bracket (flat type for box) for vertical or horizontal 60mm (2in) pipe mounting

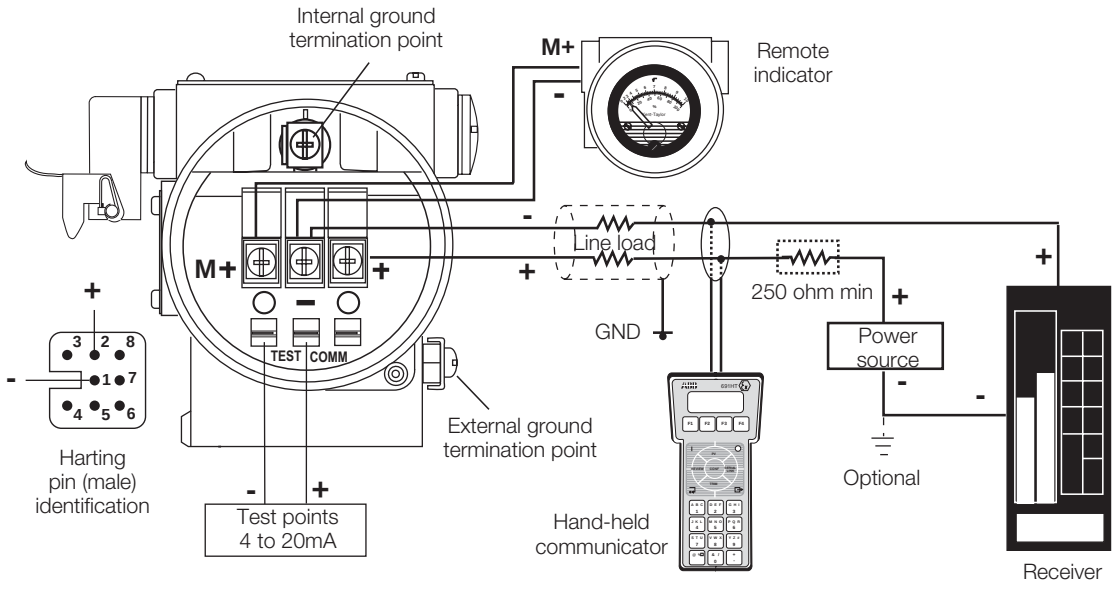


Transmitter on bracket for wall mounting (by up to four M8 screws, NOT SUPPLIED)



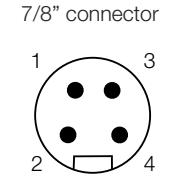
Electrical connections

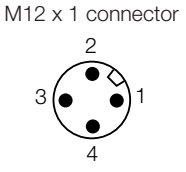
HART Version

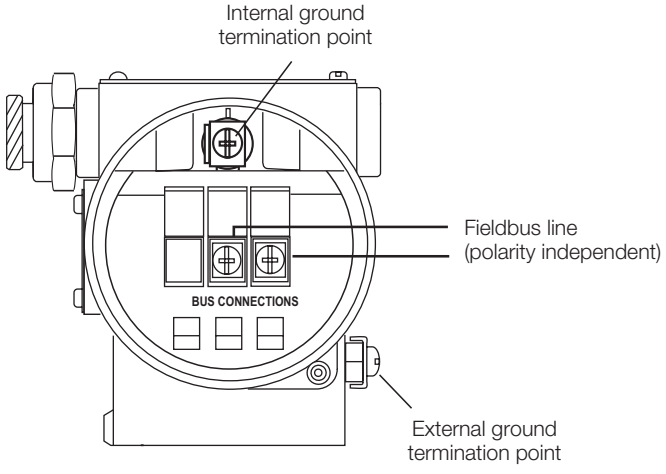


HART hand-held communicator may be connected at any wiring termination point in the loop, providing the minimum resistance is 250 ohm. If this is less than 250 ohm, additional resistance should be added to allow communications

FIELDBUS Versions







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

CONNECTOR IS SUPPLIED LOOSE WITHOUT MATING FEMALE PLUG

BASIC ORDERING INFORMATION model 264DF Differential Pressure Transmitter (fast)

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 – 1st to 5th characters				2	6	4	D	F	X	S	X	X	X	X	Cont'd
Differential Pressure Transmitter (fast) – BASE ACCURACY 0.075%															
SENSOR - Span limits – 6th character															
0.14 and 4kPa	1.4 and 40mbar	0.56 and 16inH_2O							B						
0.27 and 16 kPa	2.7 and 160mbar	1.08 and 64inH_2O							E						
0.4 and 40kPa	4 and 400mbar	1.6 and 160inH_2O							F						
0.65 and 65kPa	6.5 and 650mbar	2.6 and 260inH_2O							G						
1.6 and 160kPa	16 and 1600mbar	6.4 and 642inH_2O							H						
Use code – 7th character															
Diaphragm material / Fill fluid (wetted parts) – 8th character															
AISI 316 L ss	Silicone oil		(Note 2)								S				
Hastelloy C276™ (on AISI seat)	Silicone oil								NACE		H				
Hastelloy C276™	Silicone oil								NACE		K				
Monel 400™	Silicone oil		(Note 2)						NACE		M				
Tantalum	Silicone oil		(Note 2)						NACE		T				
AISI 316 L ss	Inert fluid - Galden		(Notes 1, 2)								A				
Hastelloy C276™ (on AISI seat)	Inert fluid - Galden		(Notes 1, 2)						NACE		B				
Hastelloy C276™	Inert fluid - Galden		(Notes 1, 2)						NACE		F				
Monel 400™	Inert fluid - Galden		(Notes 1, 2)						NACE		C				
Tantalum	Inert fluid - Galden		(Notes 1, 2)						NACE		D				
AISI 316 L ss	Inert fluid - Halocarbon		(Notes 1, 2)								L				
Hastelloy C276™ (on AISI seat)	Inert fluid - Halocarbon		(Notes 1, 2)						NACE		Q				
Hastelloy C276™	Inert fluid - Halocarbon		(Notes 1, 2)						NACE		P				
Monel 400™	Inert fluid - Halocarbon		(Notes 1, 2)						NACE		4				
Tantalum	Inert fluid - Halocarbon		(Notes 1, 2)						NACE		5				
Process flanges/adapters material and connection (wetted parts) – 9th character															
AISI 316 L ss (Horizontal connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)								NACE			A			
AISI 316 L ss (Horizontal connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)								NACE			B			
Hastelloy C276™ (Horizontal connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)								NACE			D			
Hastelloy C276™ (Horizontal connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)								NACE			E			
Monel 400™ (Horizontal connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)								NACE			G			
Monel 400™ (Horizontal connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)								NACE			H			
AISI 316 L ss (Vertical connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)								NACE			Q			
AISI 316 L ss (Vertical connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)								NACE			T			
Hastelloy C276™ (Vertical connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)								NACE			M			
Hastelloy C276™ (Vertical connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)								NACE			S			
Monel 400™ (Vertical connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)								NACE			U			
Monel 400™ (Vertical connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)								NACE			V			
Bolts/Gasket (wetted parts) – 10th character															
AISI 316 ss	Viton™												1		
AISI 316 ss	PTFE		(Note 1)										2		
AISI 316 ss (NACE) – (MWP = 16MPa)	Viton™								NACE				3		
AISI 316 ss (NACE) – (MWP = 16MPa)	PTFE		(Note 1)						NACE				4		
Alloy steel (NACE)	Viton™								NACE				8		
Alloy steel (NACE)	PTFE		(Note 1)						NACE				9		
Housing material and electrical connection – 11th 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	

ADDITIONAL BASIC ORDERING INFORMATION			X
Output/Additional options – 12th 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 264DF

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	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 7)	NACE	V2										
AISI 316 L ss	on flange side bottom	(Note 7)	NACE	V3										
Hastelloy C276™	on process axis	(Note 8)	NACE	V4										
Hastelloy C276™	on flange side top	(Note 9)	NACE	V5										
Hastelloy C276™	on flange side bottom	(Note 9)	NACE	V6										
Monel 400™	on process axis	(Note 10)	NACE	V7										
Monel 400™	on flange side top	(Note 11)	NACE	V8										
Monel 400™	on flange side bottom	(Note 11)	NACE	V9										
Electrical certification														
ATEX Group II Category 1 GD – Intrinsic Safety EEx ia					E1									
ATEX Group II Category 3 GD – Type of protection "N" EEx nL design compliance (Note 12)					E3									
Canadian Standard Association (CSA) (only ½–14NPT, M20 and Pg 13.5 electrical connection) (Note 13)					E4									
Standards Australia SAA (Not Ex d; Not Ex ia and Ex n for PROFIBUS PA and FOUNDATION Fieldbus)					E5									
Factory Mutual (FM) approval (only with ½–14NPT, M20 and Pg 13.5 electrical connection) (Note 13)					E6									
NEPSI (China) - Intrinsic Safety Ex ia (Not available for FF Output code 3)					EY									
GOST (Russia) EEx ia					W1									
GOST (Kazakistan) EEx ia					W3									
Inmetro (Brazil) EEx ia	(Note 12)				W5									
Inmetro (Brazil) EEx nL	(Note 12)				W7									
Output meter														
ProMeter, Standard calibration				(Note 12)			D1							
ProMeter, Special calibration				(Note 12)			D2							
Analog output indicator linear 0–100% scale				(Note 12)			D3							
Analog output indicator square root 0–10 scale				(Note 12)			D4							
Analog output indicator, special graduation (to be specified for linear scale)				(Note 12)			D5							
Analog output indicator, special graduation (to be specified for square root scale)				(Note 12)			D6							
Programmable signal meter and HART configurator (CoMeter)				(Note 12)			D7							
Programmable signal meter and HART configurator (CoMeter – customer configuration)				(Note 12)			D8							
Integral LCD														
Digital LCD integral display								L1						
Mounting bracket (shape and material)														
For pipe mounting	(Not suitable for AISI housing)	Carbon steel							B1					
For pipe mounting	(Not suitable for AISI housing)	AISI 316 L ss							B2					
For wall mounting	(Not suitable for AISI housing)	Carbon steel							B3					
For wall mounting	(Not suitable for AISI housing)	AISI 316 L ss							B4					
Flat type for box		AISI 316 L ss							B5					
Surge														
Surge/Transient Protector (Internal for HART / 4-20mA)														
Surge/Transient Protector (External supplied loose for PROFIBUS PA and FOUNDATION Fieldbus only suitable with ½–14NPT and M20 electrical connection and with ATEX, FM and CSA certifications, no DUST)										S1				
Operating manual														
German											M1			
Italian											M2			
French											M4			
Labels & tag language														
German												T1		
Italian												T2		
French												T4		
Additional tag plate														
Laser printing of tag on stainless steel plate													I2	

ADDITIONAL ORDERING INFORMATION		XX	XX	XX	XX	XX
Configuration						
Standard – Pressure = inH_2O/psi at 20° C; Temperature = deg. F		N2				
Standard – Pressure = inH_2O/psi at 4° C; Temperature = deg. F		N3				
Standard – Pressure = inH_2O/psi at 20° C; Temperature = deg.C		N4				
Standard – Pressure = inH_2O/psi at 4° C; Temperature = deg. C		N5				
Custom		N6				
Preparation procedure						
Oxygen service cleaning (only available with inert fill and PTFE gasket) – P_{max} =12MPa for Galden, 9MPa for Halocarbon; T_{max}=60° C/140° F			P1			
Hydrogen service preparation			P2			
Special services preparation			P4			
Certificates						
Inspection certificate EN 10204–3.1.B 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.B of process wetted parts					H3	
Connector						
Fieldbus 7/8 (Recommended for FOUNDATION Fieldbus) - (supplied loose without mating female plug)	(Notes 5, 14)					U1
Fieldbus M12x1 (Recommended for PROFIBUS PA) - (supplied loose without mating female plug)	(Notes 5, 14)					U2
Harting Han– straight entry	(Notes 4, 14)					U3
Harting Han – angle entry	(Notes 4, 14)					U4

Note 1: Suitable for oxygen service

Note 2: Not available with sensor code B

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 D, E, G, H, Q, T, M, S, U, V

Note 7: Not available with Process flanges/adapters code D, E, G, H, M, S, U, V

Note 8: Not available with Process flanges/adapters code A, B, G, H, Q, T, M, S, U, V

Note 9: Not available with Process flanges/adapters code A, B, G, H, Q, T, U, V

Note 10: Not available with Process flanges/adapters code A, B, D, E, Q, T, M, S, U, V

Note 11: Not available with Process flanges/adapters code A, B, D, E, Q, T, M, S

Note 12: Not available with PROFIBUS PA and FF output code 2 or 3

Note 13: Not XP Explosion proof

Note 14: 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

™ Galden is a Montefluos trademark

™ Halocarbon is a Halocarbon Products Co. trademark

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

– Adapters supplied loose

– Plug on axis of horizontal connection flange; nothing for vertical connection blind flange (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 264PF Gauge Pressure Transmitter (fast)

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 – 1st to 5th characters			**2**	**6**	**4**	**P**	**F**	**X**	**S**	**X**	**X**	**X**	**X**	**Cont'd**
Gauge Pressure Transmitter (fast) – BASE ACCURACY 0.075%														
SENSOR - Span limits – 6th character														
0.14 and 4kPa	1.4 and 40mbar	0.56 and 16inH_2O						B						
0.27 and 16 kPa	2.7 and 160mbar	1.08 and 64inH_2O						E						
0.4 and 40kPa	4 and 400mbar	1.6 and 160inH_2O						F						
0.65 and 65kPa	6.5 and 650mbar	2.6 and 260inH_2O						G						
1.6 and 160kPa	16 and 1600mbar	6.4 and 642inH_2O						H						
Use code – 7th character														
Diaphragm material / Fill fluid (wetted parts) – 8th character														
AISI 316 L ss	Silicone oil	(Note 2)								S				
Hastelloy C276™ (on AISI seat)	Silicone oil							NACE		H				
Hastelloy C276™	Silicone oil							NACE		K				
Monel 400™	Silicone oil	(Note 2)						NACE		M				
Tantalum	Silicone oil	(Note 2)						NACE		T				
AISI 316 L ss	Inert fluid - Galden	(Notes 1, 2)								A				
Hastelloy C276™ (on AISI seat)	Inert fluid - Galden	(Notes 1, 2)						NACE		B				
Hastelloy C276™	Inert fluid - Galden	(Notes 1, 2)						NACE		F				
Monel 400™	Inert fluid - Galden	(Notes 1, 2)						NACE		C				
Tantalum	Inert fluid - Galden	(Notes 1, 2)						NACE		D				
AISI 316 L ss	Inert fluid - Halocarbon	(Notes 1, 2)								L				
Hastelloy C276™ (on AISI seat)	Inert fluid - Halocarbon	(Notes 1, 2)						NACE		Q				
Hastelloy C276™	Inert fluid - Halocarbon	(Notes 1, 2)						NACE		P				
Monel 400™	Inert fluid - Halocarbon	(Notes 1, 2)						NACE		4				
Tantalum	Inert fluid - Halocarbon	(Notes 1, 2)						NACE		5				
Process flanges/adapters material and connection (wetted parts) – 9th character														
AISI 316 L ss (Horizontal connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)							NACE			A			
AISI 316 L ss (Horizontal connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)							NACE			B			
Hastelloy C276™ (Horizontal connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)							NACE			D			
Hastelloy C276™ (Horizontal connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)							NACE			E			
Monel 400™ (Horizontal connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)							NACE			G			
Monel 400™ (Horizontal connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)							NACE			H			
AISI 316 L ss (Vertical connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)							NACE			Q			
AISI 316 L ss (Vertical connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)							NACE			T			
Hastelloy C276™ (Vertical connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)							NACE			M			
Hastelloy C276™ (Vertical connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)							NACE			S			
Monel 400™ (Vertical connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)							NACE			U			
Monel 400™ (Vertical connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)							NACE			V			
Bolts/Gasket (wetted parts) – 10th character														
AISI 316 ss	Viton™											1		
AISI 316 ss	PTFE	(Note 1)										2		
AISI 316 ss (NACE) – (MWP = 16MPa)	Viton™							NACE				3		
AISI 316 ss (NACE) – (MWP = 16MPa)	PTFE	(Note 1)						NACE				4		
Alloy steel (NACE)	Viton™							NACE				8		
Alloy steel (NACE)	PTFE	(Note 1)						NACE				9		
Housing material and electrical connection – 11th 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	

ADDITIONAL BASIC ORDERING INFORMATION			X
Output/Additional options – 12th 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 264PF

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	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 7)	NACE	V2									
AISI 316 L ss	on flange side bottom	(Note 7)	NACE	V3									
Hastelloy C276™	on process axis	(Note 8)	NACE	V4									
Hastelloy C276™	on flange side top	(Note 9)	NACE	V5									
Hastelloy C276™	on flange side bottom	(Note 9)	NACE	V6									
Monel 400™	on process axis	(Note 10)	NACE	V7									
Monel 400™	on flange side top	(Note 11)	NACE	V8									
Monel 400™	on flange side bottom	(Note 11)	NACE	V9									
Electrical certification													
ATEX Group II Category 1 GD – Intrinsic Safety EEx ia					E1								
ATEX Group II Category 3 GD – Type of protection "N" EEx nL design compliance (Note 12)					E3								
Canadian Standard Association (CSA) (only ½–14NPT, M20 and Pg 13.5 electrical connection) (Note 13)					E4								
Standards Australia SAA (Not Ex d; Not Ex ia and Ex n for PROFIBUS PA and FOUNDATION Fieldbus)					E5								
Factory Mutual (FM) approval (only with ½–14NPT, M20 and Pg 13.5 electrical connection) (Note 13)					E6								
NEPSI (China) - Intrinsic Safety Ex ia (Not available for FF Output code 3)					EY								
GOST (Russia) EEx ia					W1								
GOST (Kazakistan) EEx ia					W3								
Inmetro (Brazil) EEx ia (Note 12)					W5								
Inmetro (Brazil) EEx nL (Note 12)					W7								
Output meter													
ProMeter, Standard calibration			(Note 12)			D1							
ProMeter, Special calibration			(Note 12)			D2							
Analog output indicator linear 0–100% scale			(Note 12)			D3							
Analog output indicator, special graduation (to be specified for linear scale)			(Note 12)			D5							
Programmable signal meter and HART configurator (CoMeter)			(Note 12)			D7							
Programmable signal meter and HART configurator (CoMeter – customer configuration)			(Note 12)			D8							
Integral LCD													
Digital LCD integral display							L1						
Mounting bracket (shape and material)													
For pipe mounting	(Not suitable for AISI housing)	Carbon steel						B1					
For pipe mounting	(Not suitable for AISI housing)	AISI 316 L ss						B2					
For wall mounting	(Not suitable for AISI housing)	Carbon steel						B3					
For wall mounting	(Not suitable for AISI housing)	AISI 316 L ss						B4					
Flat type for box		AISI 316 L ss						B5					
Surge													
Surge/Transient Protector (Internal for HART / 4-20mA)													
Surge/Transient Protector (External supplied loose for PROFIBUS PA and FOUNDATION Fieldbus only suitable with ½–14NPT and M20 electrical connection and with ATEX, FM and CSA certifications, no DUST)									S1				
Operating manual													
German										M1			
Italian										M2			
French										M4			
Labels & tag language													
German											T1		
Italian											T2		
French											T4		
Additional tag plate													
Laser printing of tag on stainless steel plate												I2	

ADDITIONAL ORDERING INFORMATION		XX	XX	XX	XX	XX
Configuration						
Standard – Pressure = inH_2O/psi at 20° C; Temperature = deg. F		N2				
Standard – Pressure = inH_2O/psi at 4° C; Temperature = deg. F		N3				
Standard – Pressure = inH_2O/psi at 20° C; Temperature = deg.C		N4				
Standard – Pressure = inH_2O/psi at 4° C; Temperature = deg. C		N5				
Custom		N6				
Preparation procedure						
Oxygen service cleaning (only available with inert fill and PTFE gasket) – P_{max} =12MPa for Galden, 9MPa for Halocarbon; T_{max}=60° C/140° F			P1			
Hydrogen service preparation			P2			
Special services preparation			P4			
Certificates						
Inspection certificate EN 10204–3.1.B 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.B of process wetted parts					H3	
Connector						
Fieldbus 7/8 (Recommended for FOUNDATION Fieldbus) - (supplied loose without mating female plug)	(Notes 5, 14)					U1
Fieldbus M12x1 (Recommended for PROFIBUS PA) - (supplied loose without mating female plug)	(Notes 5, 14)					U2
Harting Han– straight entry	(Notes 4, 14)					U3
Harting Han – angle entry	(Notes 4, 14)					U4

Note 1: Suitable for oxygen service

Note 2: Not available with sensor code B

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 D, E, G, H, Q, T, M, S, U, V

Note 7: Not available with Process flanges/adapters code D, E, G, H, M, S, U, V

Note 8: Not available with Process flanges/adapters code A, B, G, H, Q, T, M, S, U, V

Note 9: Not available with Process flanges/adapters code A, B, G, H, Q, T, U, V

Note 10: Not available with Process flanges/adapters code A, B, D, E, Q, T, M, S, U, V

Note 11: Not available with Process flanges/adapters code A, B, D, E, Q, T, M, S

Note 12: Not available with PROFIBUS PA and FF output code 2 or 3

Note 13: Not XP Explosion proof

Note 14: 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

™ Galden is a Montefluos trademark

™ Halocarbon is a Halocarbon Products Co. trademark

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

– Adapters supplied loose

– Plug on axis of horizontal connection flange; nothing for vertical connection blind flange (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 264VF Absolute Pressure Transmitter (fast)

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 – 1st to 5th characters						**2**	**6**	**4**	**V**	**F**	**X**	**S**	**X**	**X**	**X**	**X**	**X**
Absolute Pressure Transmitter (fast) - BASE ACCURACY 0.075%																	
SENSOR – Span limits – 6th character																	
0.27 and 16 kPa	2.7 and 160mbar	2 and 120mmHg									E						
0.67 and 40kPa	6.7 and 400mbar	5 and 300mmHg									F						
1.1 and 65kPa	11 and 650mbar	8 and 480mmHg									G						
2.67 and 160kPa	26.7 and 1600mbar	20 and 1200mmHg									H						
Use code – 7th character																	
Diaphragm material / Fill fluid (wetted parts) – 8th character																	
AISI 316 L ss	Silicone oil												S				
Hastelloy C276™ (on AISI seat)	Silicone oil										NACE		H				
Hastelloy C276™	Silicone oil										NACE		K				
AISI 316 L ss	Inert fluid - Galden	(Notes 1, 2)											A				
Hastelloy C276™ (on AISI seat)	Inert fluid - Galden	(Notes 1, 2)									NACE		B				
Hastelloy C276™	Inert fluid - Galden	(Notes 1, 2)									NACE		F				
AISI 316 L ss	Inert fluid - Halocarbon	(Notes 1, 2)											L				
Hastelloy C276™ (on AISI seat)	Inert fluid - Halocarbon	(Notes 1, 2)									NACE		Q				
Hastelloy C276™	Inert fluid - Halocarbon	(Notes 1, 2)									NACE		P				
Process flanges/adapters material and connection (wetted parts) – 9th character																	
AISI 316 L ss (Horizontal connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)										NACE			A			
AISI 316 L ss (Horizontal connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)										NACE			B			
Hastelloy C276™ (Horizontal connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)										NACE			D			
Hastelloy C276™ (Horizontal connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)										NACE			E			
Monel 400™ (Horizontal connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)										NACE			G			
Monel 400™ (Horizontal connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)										NACE			H			
AISI 316 L ss (Vertical connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)										NACE			Q			
AISI 316 L ss (Vertical connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)										NACE			T			
Hastelloy C276™ (Vertical connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)										NACE			M			
Hastelloy C276™ (Vertical connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)										NACE			S			
Monel 400™ (Vertical connection)	1/4 – 18 NPT-f direct (7/16 – 20 UNF U.S. drilling)										NACE			U			
Monel 400™ (Vertical connection)	1/2 – 14 NPT-f through adapter (7/16 – 20 UNF U.S. drilling)										NACE			V			
Bolts/Gasket (wetted parts) – 10th character																	
AISI 316 ss	Viton™														1		
AISI 316 ss	PTFE	(Note 1)													2		
AISI 316 ss (NACE) – (MWP = 16MPa)	Viton™										NACE				3		
AISI 316 ss (NACE) – (MWP = 16MPa)	PTFE	(Note 1)									NACE				4		
Alloy steel (NACE)	Viton™										NACE				8		
Alloy steel (NACE)	PTFE	(Note 1)									NACE				9		
Housing material and electrical connection – 11th 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 – 12th character																	
HART digital communication and 4 to 20mA	No additional options																H
HART digital communication and 4 to 20mA	Options requested (to be ordered by "Additional ordering code")																1
PROFIBUS PA	No additional options																P
PROFIBUS PA	Options requested (to be ordered by "Additional ordering code")																2
FOUNDATION Fieldbus	No additional options																F
FOUNDATION Fieldbus	Options requested (to be ordered by "Additional ordering code")																3

(Notes 4, 5)		
(Note 4)		
(Notes 4, 5)		
(Note 5)		
(Notes 4, 5)		
(Note 5)		

ADDITIONAL ORDERING INFORMATION for model 264VF

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	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 7)	NACE	V2										
AISI 316 L ss	on flange side bottom	(Note 7)	NACE	V3										
Hastelloy C276™	on process axis	(Note 8)	NACE	V4										
Hastelloy C276™	on flange side top	(Note 9)	NACE	V5										
Hastelloy C276™	on flange side bottom	(Note 9)	NACE	V6										
Monel 400™	on process axis	(Note 10)	NACE	V7										
Monel 400™	on flange side top	(Note 11)	NACE	V8										
Monel 400™	on flange side bottom	(Note 11)	NACE	V9										
Electrical certification														
ATEX Group II Category 1 GD – Intrinsic Safety EEx ia						E1								
ATEX Group II Category 3 GD – Type of protection "N" EEx nL design compliance (Note 12)						E3								
Canadian Standard Association (CSA) (only ½–14NPT, M20 and Pg 13.5 electrical connection) (Note 13)						E4								
Standards Australia SAA (Not Ex d; Not Ex ia and Ex n for PROFIBUS PA and FOUNDATION Fieldbus)						E5								
Factory Mutual (FM) approval (only with ½–14NPT, M20 and Pg 13.5 electrical connection) (Note 13)						E6								
NEPSI (China) - Intrinsic Safety Ex ia (Not available for FF Output code 3)						EY								
GOST (Russia) EEx ia						W1								
GOST (Kazakistan) EEx ia						W3								
Inmetro (Brazil) EEx ia (Note 12)						W5								
Inmetro (Brazil) EEx nL (Note 12)						W7								
Output meter														
ProMeter, Standard calibration			(Note 12)				D1							
ProMeter, Special calibration			(Note 12)				D2							
Analog output indicator linear 0–100% scale			(Note 12)				D3							
Analog output indicator, special graduation (to be specified for linear scale)			(Note 12)				D5							
Programmable signal meter and HART configurator (CoMeter)			(Note 12)				D7							
Programmable signal meter and HART configurator (CoMeter – customer configuration)			(Note 12)				D8							
Integral LCD														
Digital LCD integral display								L1						
Mounting bracket (shape and material)														
For pipe mounting	(Not suitable for AISI housing)	Carbon steel							B1					
For pipe mounting	(Not suitable for AISI housing)	AISI 316 L ss							B2					
For wall mounting	(Not suitable for AISI housing)	Carbon steel							B3					
For wall mounting	(Not suitable for AISI housing)	AISI 316 L ss							B4					
Flat type for box		AISI 316 L ss							B5					
Surge														
Surge/Transient Protector (Internal for HART / 4-20mA)														
Surge/Transient Protector (External supplied loose for PROFIBUS PA and FOUNDATION Fieldbus only suitable with ½–14NPT and M20 electrical connection and with ATEX, FM and CSA certifications, no DUST)										S1				
Operating manual														
German											M1			
Italian											M2			
French											M4			
Labels & tag language														
German												T1		
Italian												T2		
French												T4		
Additional tag plate														
Laser printing of tag on stainless steel plate													I2	

ADDITIONAL ORDERING INFORMATION		XX	XX	XX	XX	XX
Configuration						
Standard – Pressure = inH_2O/psi at 20° C; Temperature = deg. F		N2				
Standard – Pressure = inH_2O/psi at 4° C; Temperature = deg. F		N3				
Standard – Pressure = inH_2O/psi at 20° C; Temperature = deg.C		N4				
Standard – Pressure = inH_2O/psi at 4° C; Temperature = deg. C		N5				
Custom		N6				
Preparation procedure						
Oxygen service cleaning (only available with inert fill and PTFE gasket) – P_{max} =12MPa for Galden, 9MPa for Halocarbon; T_{max}=60° C/140° F			P1			
Hydrogen service preparation			P2			
Special services preparation			P4			
Certificates						
Inspection certificate EN 10204–3.1.B 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.B of process wetted parts					H3	
Connector						
Fieldbus 7/8 (Recommended for FOUNDATION Fieldbus) - (supplied loose without mating female plug)	(Notes 5, 14)					U1
Fieldbus M12x1 (Recommended for PROFIBUS PA) - (supplied loose without mating female plug)	(Notes 5, 14)					U2
Harting Han– straight entry	(Notes 4, 14)					U3
Harting Han – angle entry	(Notes 4, 14)					U4

Note 1: Suitable for oxygen service

Note 2: Not available with sensor code E

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 D, E, G, H, Q, T, M, S, U, V

Note 7: Not available with Process flanges/adapters code D, E, G, H, M, S, U, V

Note 8: Not available with Process flanges/adapters code A, B, G, H, Q, T, M, S, U, V

Note 9: Not available with Process flanges/adapters code A, B, G, H, Q, T, U, V

Note 10: Not available with Process flanges/adapters code A, B, D, E, Q, T, M, S, U, V

Note 11: Not available with Process flanges/adapters code A, B, D, E, Q, T, M, S

Note 12: Not available with PROFIBUS PA and FF output code 2 or 3

Note 13: Not XP Explosion proof

Note 14: Not available with Electronic housing code U, S, T, V, H, M, L, N, D, C, A, B, J, Y

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

– Adapters supplied loose

– Plug on axis of horizontal connection flange; nothing for vertical connection blind flange (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.

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