ABB 2600T Series
Engineered solutions
for all applications

Base accuracy : ±0.075%

Span limits
– 0.2 to 60000kPa; 0.8inH₂O to 8700psi
– 0.3 to 3000kPa abs; 2.25mmHg to 435psia

Reliable sensing system coupled with very latest
digital technologies
– provides large turn down ratio up to 100:1

Comprehensive sensor choice
– optimize in-use total performance and stability

Flexible configuration facilities
– provided locally via local keys combined with LCD
  indicator or via hand held terminal or PC configuration
  platform

Multiple protocol availability
– provides integration with HART®, PROFIBUS PA
  and FOUNDATION Fieldbus platforms offering
  interchangeability and transmitter upgrade capabilities

Full compliance with PED Category III
### Functional Specifications

#### Range and span limits

<table>
<thead>
<tr>
<th>Sensor Code</th>
<th>Upper Range Limit (URL)</th>
<th>Lower Range Limit (LRL) for 264GS</th>
<th>Minimum span</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>6kPa 60mbar 24inH₂O</td>
<td>–6kPa –60mbar –24inH₂O</td>
<td>1.2kPa 2mbar 0.8inH₂O 1.3kPa 3mbar 2.25mmHg</td>
</tr>
<tr>
<td>F</td>
<td>40kPa 400mbar 160inH₂O</td>
<td>–40kPa –400mbar –160inH₂O</td>
<td>0.4kPa 1mbar 1.6inH₂O 2kPa 20mbar 15mmHg</td>
</tr>
<tr>
<td>L</td>
<td>250kPa 2500mbar 1000inH₂O</td>
<td>0 abs</td>
<td>2.5kPa 25mbar 10inH₂O 2.5kPa 25mbar 15mmHg</td>
</tr>
<tr>
<td>U</td>
<td>3000kPa 30bar 435psi 10000kPa</td>
<td>0 abs</td>
<td>30kPa 03bar 1.35psi 10kPa</td>
</tr>
<tr>
<td>R</td>
<td>100bar 1450psi 6000kPa</td>
<td>0 abs</td>
<td>14.5psi 100kPa</td>
</tr>
<tr>
<td>V</td>
<td>500bar 7700psi</td>
<td>0 abs</td>
<td>77psi</td>
</tr>
</tbody>
</table>

Note: Lower Range Limit (LRL) for 264AS is 0 abs for all ranges

#### Span limits

- Maximum span = URL

It is recommended to select the transmitter sensor code providing the turndown value as lowest as possible to optimize performance characteristics.

#### Zero suppression and elevation

- Zero and span can be adjusted to any value within the range limits detailed in the table as long as:
  - calibrated span > 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)
  - Silicone oil filling: –40°C and +85°C (-40°F and +185°F)
  - Inert filling and white oil: –20°C and +85°C (-4°F and +185°F)
  - Lower limit for LCD indicators and Viton gasket: –20°C (-4°F)
  - Lower limit for perfluoroelastomer gasket: –15°C (+5°F)
  - Upper 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
  - –50°C (-58°F); –20°C (-4°F) for Viton gasket.
  - –15°C (+5°F) for perfluoroelastomer gasket

- Upper limit
  - Silicone oil, inert fluid and white oil: 121°C (250°F)

#### Storage

- Lower limit: –50°C (-58°F); –40°C (-40°F) for LCD indicators
  - Upper limit: +85°C (+185°F)
2600T Pressure Transmitters
Model 264GS,

Pressure limits

Overpressure limits (without damage to the transmitter)
- 0 absolute to
  - 1MPa, 10bar, 145psi for sensor codes C, F
  - 0.5MPa, 5bar, 72.5psi for sensor code L
  - 6MPa, 60bar, 870psi for sensor code U
  - 20MPa, 200bar, 2900psi for sensor code R
  - 90MPa, 900bar, 13050psi for sensor code V
- 0.6MPa, 6bar, 87psi for perfluoroelastomer gasket

Proof pressure
The transmitter can be exposed without leaking to line pressure of up to
- 1MPa, 10bar, 145psi for sensor codes C, F
- 0.5MPa, 5bar, 72.5psi for sensor code L
- 6MPa, 60bar, 870psi for sensor code U
- 20MPa, 200bar, 2900psi for sensor code R
- 90MPa, 900bar, 13050psi for sensor code V
- 0.6MPa, 6bar, 87psi for perfluoroelastomer gasket

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 III Module H.

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

Vibration resistance
Accelerations up to 2g at frequency up to 1000Hz
(according to IEC 60068–2–6)

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 EN60529 (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 δ Ta δ+40°C)
    T95°C, EEx ia IIC T4 (–40°C δ Ta δ+45°C)
  - INTRINSIC SAFETY/EUROPE:
    ATEX/ZELM approval
    II 1 GD T50°C, EEx ia IIC T6 (–40°C δ Ta δ+40°C)
    T95°C, EEx ia IIC T4 (–40°C δ Ta δ+45°C)
- TYPE “N”/EUROPE:
  ATEX/ZELM type examination (for HART)
  II 3 GD T50°C, EEx nL IIC T6 (–40°C δ Ta δ+40°C)
  T95°C, EEx nL IIC T4 (–40°C δ Ta δ+45°C)
- FLAMEPROOF/EUROPE:
  ATEX/CESI approval
  II 1/2 GD T85°C, EEx d IIC T6 (–40°C δ Ta δ+75°C)
  – CANADIAN STANDARDS ASSOCIATION and FACTORY MUTUAL:
    – Explosionproof: Class I, Div. 1, Groups A, B, C, D
    – Dust ignitionproof: Class II, Div. 2, Groups A, B, C
    – 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 δ Ta δ+80°C) only HART
      - Flameproof Ex d IIC T4/T6 (–20°C δ Ta δ+80°C) only HART
      - Dust ignitionproof DIP A21 Ta T6 (–20°C δ Ta δ+80°C)
      – INTRINSIC SAFETY/CHINA
      NEPSI approval Ex ia IIC T4-T6
      – FLAMEPROOF/CHINA
      NEPSI approval Ex d IIC T6
      – GOST (Russia), GOST (Kazakhstan), 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

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.

Load limitations

4 to 20mA and HART total loop resistance:

\[ R(\text{kΩ}) = \frac{\text{Supply voltage} – \text{min. operating voltage} (\text{VDC})}{22.5} \]

A minimum of 250Ω is required for HART communication.

Optional surge protection

Up to 4kV

– voltage \(1.2 = \alpha \) rise time / 50 = \( \alpha \) delay time to half value

– current \(8 = \alpha \) rise time / 20 = \( \alpha \) delay time to half value

Output signal

Two-wire 4 to 20mA, user-selectable for linear or 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.
2600T Pressure Transmitters
Model 264GS,

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 percentage indication 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/exolution period
2 enhanced Analog Input blocks/25ms max (each)
1 enhanced PID block/40ms max.
1 standard Artifactic 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), zero based range for transmitter with isolating diaphragms ceramic or Hastelloy and silicone oil fill and HART digital trim values equal to 4–20mA span end points, in linear mode.

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

Some performance data 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):
- 150 ms for all sensors

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 oustcale range

Model 264GS
- ±0.075% for TD from 1:1 to 15:1 (10:1 for sensor C)
- ±0.005% x URL for TD from 15:1 to 60:1
- ±0.0075% x Span for TD from 10:1 to 30:1 for sensor C

Model 264AS
- ±0.075% for TD from 1:1 to 10:1
- ±0.0075% x URL 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)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sensor Code</th>
<th>for TD up to</th>
</tr>
</thead>
<tbody>
<tr>
<td>264GS</td>
<td>F to V</td>
<td>15:1</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>10:1</td>
</tr>
<tr>
<td>264AS</td>
<td>F to U</td>
<td>10:1</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>10:1</td>
</tr>
</tbody>
</table>

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).

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

No 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 (*)
  - Ceramic (Al203) gold-plated; Hastelloy C276™;
  - Hastelloy C276™ gold-plated.
- Process connection (*)
  - AISI 316 L ss; Hastelloy C276™.
- Gasket (only for sensor codes C, F) (*)
  - Viton™, Perfluoroelastomer, Perbunan (NBR).
- Sensor fill fluid
  - Silicone oil; inert fill (Carbon fluoride); white oil (FDA).
- Mounting bracket (**)
  - Zinc plated carbon steel with chrome passivation; AISI 316 L ss.
- 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.
- 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; or at operating temperature.

Optional extras

- Mounting brackets
  - For 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 (not for sensor V)
- Test Certificates (test, design, calibration, material traceability)
- Tag and manual language
- Communication connectors
  - Two 1/2– 14 NPT or M20x1.5 or PG 13.5 or 1/2GK 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 2.5mm² (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)

- 1.2kg approx (3lb); 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).

™ Hastelloy is a Cabot Corporation trademark

(*) 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 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 °X. 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

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 time: 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
MOUNTING DIMENSIONS (not for construction unless certified) - dimensions in mm (in Transmitter with barrel housing on bracket for 60mm (2in) pipe mounting

\[1/2\] – 14 NPT female connection

DIN–EN837–1 G \(1/2\) B connection
1/2 – 14 NPT male connection
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

<table>
<thead>
<tr>
<th>PIN (male) IDENTIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOUNDATION PROFINET/PROFIBUS</td>
</tr>
<tr>
<td>FieldbusPA</td>
</tr>
<tr>
<td>FF-PA+</td>
</tr>
<tr>
<td>FF+GROUND</td>
</tr>
<tr>
<td>SHIELDPA-</td>
</tr>
<tr>
<td>GROUNDSHIELD</td>
</tr>
</tbody>
</table>

CONNECTOR IS SUPPLIED LOOSE WITHOUT MATING FEMALE PLUG
### BASIC ORDERING INFORMATION

**model 264GS Gauge Pressure Transmitter**

Select one character or set of characters from each category and specify complete catalog number. Refer to additional ordering information code and specify one or more codes for each transmitter if additional options are required.

#### BASE MODEL – 1st to 5th characters

<table>
<thead>
<tr>
<th>Gauge Pressure Transmitter – BASE ACCURACY 0.075%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

#### SENSOR - Span limits – 6th character

<table>
<thead>
<tr>
<th>Span limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2 and 6kPa and 60mbar and 8 and 24inH2O</td>
</tr>
<tr>
<td>0.4 and 40kPa and 400mbar and 6 and 160inH2O</td>
</tr>
<tr>
<td>2.5 and 250kPa and 2500mbar and 10 and 1000inH2O</td>
</tr>
<tr>
<td>30 and 3000kPa and 300bar and 43 and 435psi</td>
</tr>
<tr>
<td>100 and 10000kPa and 100bar and 145 and 1450psi</td>
</tr>
<tr>
<td>600 and 60000kPa and 600bar and 8700 and 8700psi</td>
</tr>
</tbody>
</table>

#### Diaphragm material / Fill fluid (wetted parts) – 7th character

<table>
<thead>
<tr>
<th>Material/Fill Fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hastelloy C276™ Silicone oil</td>
</tr>
<tr>
<td>Hastelloy C276™ gold-plated Silicone oil</td>
</tr>
<tr>
<td>Ceramic No filling</td>
</tr>
<tr>
<td>white oil (FDA)</td>
</tr>
</tbody>
</table>

#### Process connection material (wetted parts) – 8th character

<table>
<thead>
<tr>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>AISI 316 L ss</td>
</tr>
<tr>
<td>Hastelloy C276™</td>
</tr>
</tbody>
</table>

#### Gasket – 9th character

<table>
<thead>
<tr>
<th>Gasket Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 6 NPT female</td>
</tr>
<tr>
<td>2 – 14 NPT male</td>
</tr>
<tr>
<td>4 – 20 x 1.5 (CM20)</td>
</tr>
</tbody>
</table>

#### Housing material and electrical connection – 10th character

<table>
<thead>
<tr>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium alloy (Barrel version)</td>
</tr>
<tr>
<td>Aluminium alloy (Barrel version)</td>
</tr>
</tbody>
</table>

#### Output/Additional options – 11th character

<table>
<thead>
<tr>
<th>Option Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional options</td>
</tr>
<tr>
<td>Options requested to be ordered by &quot;Additional ordering code&quot;</td>
</tr>
</tbody>
</table>

### Additional Reference Codes

- **(Note 1)**: Indicates additional or special options.
- **(Note 2)**: Describes specific configurations or specifications.
- **(Note 3)**: Provides further details or exceptions.
- **(Note 4)**: Highlights general purpose options.
- **(Note 5)**: Details general order options.
- **(Note 6)**: Offers specific operation configurations.
## ADDITIONAL ORDERING INFORMATION for model 264GS

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

<table>
<thead>
<tr>
<th>XX</th>
<th>X</th>
<th>XX</th>
<th>X</th>
<th>XX</th>
<th>X</th>
<th>XX</th>
<th>X</th>
<th>XX</th>
<th>XX</th>
</tr>
</thead>
</table>

### Electrical certification
- ATEX Group II Category 1 GD – Intrinsic Safety EEx ia [E1]
- ATEX Group II Category 1/2 GD – Flameproof EEx d (Note 2) [E2]
- ATEX Group II Category 3 GD – Type of protection "N" EEx nL design compliance (Note 7) [E3]
- Canadian Standard Association (CSA) (only with \( \frac{1}{4} - 14NPT, M20 \) and Pg 13.5 electrical connection) - (Note 8) [E4]
- Standards Australia SAA (Not Ex d; Not Ex ia and Ex n for PROFIBUS PA and FOUNDATION Fieldbus) (Note 7) [E5]
- Factory Mutual (FM) approval (only with \( \frac{1}{4} - 14NPT, M20 \) and Pg 13.5 electrical connection) - (Note 8) [E6]
- Combined ATEX - Intrinsically Safe and Flameproof (Note 2) [E7]
- Combined ATEX, FM and CSA (only with \( \frac{1}{4} - 14NPT, M20 \) and Pg 13.5 electrical connection) (Notes 7,8) [EN]
- NEPSI (China) - Intrinsically Safe Ex ia [EY]
- NEPSI (China) - Flameproof Ex d (Note 2) [E2]
- GOST (Russia) EEx ia [E1]
- GOST (Russia) EEx d (Note 2) [W2]
- GOST (Kazakhstan) EEx ia [W3]
- GOST (Kazakhstan) EEx d (Note 2) [W4]
- Intrmetro (Brazil) EEx ia [W5]
- Intrmetro (Brazil) EEx d (Note 2) [W6]
- Intrmetro (Brazil) EEx nL [W7]
- Metrologic (Russia) [WC]
- Metrologic (Kazakhstan) [WD]

### Output meter
- ProMeter, Standard calibration
- ProMeter, Special calibration
- Analog output indicator linear 0–100% scale
- Analog output indicator, special graduation (to be specified for linear scale)
- Programmable signal meter and HART configurator (CoMeter)
- Programmable signal meter and HART configurator (CoMeter – customer configuration)

### Integral LCD
- Digital LCD integral display [L1]

### Mounting bracket (shape and material)
- For pipe mounting
  - (Not suitable for AISI housing) [B1]
  - [B2]
- For pipe mounting
  - [AISI 316 L ss]

### Surge
- Surge/Transient Protector (Internal for HART / 4-20mA)
- Surge/Transient Protector (External supplied loose for PROFIBUS PA and FOUNDATION Fieldbus only suitable with \( \frac{1}{4} - 14NPT \) 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 [L2]

### Configuration
- Standard – Pressure = inH2O/psi at 20°C; Temperature = deg. F [N2]
- Standard – Pressure = inH2O/psi at 4°C; Temperature = deg. F [N3]
- Standard – Pressure = inH2O/psi at 20°C; Temperature = deg. C [N4]
- Standard – Pressure = inH2O/psi at 4°C; Temperature = deg. C [N5]
- Custom [N6]

### Preparation procedure
- Oxygen service cleaning (only available with inert fill and Viton gasket) – \( P_{\text{max}} = 21MPa/210bar/3045psi; T_{\text{max}} = 60°C/140°F \) [P1]

### 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 6,9) [U1]
- Fieldbus M12x1 (Recommended for PROFIBUS PA) - (supplied loose without mating female plug) (Notes 6,9) [U2]
- HARTING Han – straight entry (Notes 5,9) [U3]
- HARTING Han – angle entry (Notes 5,9) [U4]

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For Location: 2600T Pressure Transmitters
Model 264GS
2600T Pressure Transmitters
Model 264GS,

Note 1: Suitable for oxygen service
Note 2: Not available with Sensor code C, F
Note 3: Not available with Sensor code L, U, R, V
Note 4: Select type in additional ordering code
Note 5: Not available with Electronic Housing code Z, R, G
Note 6: Not available with Electronic Housing code P, E
Note 7: Not available with PROFIBUS PA and FF output code 2 or 3
Note 8: Not Ex d for sensor code C, F
Note 9: Not available with Electronic housing code U, S, T, V, H, M, L, N, D, C, A, B

™ Hastelloy is a Cabot Corporation trademark
™ Viton is a Dupont de Nemour trademark

Standard delivery items (can be differently specified by additional ordering code)
- General purpose (no 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.