

## Model 265DC Differential

### Series 2600T Pressure Transmitters

Engineered solutions for all applications



**For differential pressure, with direct mount flange-type seal**

**Base accuracy**

–  $\pm 0,04$  %

**Span limits**

– 1 ... 10000 kPa; 4 in H<sub>2</sub>O up to 1450 psi

**Proven sensor technology together with state-of-the-art digital technology**

**Comprehensive selection of sensors**

– Optimized performance and stability

**Flexible configuration options**

– On device using control buttons in combination with LCD display, handheld terminal, or PC user interface

**Various communication protocols available**

- Enables integration into HART®, PROFIBUS PA, and FOUNDATION fieldbus platforms
- Upgrade options thanks to interchangeable electronics with automatic configuration

**Large choice of versions and options**

- Enables complete flexibility and, therefore, maximum cost effectiveness

**Adherence to Pressure Equipment Directive (PED/SEP)**

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## 1 General description

Model 265DC, which is described in this data sheet, features a direct mount seal on the plus side. The transmitter is available in the following versions.

### Version 1

Terminal end	Version
Plus side	Direct mount seal.
Minus side	Process connection with 1/4-18 NPT-f thread or via an adapter for measuring differential pressure with 1/2-14 NPT-f thread.

### Version 2

Terminal end	Version
Plus side	Direct mount seal.
Minus side	Remote seal with capillary tube. In this case, both seals should be identical in terms of type and size.

### **i** Important

All data and detailed information can be found on remote seal data sheet SS/S265.

The following table indicates the standard remote seal types which may be combined with the 265DC transmitter.

Remote seal type	Size
Flanged flush diaphragm	2 in / DN 50
	3 in / DN 80
Flanged extended diaphragm	2 in / DN 50
	3 in / DN 80

## 2 Functional specifications

### Measuring range and span limits

Code <sup>1)</sup>	URL <sup>2)</sup>	LRL <sup>3)</sup>	Minimum span			
			Direct mount seal only DN 50	Direct mount seal only DN 80	Direct mount seal and one remote seal with capillary tube Maximum length: 16 m (630 inches) DN 50	Direct mount seal and one remote seal with capillary tube Maximum length: 16 m (630 inches) DN 80
<b>C</b>	6 kPa 60 mbar 24 in H <sub>2</sub> O	-6 kPa -60 mbar -24 in H <sub>2</sub> O	-	1 kPa 10 mbar 4 in H <sub>2</sub> O	3 kPa 30 mbar 12 in H <sub>2</sub> O	1 kPa 10 mbar 4 in H <sub>2</sub> O
<b>F</b>	40 kPa 400 mbar 160 in H <sub>2</sub> O	-40 kPa -400 mbar -160 in H <sub>2</sub> O	10 kPa 100 mbar 40 in H <sub>2</sub> O	1.3 kPa 13.3 mbar 5.3 in H <sub>2</sub> O	3 kPa 30 mbar 12 in H <sub>2</sub> O	1.3 kPa 13.3 mbar 5.3 in H <sub>2</sub> O
<b>L</b>	250 kPa 2500 mbar 1000 in H <sub>2</sub> O	-250 kPa -2500 mbar -1000 in H <sub>2</sub> O	10 kPa 100 mbar 40 in H <sub>2</sub> O	8.3 kPa 83 mbar 34 in H <sub>2</sub> O	8.3 kPa 83 mbar 34 in H <sub>2</sub> O	8.3 kPa 83 mbar 34 in H <sub>2</sub> O
<b>N</b>	2000 kPa 20 bar 290 psi	-2000 kPa -20 bar -290 psi	67 kPa 0,67 bar 9.7 psi	67 kPa 0.67 bar 9.7 psi	67 kPa 0.67 bar 9.7 psi	67 kPa 0.67 bar 9.7 psi
<b>R</b>	10000 kPa 100 bar 1450 psi	-10000 kPa -100 bar -1450 psi	333 kPa 3.3 bar 49 psi	333 kPa 3.3 bar 49 psi	333 kPa 3.3 bar 49 psi	333 kPa 3.3 bar 49 psi

- 1) Sensor code  
2) Upper range limit  
3) Lower range limit

### Span limits

Maximum span = URL = Upper range limit

With differential pressure models, the span can be adjusted within the span limits right up to  $\pm$  upper range limit.

### Examples

Type of characteristic	Span limits
Linear characteristic	-400 ... 400 mbar
Square-root characteristic	0 ... 400 mbar

To optimize the performance characteristics, it is recommended that you select the transmitter sensor with the lowest turndown (TD) ratio.

Recommendation for square root function:

At least 10 % of upper range limit (URL)

### Zero suppression and elevation

The zero position and span can be set to any value within the range limits listed in the table if:

- Set span  $\geq$  minimum span

### Damping

Adjustable time constant: 0 ... 60 s

This is in addition to the sensor response time.

### Second sensor for absolute pressure measurement

Measuring range: 41 MPa, 410 bar, 5,945 psi

### Warm-up time

According to the technical data, with minimum damping the transmitter will be ready for operation in a maximum of 2.5 s.

### Insulation resistance

> 100 M $\Omega$  at 500 V DC (between terminals and ground)

### 3 Operating limits

#### 3.1 Temperature limits in °C (°F)

	Ambient temperature range
Operating temperature	-40 ... 85 °C (-40 ... 185 °F)
LCD display	-20 ... 70 °C (-4 ... 158 °F)
Viton seals	-20 ... 85 °C (-4 ... 185 °F)
PTFE seals	-20 ... 85 °C (-4 ... 185 °F)

	Storage temperature range
Storage temperature	-50 ... 85 °C (-58 ... 185 °F)
LCD display	-40 ... 85 °C (-40 ... 185 °F)

	Humidity during storage
Relative humidity	Up to 75 %



#### Important

For applications in potentially explosive atmospheres, the temperature range specified on the relevant certificate/approval must be observed.

#### Process temperature range

ID letter(s) and process temperature usage restrictions for the various filling liquids in the remote seal:

Filling liquids	ID	Process temperature		
		Plus side, maximum ambient temperature		Minus side (without remote seal)
		40 °C (104 °F)	60 °C (140 °F)	
Silicone oil	IB	-30 ... 180 °C (-22 ... 356 °F)	-30 ... 140 °C (-22 ... 284 °F)	-40 ... 120 °C (-40 ... 248 °F) <sup>1)</sup> For operating pressures ≥ 10 kPa abs., 100 mbar abs., 1.45 psia
Carbon fluoride	L	-30 ... 150 °C (-22 ... 302 °F)	-30 ... 140 °C (-22 ... 284 °F)	-40 ... 120 °C (-40 ... 248 °F) <sup>2)</sup> For operating pressures ≥ atmospheric pressure
High temperature oil	SH	-10 ... 180 °C (14 ... 356 °F)	-10 ... 140 °C (14 ... 284 °F)	-
White oil	WB	-6 ... 180 °C (21 ... 356 °F)	-6 ... 140 °C (21 ... 284 °F)	-
Vacuum-tight design	IC-V	-30 ... 180 °C (-22 ... 356 °F)	-30 ... 140 °C (-22 ... 284 °F)	-
Viton seals	-	-	-	-20 ... 120 °C (-4 ... 248 °F)
PTFE seals	-	-	-	-20 ... 85 °C (-4 ... 185 °F)

1) ≤ 85 °C (185 °F) for operating pressures below 10 kPa, 100 mbar abs., 1.45 psia up to 3.5 kPa abs., 35 mbar abs., 0.5 psia  
2) ≤ 85 °C (185 °F) for operating pressures below atmospheric pressure up to 40 kPa abs., 400 mbar abs., 5.8 psia

#### 3.2 Fill liquid properties

Filling liquids (applications)	ID	Density at 20 °C (68 °F) in kg/m <sup>3</sup>	Thermal expansion (x10 <sup>-4</sup> /K)	Pressure in kPa abs.					
				20 °C (68 °F)	100 °C (212 °F)	150 °C (302 °F)	200 °C (392 °F)	250 °C (482 °F)	375 °C (707 °F)
Silicone oil	IB	924	9.8	> 50	> 50	> 50	> 75	> 100	-
Carbon fluoride	L	1860	11	> 100	> 100	> 100	-	-	-
High temperature oil	SH	1070	7.7	> 50	> 50	> 50	> 75	> 100	> 100
White oil	WB	849	7.9	> 50	> 100	> 100	> 100	> 100	-
Silicone oil for vacuum-tight design	IC-V	1055	8.1	> 0.5	> 2.5	> 3.8	> 5.0	-	-



#### Important

Remote seals with a diaphragm made of tantalum should not be used with temperatures above 220 °C (428 °F).

### 3.3 Pressure limits

#### Maximum working pressure

in compliance with **DIN** (standard temperature 50 °C (122 °F))

	Maximum working pressure
DIN PN 16/PN 40	4 MPa, 40 bar, 580 psi
DIN PN 63	6.3 MPa, 63 bar, 913 psi
DIN PN 100	10 MPa, 100 bar, 1,450 psi

**i Important**  
 As temperature increases, the permissible load capacity decreases in accordance with EN 1092-1.

in compliance with **ASME** (standard temperature 38 °C (100 °F))

	Maximum working pressure
ASME CL 150	1.59 MPa, 15.9 bar, 230 psi
ASME CL 300	4.14 MPa, 41.4 bar, 600 psi
ASME CL 600	8.27 MPa, 82.7 bar, 1200 psi

**i Important**  
 As temperature increases, the permissible load capacity decreases in accordance with ASME B16.5.

#### Static pressure

Minimum pressure:

Please refer to the table titled "Fill liquid properties"

Overpressure limits:

Please refer to the table titled "Maximum working pressure"

#### Pressure test

For pressure testing purposes, the transmitter can be subjected to a pressure test applied simultaneously from both sides of up to 15 MPa, 150 bar, 2,175 psi or up to 1.5 times the flange pressure level of the remote seal, depending upon which value is lower.

## 4 Environmental limits

#### Electromagnetic compatibility (EMC)

Conforms to the requirements and tests for EMC Directive 89/336/EC, as well as to EN 61000-6-3 concerning emitted interference and EN 61000-6-2 concerning interference immunity.

Meets NAMUR recommendations.

#### Low Voltage Directive

Complies with 73/23/EC.

#### Pressure Equipment Directive (PED)

Complies with Directive 97/23/EC concerning sound engineering practice (SEP).

#### Humidity

Relative humidity: Up to 100 %

Condensation, icing: Permissible

#### Vibration resistance

Acceleration of up to 2 g at frequencies of up to 1,000 Hz (according to IEC 60068-2-6).

#### Shock resistance (according to IEC 60068-2-27)

Acceleration: 50 g

Duration: 11 ms

#### Protection type (humid and dusty atmospheres)

The transmitter is dust and sand-tight, and is protected against immersion effects as defined by the following standards:

- IEC EN 60529 (1989) with IP 67 (with IP 68 on request)
- NEMA 4X
- JIS C0920

Protection type with plug connection: IP 65

## 5 Potentially explosive atmospheres

### Transmitter with "Intrinsically safe EEx ia" type of explosion protection in accordance with Directive 94/9/EC (ATEX)

Transmitter with 4 ... 20 mA output signal and HART communication:

Designation: II 1/2 GD T 50 °C EEx ia IIC T6  
 II 1/2 GD T 95 °C EEx ia IIC T4

Power supply and signal circuit with "Intrinsically safe, EEx ib IIB/IIC" or "Intrinsically safe, EEx ia IIB/IIC" type of explosion protection, for connection to supply units with the following maximum values:

II 1/2 GD T 50 °C EEx ia or ib IIC T6  
 II 1/2 GD T 95 °C EEx ia or ib IIC T4

Temperature class T4:

$U_i = 30 \text{ V}$

$I_i = 200 \text{ mA}$

$P_i = 0.8 \text{ W}$  for T4 where  $T_a = -40 \dots 85 \text{ °C}$

$P_i = 1.0 \text{ W}$  for T4 where  $T_a = -40 \dots 70 \text{ °C}$

For temperature class T6:

$P_i = 0.7 \text{ W}$  for T6 where  $T_a = -40 \dots 40 \text{ °C}$

Effective internal capacitance:  $C_i = 10 \text{ nF}$

Effective internal inductance:  $L_i \approx 0$

Fieldbus transmitter (PROFIBUS PA / FOUNDATION Fieldbus):

Designation: FISCO field device  
 II 1/2G Ex ia IIC T6 or T4  
 II 1/2D Ex iaD 20 T50 °C or T95 °C

Power supply and signal circuit with "Intrinsically safe" type of explosion protection, only for connection to supply units certified according to the FISCO concept and with the following maximum values:

$U_i = 17.5 \text{ V}$

$I_i = 500 \text{ mA}$

$P_i = 8.75 \text{ W}$

or connection to supply units or barriers with linear characteristics.

Maximum values:

$U_i = 24 \text{ V}$

$I_i = 250 \text{ mA}$

$P_i = 1.2 \text{ W}$

Effective internal inductance:  $L_i = 10 \text{ } \mu\text{H}$ ,

Effective internal capacitance:  $C_i = 5 \text{ nF}$

Permissible ambient temperature range depending on temperature class:

Temperature class	Lower limit of ambient temperature	Upper limit of ambient temperature
T4	-40 °C (-40 °F)	85 °C (185 °F)
T5, T6	-40 °C (-40 °F)	40 °C (104 °F)

### Category 3 transmitter for use in "Zone 2" as defined by Directive 94/9/EC (ATEX)

Transmitter with 4 ... 20 mA output signal and HART communication:

Designation: II 3 GD T 50 °C EEx nL IIC T6  
 II 3 GD T 95 °C EEx nL IIC T4

Operating conditions:

Supply and signal circuit

(terminal signal ±):

$U \leq 45 \text{ V}$

$I \leq 22.5 \text{ mA}$

Ambient temperature range:

Temperature class T4:  $T_a = -40 \dots 85 \text{ °C}$

Temperature class T5 and T6:  $T_a = -40 \dots 40 \text{ °C}$

### Transmitter with "Flameproof EEx d" type of explosion protection in accordance with Directive 94/9/EC (ATEX)

Transmitter with 4 ... 20 mA output signal, HART communication, and fieldbus transmitter (PROFIBUS PA / FOUNDATION Fieldbus)

Designation: II 1/2 G EEx d IIC T6

Operating conditions:

Ambient temperature range:  $-40 \dots 75 \text{ °C}$

**Transmitter with "Intrinsically safe EEx ia" type of explosion protection in accordance with Directive 94/9/EC (ATEX), or**

**"Flameproof EEx d" type of explosion protection in accordance with Directive 94/9/EC (ATEX), or**

**"Limited energy EEx nL" type of explosion protection in accordance with Directive 94/9/EC (ATEX) (alternative certification)**

Transmitter with 4 ... 20 mA output signal and HART communication:

Identification: II 1/2 GD T50 °C EEx ia IIC T6  
II 1/2 GD T95 °C EEx ia IIC T4;  
(refer to "EEx ia" for additional data)

or

Identification: II 1/2 GD T85 °C EEx d IIC T6  
Ambient temperature range: -40 ... 75 °C

or

Identification: II 3 GD T50 °C EEx nL IIC T6  
II 3 GD T95 °C EEx nL IIC T4  
(refer to "EEx nL" for additional data)

**Factory Mutual (FM)**

Transmitter with 4 ... 20 mA output signal and HART communication:

**Intrinsically safe protection**

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

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

Permissible ambient temperature range depending on temperature class:

<b><math>U_{max} = 30 \text{ V}</math>, <math>C_i = 10.5 \text{ nF}</math>, <math>L_i = 10 \text{ }\mu\text{H}</math></b>			
<b>Ambient temperature</b>	<b>Temperature class</b>	<b><math>I_{max}</math></b>	<b><math>P_i</math></b>
-40 ... 85 °C (-40 ... 185 °F)	T4	200 mA	0.8 W
-40 ... 70 °C (-40 ... 158 °F)			1 W
-40 ... 40 °C (-40 ... 104 °F)	T5	25 mA	0.75 W
	T6		0.5 W

Fieldbus transmitter (PROFIBUS PA / FOUNDATION Fieldbus):

**Intrinsically safe protection:**

Class I, II, and III; Division 1;  
Groups A, B, C, D, E, F, G;  
Class I; Zone 0; AEx ia Group IIC T6, T4;  
Non-incendive Class I, II, and III; Division 2;  
Groups A, B, C, D, F, G

Transmitter with 4 ... 20 mA output signal, HART communication, and fieldbus transmitter (PROFIBUS PA / FOUNDATION Fieldbus):

**Explosion-proof protection:**

Class I, Division 1, Groups A, B, C, D;  
Class II/III, Division 1, Groups E, F, G

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

**Canadian Standards Association (CSA)**

Transmitter with 4 ... 20 mA output signal, HART communication, and fieldbus transmitter (PROFIBUS PA / FOUNDATION Fieldbus)

**Explosion-proof protection:**

Class I, Division 1, Groups B, C, D;  
Class II, Division 1, Groups E, F, G

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

**Standards Association of Australia (SAA)**

**Transmitter with "Intrinsically safe EEx ia" and "Non-sparking EEx n" types of protection**

Transmitter with 4 ... 20 mA output signal and HART communication:

Identification:

Ex ia IIC T4 ( $P_i \leq 0.8 \text{ W}$ ,  $T_a = 85 \text{ }^\circ\text{C}$ )/T6 ( $P_i \leq 0.7 \text{ W}$ ,  $T_a = 40 \text{ }^\circ\text{C}$ )  
Ex n IIC T4 ( $T_a = 85 \text{ }^\circ\text{C}$ )/T6 ( $T_a = 40 \text{ }^\circ\text{C}$ )  
IP 66

Intrinsically safe installation input parameters:

$U_i = 30 \text{ V}$   
 $I_i = 200 \text{ mA}$   
 $P_i = 0.8 \text{ W}$  for T4 where  $T_a = +85 \text{ }^\circ\text{C}$  or  
 $P_i = 0.7 \text{ W}$  for T6 where  $T_a = +40 \text{ }^\circ\text{C}$

Effective internal capacitance:  $C_i = 52 \text{ nF}$

Effective internal inductance:  $L_i \approx 0 \text{ mH}$

EEx n installation input parameters:

$U_i = 30 \text{ V}$

**Transmitter with "Flameproof Ex d" type of explosion protection**

Transmitter with 4 ... 20 mA output signal, HART communication, and fieldbus transmitter (PROFIBUS PA / FOUNDATION Fieldbus, Modbus):

Identification:

Zone 1: Ex d IIC T6 (Tamb +75 °C) IP66 / IP67  
Zone A21: Ex tD A21 T85 (Tamb +75 °C) IP66 / IP67

**NEPSI (China)**

**Intrinsically safe protection**

Transmitter with 4 ... 20 mA output signal and HART communication:

Identification: Ex ia IIC T4/T6

Permissible ambient temperature range depending on temperature class:

Temperature class	Ambient temperature	Pi
T4	-40 ... 85 °C (-40 ... 185 °F)	0.8
T4	-40 ... 70 °C (-40 ... 158 °F)	1.0
T6	-40 ... 40 °C (-40 ... 104 °F)	0.7

Supply and signal circuit for connection to supply units with the following maximum values:

<b>U<sub>i max</sub> = 30 V, I<sub>i max</sub> = 200 mA</b>			
Temperature class	P <sub>i max</sub>	Max. internal parameters	
		C <sub>i</sub> (nF)	L <sub>i</sub> (µH)
T6	0.7	47	10
T4	0.8	47	10
T4	1.0	47	10

Fieldbus transmitter (PROFIBUS PA / FOUNDATION Fieldbus)

Identification: Ex ia IIB/IIC T4 ... T6

Permissible ambient temperature range depending on temperature class:

Temperature class	Ambient temperature
T4	-40 ... 85 °C (-40 ... 185 °F)
T5	-40 ... 50 °C (-40 ... 122 °F)
T6	-40 ... 40 °C (-40 ... 104 °F)

Supply and signal circuit for connection to supply units with the following maximum values:

Ex mark	Supply unit Characteristic	U <sub>i max</sub> (V)	I <sub>i max</sub> (mA)	P <sub>i max</sub> (W)
Ex ia IIC T4 ... T6	Rectangular or trapezoidal	17.5	360	2.52
Ex ia IIB T4 ... T6	Rectangular or trapezoidal	17.5	380	5.32
Ex ia IIC T4 ... T6	Linear	24	250	1.2
C <sub>i max</sub> (nF)		L <sub>i max</sub> (µH)		
0		10		

**Explosion-proof protection**

Transmitter with 4 ... 20 mA output signal, HART communication, and fieldbus transmitter (PROFIBUS PA / FOUNDATION Fieldbus)

Identification: Ex d IIC T6

**Operating conditions**

Ambient temperature range: -40 ... 75 °C (-40 ... 167 °F)

**Overfill protection**

Model 265DC as part of overfill protection on containers used for storing flammable or non-flammable liquids that are hazardous to water

Flammable liquids	Only in conjunction with EEx ia approval
Total pressure	Up to 4 MPa, 40 bar, 580 psi
Sensor code	C, F, or L
Filling liquid	Silicone oil
Process temperature limits on remote seal	-30 ... 180 °C (-22 ... 356 °F)
Approval	Z-65.11-271

## 6 Electrical data and options

### 6.1 HART digital communication and 4 ... 20 mA output current

#### Power supply

The transmitter operates at voltages between 10.5 and 45 V DC with no load, and is protected against reverse polarity connection (additional load enables operation above 45 V DC).

With a backlit LCD display, the minimum voltage is 14 V DC.

In the case of the EEx ia version and other intrinsically safe, approved versions, the supply voltage must not exceed 30 V DC.

#### Ripple

Maximum permissible supply voltage ripple during communication: According to HART FSK "Physical Layer" specification rev. 8.1.

#### Load limitations

Total loop resistance with 4 ... 20 mA and HART:

$$R(k\Omega) = \frac{\text{Voltage supply} - \text{Minimum operating voltage (VDC)}}{22.5 \text{ mA}}$$



#### Important

A minimum resistance of 250 Ω is required for HART communication.

#### LCD display (optional)

19-segment alphanumeric display (two lines, six characters) with additional bar chart display; option of backlighting for customized display of:

- Output current in percent
- Output current in mA
- Freely selectable process variable

Diagnostic messages, alarms, measuring range upper limit violations, and changes to the configuration are also displayed.

#### Output signal

4 ... 20 mA two-wire output; linear output signal or square root output signal.

Additionally:

- Characteristic with exponents 3/2 or 5/2
  - Horizontal cylindrical container
  - Spherical vessel
  - Freely programmable characteristic with 20 reference points
- HART® communication provides digital process variables (% , mA, or engineering units) superimposed on the 4 ... 20 mA signal (protocol in accordance with Bell 202 FSK standard).

#### Output current limits (according to NAMUR standard)

Overload condition:

- Lower limit: 3.8 mA (can be configured up to 3.5 mA)
- Upper limit: 20.5 mA (can be configured up to 22.5 mA)

#### Alarm current

Minimum alarm current:	Can be configured from 3.5 ... 4 mA; default setting: 3.6 mA
Max. alarm current:	Can be configured from 20 ... 22.5 mA; default setting: 21 mA
Default setting:	Maximum alarm current

#### SIL: Functional safety (optional)

According to IEC 61 508/61 511

Device with certificate of conformity for use in safety-related applications, up to and including SIL 2.

## 6.2 PROFIBUS PA output

### Device type

Pressure transmitter conforming to Profile 3.0, Class A and B;  
ID number 04C2 HEX

### Power supply

The transmitter is operated at 10.2 ... 32 V DC (no polarity).  
The supply voltage must not exceed 17.5 V DC when used in EEx ia zones.  
Intrinsically safe installation in accordance with FISCO model.

### Current consumption

Operating (quiescent): 11.7 mA  
Fault current limiting: Maximum 17.3 mA

### Output signal

Physical layer in accordance with IEC 1158-2/EN 61158-2;  
transmission using Manchester II modulation at 31.25 kbit/sec.

### Output interface

PROFIBUS PA communication according to PROFIBUS DP 50170  
Part 2 / DIN 19245 Parts 1-3

### Output cycle time

40 ms

### Function blocks

2 standard analog input function blocks  
1 transducer block  
1 physical block

### LCD display (optional)

19-segment alphanumeric display (two lines, six characters) with  
additional bar chart display; option of backlighting.  
Customized display:  
Output value in percent or OUT (analog input)  
Diagnostic messages, alarms, measuring range upper limit violations,  
and changes to the configuration are also displayed.

### Transmitter interference mode

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

## 6.3 FOUNDATION Fieldbus output

### Power supply

The transmitter is operated at 10.2 ... 32 V DC (no polarity).  
The supply voltage must not exceed 17.5 V DC when used in EEx ia zones.  
Intrinsically safe installation in accordance with FISCO model.

### Current consumption

Operating (quiescent): 11.7 mA  
Fault current limiting: Maximum 17.3 mA

### Output signal

Physical layer in accordance with IEC 1158-2/EN 61158-2;  
transmission using Manchester II modulation at 31.25 kbit/sec.

### Function blocks/execution time

2 standard analog input function blocks/maximum 25 ms  
1 standard PID function block

### Additional blocks

1 manufacturer-specific pressure with calibration transducer block  
1 enhanced resource block

### Number of link objects

10

### Number of VCRs

16

### Output interface

FOUNDATION fieldbus digital communication protocol in accordance  
with standard H1; complies with specification V. 1.5.  
FF registration no.: IT023600

### LCD display (optional)

19-segment alphanumeric display (two lines, six characters) with  
additional bar chart display; option of backlighting.  
Customized display:  
Output value in percent or OUT (analog input)  
Diagnostic messages, alarms, measuring range upper limit violations,  
and changes to the configuration are also displayed.

### Transmitter interference mode

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

## 7 Measuring accuracy

### Reference conditions according to IEC 60770

- Ambient temperature TU: constant in the range 18 ... 30 °C (64 ... 86 °F)
- Relative humidity: constant in the range 30 ... 80 %
- Atmospheric pressure PU: constant in the range 950 ... 1,060 mbar
- Position of measuring cell (isolating diaphragm areas): vertical ± 1 °
- Span based on zero position
- Isolating diaphragm material (plus side / remote seal): Stainless steel (316L/1.4404)
- Isolating diaphragm material (minus side / measuring mechanism): Hastelloy C276™
- Filling liquid: silicone oil
- Supply voltage: 24 V DC
- Load with HART: 250 Ω
- Transmitter not grounded
- Characteristic setting: linear, 4 ... 20 mA

Unless otherwise specified:

- The reference conditions apply for the following performance characteristics.
- Errors are given as a percentage of the span value.

The accuracy of the measurement in relation to the upper range limit (URL) is affected by the turndown (TD); i.e., the ratio of the upper range limit (URL) to the set span (URL/span).

### **i** Important

Select the transmitter sensor with the smallest possible turndown. This optimizes the accuracy of the measurement.

## 7.1 Measurement deviation

### Measuring error (for terminal based conformity)

Percentage of set span, consisting of non-linearity, hysteresis, and non-reproducibility.

In the case of fieldbus devices, SPAN refers to the analog input function block output scale range.

### Measuring error for differential pressure sensor

Turndown	Measuring error
1:1 to 10:1	± 0.04 %
> 10:1	± (0.04 + 0.005 x TD - 0.05) %

### Measuring error for absolute pressure sensor

	Measuring error
-	80 kPa, 800 mbar, 321 in H <sub>2</sub> O

## 7.2 Operating influences

Thermal change in ambient temperature on the zero signal and span (turndown up to 15:1), in relation to the set span

Differential pressure sensor:

Range	Maximum effect on zero signal and span
-10 ... 60 °C (14 ... 140 °F)	± (0.06 % x TD + 0.05 %)
-40 ... -10 °C (-40 ... 14 °F) and 60 ... 80 °C (140 ... 176 °F)	± (0.025 % / 10 K x TD + 0.03 % / 10 K)

Additional effect for each 20 K (36 °F) change in ambient temperature

	Connection	kPa	mbar	in H <sub>2</sub> O
Flanged flush diaphragm	2 in/DN 50	0.03	0.3	0.12
	3 in/DN 80	0.015	0.15	0.06
Flanged extended diaphragm	2 in/DN 50	0.06	0.6	0.24
	3 in/DN 80	0.015	0.15	0.06

Additional effect for each 20 K (36 °F) change in ambient temperature at the remote seal

	Connection	kPa	mbar	in H <sub>2</sub> O
Flanged flush diaphragm	2 in/DN 50	0.09	0.9	0.36
	3 in/DN 80	0.02	0.2	0.08
Flanged extended diaphragm	2 in/DN 50	0.24	2.4	0.96
	3 in/DN 80	0.02	0.2	0.08

### Static pressure

Measuring range	Sensors C, F, L, N	Sensor R
Zero signal	0.1 % URL	0.1 % URL
Span	0.05 % span	0.1 % span

### Power supply

Within the specified limits for the voltage/load, the total effect is less than 0.001 % of the upper range limit per volt.

### Load

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

### Electromagnetic fields

Total effect: Less than 0.05 % of span between 80 and 1000 MHz and at field strengths of up to 10 V/m, when tested with unshielded cables, and either with or without a display.

## 8 Technical specification

### Materials

Isolating diaphragm on the minus side (without remote seal) <sup>1)</sup>	Stainless steel (316L / 1.4435); tantalum; Hastelloy C276™; Monel 400™; Monel 400™, gold-plated A remote seal with a capillary tube can also be used on the minus side together with the required diaphragm (see plus side).
Process flange, adapter, plugs and drain/vent valves for the minus side (without remote seal) <sup>1)</sup>	Stainless steel (316L/1.4404); Hastelloy C276™; Monel 400™
Screws and nuts	Stainless steel (316L); bolts and nuts Class A4-70 according to ISO 3506, conforming to NACE MR0175 Class II
Seals <sup>1)</sup>	Viton™ (FPM) color: Green; Buna (NBR): Color: Black; EPDM color: Black; PTFE - Color: White
Process diaphragm on the plus side (direct mount seal) <sup>1)</sup>	<ul style="list-style-type: none"> <li>Stainless steel (316L/1.4404); tantalum; Hastelloy C276™;</li> <li>Stainless steel (316L/1.4404) or Hastelloy C276™ (each with FEP coating)</li> </ul>
Tube material	<ul style="list-style-type: none"> <li>Stainless steel (316L/1.4404), Hastelloy C276™;</li> <li>Stainless steel (316L/1.4404) or Hastelloy C276™ (each with FEP coating)</li> </ul>
Fill liquid on the plus side (direct mount seal)	Silicone oil; inert filling (carbon fluoride); white oil; silicone oil for vacuum-tight design; high temperature oil

Sensor filling liquid	Silicone oil; inert filling (carbon fluoride)
Sensor housing	Stainless steel (316L/1.4404)
Electronics housing and cover	Barrel design <ul style="list-style-type: none"> <li>Aluminum alloy with low copper content (&lt; 0.1 %), baked epoxy finish</li> <li>Stainless steel (316L/1.4404)</li> </ul> DIN design <ul style="list-style-type: none"> <li>Aluminum alloy with low copper content (&lt; 0.1 %), baked epoxy finish</li> </ul>
O-ring cover	Viton™
Local zero and span adjustments	Fiber glass-reinforced polycarbonate plastic (removable), no adjustment options for stainless steel housings
Name plate	Stainless steel (304/1.4301) or plastic data plate attached to the electronics housing

™ Hastelloy is a Cabot Corporation trademark.

™ Monel is an International Nickel Co. trademark.

™ Viton is a DuPont de Nemours trademark.

1) Transmitter wetted parts



### Important

Please refer to the ordering information to check the availability of different versions of the relevant model.

**Calibration**

Standard	0 to upper range limit (URL) for ambient temperature and atmospheric pressure
Optional	To specified span

**Optional accessories**

LCD display	Pluggable and rotatable design
Additional tag plate, e.g. for marking measuring points	Tag with wire (both stainless steel) attached to the transmitter, with a maximum of 30 characters including spaces
Lightning protection	Up to 4 kV <ul style="list-style-type: none"> <li>• Voltage pulses: 1.2 µs rise time; 50 µs delay time at half value</li> <li>• Current pulses: 8 µs rise time; 20 µs delay time at half value</li> </ul> Not available for devices with ATEX-EEx nL or PROFIBUS PA/FOUNDATION fieldbus featuring ATEX-EEx i or FM intrinsically safe designs.
Certificates	(Test, design, characteristics, material traceability)

**Process connections**

Flange on the minus side (without remote seal)	1/4-18 NPT on the process axis (7/16-20 UNF threading or DIN 19213 connection with M10 threading) or via a 1/2-14 NPT adapter on the process axis.
Remote seal side	Flange-type seal with flush diaphragm or tube <sup>1)</sup> 2 in or 3 in ASME RF, CL 150 ... CL 600, DN 50, DN 80 DIN, PN 16-100

1) Flange mounting screws and nuts, seals and mounting flanges are not supplied.

**Electrical connections**

	Two 1/2 – 14 NPT or M20 x 1.5 threaded bores for cable glands directly on housing, or plug connector.
Plug connector	<ul style="list-style-type: none"> <li>• HART: Straight or angled Harting Han 8D (8U) connector and one mating plug</li> <li>• FOUNDATION fieldbus / PROFIBUS PA: 7/8 in. plug/M12 x 1</li> </ul>

**Terminals**

HART	Four terminals for signal/external display, for wire cross sections of up to 2.5 mm <sup>2</sup> (14 AWG), and four connection points for testing and communication purposes.
FOUNDATION Fieldbus / PROFIBUS PA:	Two signal terminals (bus connection) for wire cross sections of up to 2.5 mm <sup>2</sup> (14 AWG)

**Grounding**

Terminals	Internal and external ground terminals for wire cross sections of up to 4 mm <sup>2</sup> (12 AWG) are provided.
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**Installation position**

Position	The transmitter can be installed in any position. The electronics housing may be rotated 360°. A stop is provided to prevent overtravel.
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**Weight (without options)**

Transmitter	Approx. 12 kg plus 0.15 kg/m capillary tube
Remote seal with flush diaphragm DN 50 / 80 ... PN 16 / 40	Approx. 3 / 3.5 kg
Remote seal with 50 mm extended diaphragm DN 50 / 80 ... PN 16 / 40	Approx. 3.5 / 6.5 kg

## 9 Configuration

### 9.1 Transmitter with HART communication and 4 ... 20 mA output current

#### Standard configuration

Transmitters are calibrated at the factory to the customer's specified measuring range. The calibrated range and measuring point number are provided on the name plate. If this data has not been specified, the transmitter will be delivered with the following configuration:

4 mA	Zero position
20 mA	Upper range limit (URL)
Output	Linear
Damping	0.125 sec.
Transmitter failure mode	21 mA
Optional LCD display	0 ... 100 % linear

Any or all of the configurable parameters listed above - including the upper and lower range limit values - can easily be changed using a portable HART handheld communicator or a PC running the configuration software SMART VISION with DTM for 2600T. Data regarding flange type and material, O-ring materials, and type of filling liquid is stored in the device.

### 9.2 Transmitter with PROFIBUS PA communication

Transmitters are calibrated at the factory to the customer's specified measuring range. The calibrated range and measuring point number are provided on the name plate. If this data has not been specified, the transmitter will be delivered with the following configuration:

Measuring profile	Pressure
Engineering unit	mbar/bar
Output scale 0 %	Lower range limit (LRL)
Output scale 100 %	Upper range limit (URL)
Output	Linear
Upper alarm limit	Upper range limit (URL)
Upper warning limit	Upper range limit (URL)
Lower warning limit	Lower range limit (LRL)
Lower alarm limit	Lower range limit (LRL)
Hysteresis limit value	0.5 % of output scale
PV filter	0.125 sec.
Address	126

Any or all of the configurable parameters listed above - including the upper and lower range limit values - can easily be changed using a PC running the configuration software SMART VISION with DTM for 2600T. Data regarding flange type and material, O-ring materials, and type of filling liquid is stored in the device.

### 9.3 Transmitter with FOUNDATION Fieldbus communication

Transmitters are calibrated at the factory to the customer's specified measuring range. The calibrated range and measuring point number are provided on the name plate. If this data has not been specified, the transmitter will be delivered with the following configuration:

Measuring profile	Pressure
Engineering unit	mbar/bar
Output scale 0 %	Lower range limit (LRL)
Output scale 100 %	Upper range limit (URL)
Output	Linear
Upper alarm limit	Upper range limit (URL)
Upper warning limit	Upper range limit (URL)
Lower warning limit	Lower range limit (LRL)
Lower alarm limit	Lower range limit (LRL)
Hysteresis limit value	0.5 % of output scale
PV filter	0.125 sec.
Address	Not required

Any or all of the configurable parameters listed above - including the upper and lower range limit values - can be changed using any FOUNDATION Fieldbus-compatible configuration tool. Data regarding flange type and material, O-ring materials, and type of filling liquid is stored in the device.

## 10 Mounting dimensions (not design data)

### 10.1 Transmitter with DIN housing

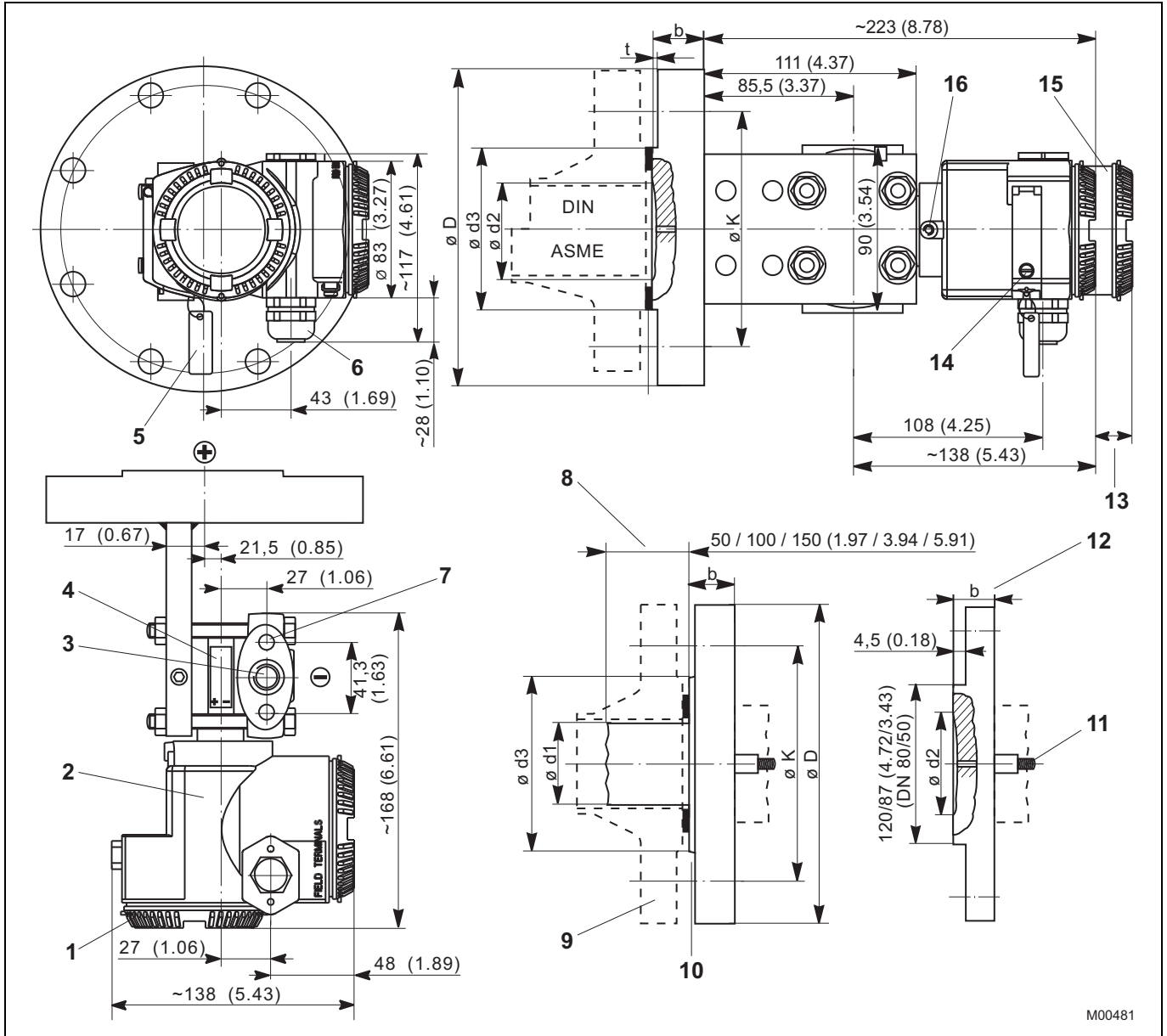


Fig. 1: Dimensions in mm (inch), deviations in the drawing are possible

- |  |  |
|--|--|
| 1 Housing cover  | 9 Connection flange according to DIN/ASME (not supplied)                     |
| 2 Name plate   | 10 Flat gasket and screws (not supplied)                                     |
| 3 Process connection (conforms to IEC 61518)                     | 11 Capillary tube  |
| 4 Sensor plate   | 12 Design with seal surface form in compliance with EN 1092-E (DIN 2513-V13) |
| 5 Additional plate, e.g. for marking measuring points (optional) | 13 + 23 mm (0.91 inches) with LCD display                                    |
| 6 Electrical connection  | 14 Captive screw for key unit cover  |
| 7 Threads for fixing screw (see "Process connections" data)      | 15 20 mm (0.79 inch) space for removing the cover required                   |
| 8 Design with extension / tube                                   | 16 Housing rotation stop screw   |

Size/maximum working pressure	Dimensions in mm (inches)									Screws required	
	D Ø	K Ø	Tube d1 Ø	Without tube	With tube	d3 Ø	t	b	Number	Ø bore hole	
				d2 Ø							
DN 50; PN 16/40	165 (6.5)	125 (4.92)	48.3 (1.9)	57 (2.24)	47 (1.85)	102 (4.02)	2 (0.08)	20 (0.79)	4	18 (0.71)	
DN 50; PN 63	180 (7.09)	135 (5.31)	48.3 (1.9)	57 (2.24)	47 (1.85)	102 (4.02)	2 (0.08)	26 (1.02)	4	22 (0.87)	
DN 50; PN 100	195 (7.68)	145 (5.71)	48.3 (1.9)	57 (2.24)	47 (1.85)	102 (4.02)	2 (0.08)	28 (1.10)	4	26 (1.02)	
DN 80; PN 16/40	200 (7.88)	160 (6.3)	73 (2.87)	75 (2.95)	71 (2.80)	138 (5.43)	2 (0.08)	24 (0.94)	8	18 (0.71)	
DN 80; PN 63	215 (8.47)	170 (6.7)	73 (2.87)	75 (2.95)	71 (2.80)	138 (5.43)	2 (0.08)	28 (1.10)	8	22 (0.87)	
DN 80; PN 100	230 (9.06)	180 (7.09)	73 (2.87)	75 (2.95)	71 (2.80)	138 (5.43)	2 (0.08)	32 (1.26)	8	26 (1.02)	
2 in ASME; CL 150	152.4 (6)	120.7 (4.75)	48.3 (1.9)	57 (2.24)	47 (1.85)	92 (3.62)	2 (0.08)	17.4 (0.69)	4	19.1 (0.75)	
2 in ASME; CL 300	165.1 (6.5)	127.0 (5)	48.3 (1.9)	57 (2.24)	47 (1.85)	92 (3.62)	2 (0.08)	20.6 (0.81)	8	19.1 (0.75)	
2 in ASME; CL 600	165.1 (6.5)	127.0 (5)	48.3 (1.9)	57 (2.24)	47 (1.85)	92 (3.62)	6.4 (0.25)	31.75 (1.25)	8	19.1 (0.75)	
3 in ASME; CL 150	190.5 (7.5)	152.4 (6)	73 (2.87)	75 (2.95)	71 (2.80)	127 (5)	2 (0.08)	22.2 (0.87)	4	19.1 (0.75)	
3 in ASME; CL 300	209.5 (8.25)	168.1 (6.62)	73 (2.87)	75 (2.95)	71 (2.80)	127 (5)	2 (0.08)	27.0 (1.06)	8	22.4 (0.88)	
3 in ASME; CL 600	209.5 (8.25)	168.1 (6.62)	73 (2.87)	75 (2.95)	71 (2.80)	127 (5)	6.4 (0.25)	38.05 (1.5)	8	22.4 (0.88)	

## 11 Electrical connections

### 11.1 Standard terminal strip

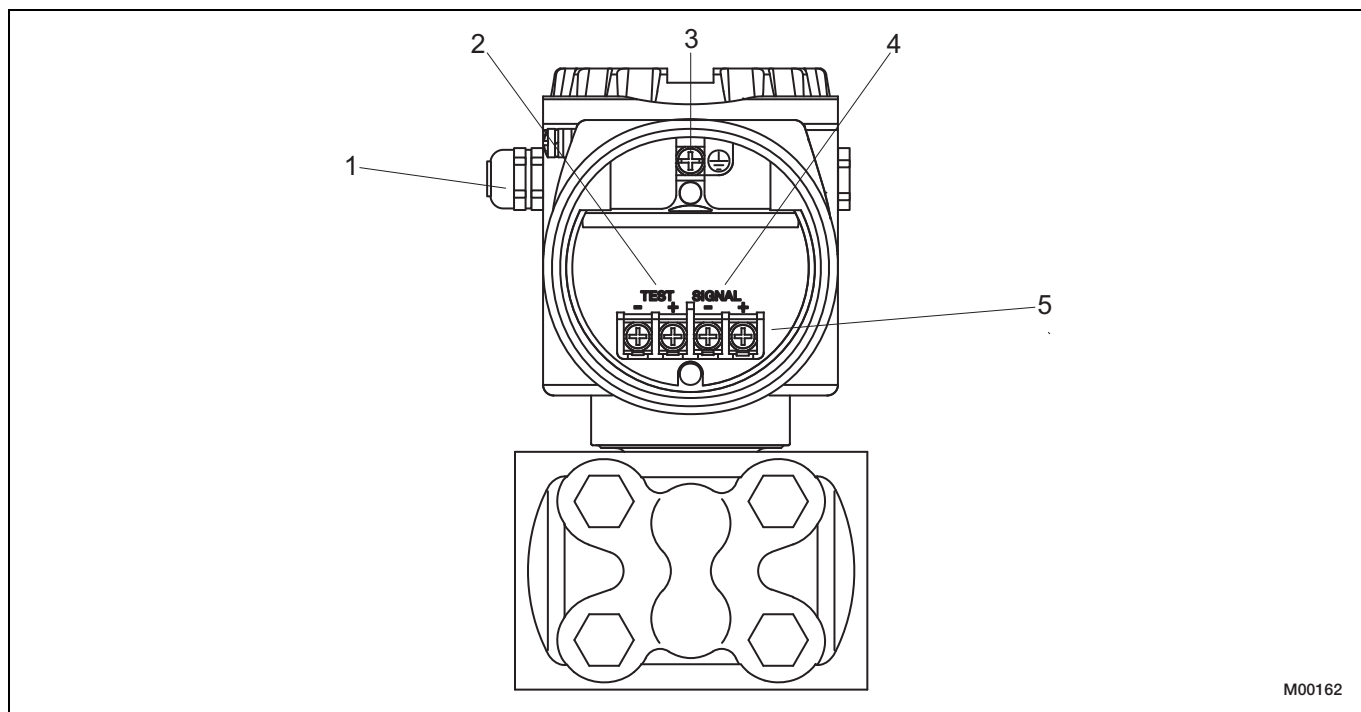


Fig. 2

- |   |   |
|---|---|
| 1 Cable entry   | 4 Output signal / power supply  |
| 2 Test terminals for 4 ... 20 mA (not with fieldbus transmitters) | 5 Screw terminals for leads with cross section of 0.5 ... 2.5 mm <sup>2</sup> (AWG 20 ... AWG 14) |
| 3 Ground/equipotential bonding terminal                           |   |

### 11.2 Fieldbus plug connector



Fig. 3

Pin (male) assignment		
Pin number	FOUNDATION fieldbus	PROFIBUS PA
1	FF-	PA+
2	FF+	Ground
3	Shield	PA-
4	Ground	Shield

Mating plug (socket) not supplied

### 11.3 Harting Han 8D (8U) plug connector

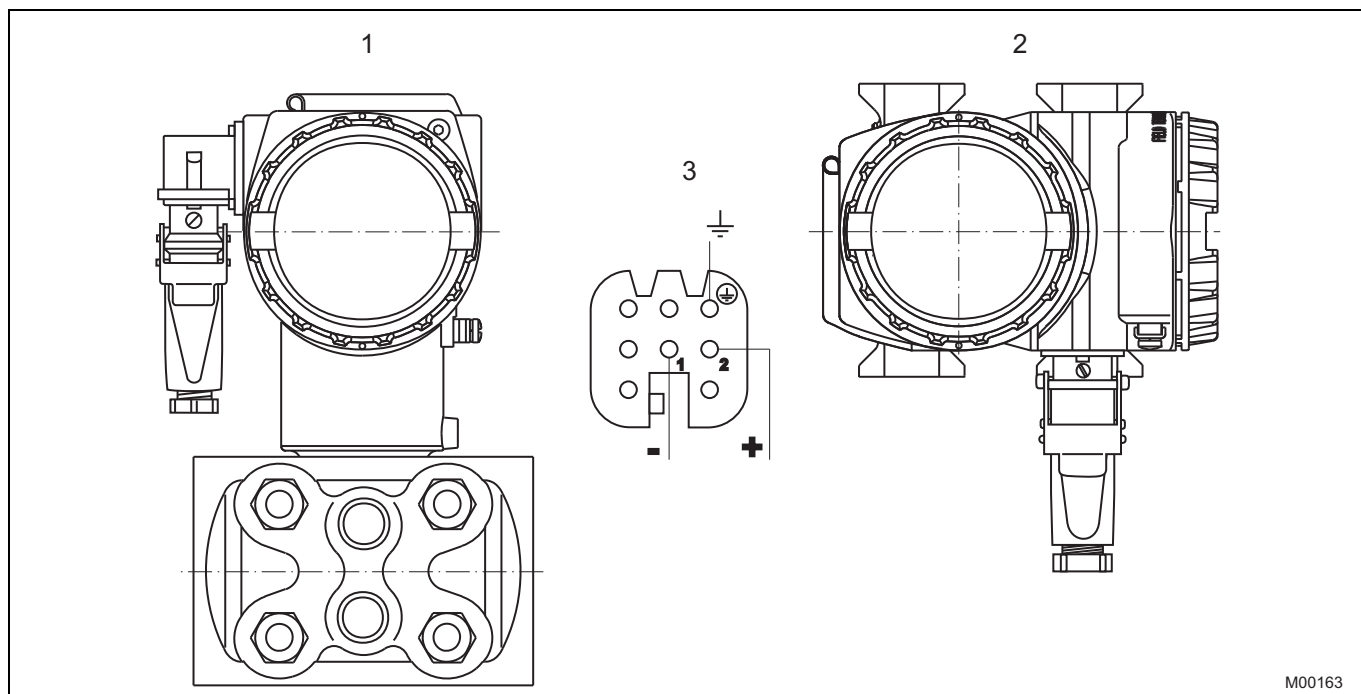


Fig. 4

- 1 Barrel housing
- 2 DIN housing

- 3 Harting Han 8D (8U) socket insert for mating plug supplied (view of sockets)

12 Ordering information

Variant digit No.	Main Catalog No.											Additional Catalog No.			
	1 - 5	6	7	8	9	10	11	12	13	14	15		16		
<b>265DC Differential / Gauge Pressure Transmitter, with directly mounted Flange-Type Seal DN 50 / DN 80 / 2 in. / 3 in., Base Accuracy 0.04%</b>	265DC	X	X	X	X	X	X	X	X	X	X	X	X	X	XX
<b>Sensor - Span Limits</b>															
6 kPa / 60 mbar / 24 in. H2O		C													
40 kPa / 400 mbar / 160 in. H2O		F													
250 kPa / 2500 mbar / 1000 in. H2O		L													
2000 kPa / 20 bar / 290 psi		N													
10000 kPa / 100 bar / 1450 psi		R													
<b>Size / Mounting Flange Rating</b>															
2 in. / ASME CL 150			A												
2 in. / ASME CL 300			D												
2 in. / ASME CL 600			G												
3 in. / ASME CL 150			B												
3 in. / ASME CL 300			E												
3 in. / ASME CL 600			H												
DN 50 // DIN PN 16 / PN 40			M												
DN 50 / DIN PN 63			P												
DN 50 / DIN PN 100			R												
DN 80 // DIN PN 16 / PN 40			L												
DN 80 / DIN PN 63			Q												
DN 80 / DIN PN 100			S												
<b>Mounting Flange Material / Seat Form (Seal)</b>															
AISI 316L SST (1.4404) / Form RF (Raised Face) - Smooth Finish						E									
AISI 316L SST (1.4404) / EN 1092 - B2 (DIN 2526 - Form E)						S									
AISI 316L SST (1.4404) / EN 1092 - E (DIN 2513 - V13)						M									
AISI 316L SST (1.4404) / EN 1092 - D (DIN 2512 - N)						N									
<b>Extension Length / Material</b>															
Flush						F									
50 mm (2 in.) / AISI 316L SST (1.4404)						1									
50 mm (2 in.) / Hastelloy C-276						2									
100 mm (4 in.) / AISI 316L SST (1.4404)						3									
100 mm (4 in.) / Hastelloy C-276						4									
150 mm (6 in.) / AISI 316L SST (1.4404)						5									
150 mm (6 in.) / Hastelloy C-276						6									
<b>Diaphragm Material (Seal)</b>															
AISI 316L SST (1.4404)						1)	S								
Hastelloy C-276						2)	H								
Tantalum						3)	T								
AISI 316L SST (1.4404) with Teflon anti-stick coating						3)	1								
Hastelloy C-276 with Teflon anti-stick coating						3)	2								
<b>Fill Fluid (Seal)</b>															
Silicone Oil							S								
Inert Fluid						4)	N								
Silicone Oil for High Temperatures							H								
White Oil (FDA approved)						5)	W								
Silicone Oil for Vacuum Applications							L								

- 1) Not available with Extension Length / Material Code 2, 4, 6
- 2) Not available with Extension Length / Material Code 1, 3, 5
- 3) Only with Extension Length / Material Code F
- 4) Suitable for Oxygen Applications
- 5) Suitable for Food Applications

Continued on next page

Variant digit No.	Main Catalog No.										Additional Catalog No.				
	1 - 5	6	7	8	9	10	11	12	13	14	15	16	XX		
<b>265DC Differential / Gauge Pressure Transmitter, with directly mounted Flange-Type Seal DN 50 / DN 80 / 2 in. / 3 in., Base Accuracy 0.04%</b>	<b>265DC</b>	X	X	X	X	X	X	X	X	X	X	X	XX		
<b>Diaphragm Material / Fill Fluid (Low Pressure Side)</b>															
AISI 316L SST (1.4435) / Silicone Oil, NACE								S							
Hastelloy C-276 / Silicone Oil, NACE								K							
Monel 400 / Silicone Oil, NACE								M							
Monel 400 Gold-plated / Silicone Oil, NACE								V							
Tantalum / Silicone Oil, NACE								T							
AISI 316L SST (1.4435) / Inert Fluid, NACE							4)	A							
Hastelloy C-276 / Inert Fluid, NACE							4)	F							
Monel 400 / Inert Fluid, NACE							4)	C							
Monel 400 Gold-plated / Inert Fluid, NACE							4)	Y							
Tantalum / Inert Fluid, NACE							4)	D							
With Remote Seal on Low Pressure Side / Silicone Oil								R							
With Remote Seal on Low Pressure Side / Inert Fluid								2							
<b>Process Connection Material / Process Connection (Low Pressure Side)</b>															
AISI 316L SST (1.4404 / 1.4408) / 1/4-18 NPT-f direct, NACE									A						
AISI 316L SST (1.4404 / 1.4408) / 1/4-18 NPT-f direct (DIN 19213), NACE									C						
AISI 316L SST (1.4404 / 1.4408) / 1/2-14 NPT-f through Adapter, NACE									B						
Hastelloy C-276 / 1/4-18 NPT-f direct, NACE									D						
Hastelloy C-276 / 1/2-14 NPT-f through Adapter, NACE									E						
Monel 400 / 1/4-18 NPT-f direct, NACE									G						
Monel 400 / 1/2-14 NPT-f through Adapter, NACE									H						
AISI 316L SST (1.4404 / 1.4408) / With Remote Seal on Low Pressure Side									R						
<b>Bolts / Gaskets</b>															
AISI 316L SST / Viton, NACE										3					
AISI 316L SST / PTFE (max. 25 MPa), NACE										4					
AISI 316L SST / EPDM, NACE										5					
AISI 316L SST / Perbunan										6					
AISI 316L SST / With Remote Seal on Low Pressure Side										R					
<b>Electronic Housing Material / Electrical Connection</b>															
Aluminium Alloy (Barrel Type) / 1/2-14 NPT											A				
Aluminium Alloy (Barrel Type) / M20 x 1.5										6)	B				
Aluminium Alloy (Barrel Type) / Harting Han Connector										7)	E				
Aluminium Alloy (Barrel Type) / Fieldbus Connector										8)	G				
AISI 316L SST (Barrel Type) / 1/2-14 NPT											S				
AISI 316L SST (Barrel Type) / M20 x 1.5										6)	T				
Aluminium Alloy (DIN Type) / M20 x 1.5										6)	J				
Aluminium Alloy (DIN Type) / Harting Han Connector										7)	K				
Aluminium Alloy (DIN Type) / Fieldbus Connector										8)	W				
<b>Output</b>															
HART Digital Communication and 4 ... 20 mA											9)	H			
HART Digital Communication and 4 ... 20 mA											10)	1			
PROFIBUS PA											9)	P			
PROFIBUS PA											10)	2			
FOUNDATION Fieldbus											9)	F			
FOUNDATION Fieldbus											10)	3			

- 4) Suitable for Oxygen Applications
- 6) Not available with FM, CSA
- 7) Not available with EExnL, EExd, FM, CSA (select connector with additional ordering code)
- 8) Not available with EEx nL, EEx d, FM- / CSA- / NEPSI-Explosion Proof (select connector with additional ordering code)
- 9) No Additional Options
- 10) Options requested (to be ordered by Additional Ordering Code)

Continued on next page

	Main Catalog No.											Additional Catalog No.	
	1-5	6	7	8	9	10	11	12	13	14	15	16	XX
	265DC	X	X	X	X	X	X	X	X	X	X	X	XX
<b>Vent Valve Material / Position</b>													
AISI 316L SST (1.4404) / On Process Axis, NACE													V1
AISI 316L SST (1.4404) / On Flange Side Top, NACE													V2
AISI 316L SST (1.4404) / On Flange Side Bottom, NACE													V3
Hastelloy C-276 / On Process Axis, NACE													V4
Hastelloy C-276 / On Flange Side Top, NACE													V5
Hastelloy C-276 / On Flange Side Bottom, NACE													V6
Monel 400 / On Process Axis, NACE													V7
Monel 400 / On Flange Side Top, NACE													V8
Monel 400 / On Flange Side Bottom, NACE													V9
<b>Explosion Protection Certification</b>													
ATEX Group II Category 1/2 GD - Intrinsic Safety EEx ia													E1
ATEX Group II Category 1/2 G - Flameproof EEx d													E2
ATEX Group II Category 3 GD - Type of Protection N EEx nL Energy Limited													E3
ATEX II 1/2 GD EEx ia + ATEX II 1/2 GD EEx d + ATEX EEx nL													EW
Factory Mutual (FM) - Intrinsically Safe													EA
Factory Mutual (FM) - Explosion Proof											11)		EB
Canadian Standard Association (CSA) - Explosion Proof													EE
Canadian Standard Association (CSA) - Explosion Proof (Canada & USA)													EM
NEPSI Ex ia II C T4/T6													EY
NEPSI Ex d II C T6													EZ
GOST (Russia) EEx ia													W1
GOST (Russia) EEx d													W2
GOST (Kazakhstan) EEx ia													W3
GOST (Kazakhstan) EEx d													W4
GOST (Ukraine) EEx ia													WA
GOST (Ukraine) EEx d													WB
SAA Ex d IIC T6 and Ex td A21 IP 66 T85 °C													X1
SAA Ex ia IIC T4/T6 and Ex n IIC T4/T6											12)		X2
<b>Integrated Digital Display (LCD)</b>													
With Integrated LCD Display													L1
With Integrated LCD Display (Backlit)													L2
<b>Surge Protector</b>													
Surge / Transient Protector											13)		S1
<b>Operating Manual</b>													
German													M1
Spanish													M3
French													M4
Swedish													M7
Russian													MB
<b>Label and Tag Language / Material</b>													
German / Stainless Steel											14)		T1
German and English / Plastic											15)		TA
<b>Additional Tag Plate</b>													
Stainless Steel													I1

- 11) Only with Electrical Connection 1/2-14 NPT and Stainless Steel Tag Plate
- 12) Only with Output HART / 4 ... 20 mA, not with SIL2
- 13) Not with ATEX-EEx nL (Code E3), not with PROFIBUS PA / FOUNDATION Fieldbus (Code 2, 3) and Intrinsic Safety EEx ia (Code E1, EY), not with FM Intrinsically Safe (Code EA) and SAA (Code X2)
- 14) Not available with DIN Electronic Housing Code J, K, W
- 15) Not available with Factory Mutual - Explosion Proof

Continued on next page

	Main Catalog No.											Additional Catalog No.		
	1 - 5	6	7	8	9	10	11	12	13	14	15	16	XX	
	265DC	X	X	X	X	X	X	X	X	X	X	X	XX	
<b>Housing Accessories</b>														
Four-wire Add-on Unit: Power Supply 24 V UC // Output Signal 0 ... 20 mA													16)	A4
Four-wire Add-on Unit: Power Supply 24 V UC // Output Signal 4 ... 20 mA													16)	A6
Four-wire Add-on Unit: Power Supply 230 V AC // Output Signal 0 ... 20 mA													16)	A5
Four-wire Add-on Unit: Power Supply 230 V AC // Output Signal 4 ... 20 mA													16)	A7
<b>Connector</b>														
Fieldbus 7/8 in. (without Mating Plug, recommended for FOUNDATION Fieldbus)														U1
Fieldbus M12 x 1 (without Mating Plug, recommended for PROFIBUS PA)														U2
Harting Han 8D (8U) - Straight Entry														U3
Harting Han 8D (8U) - Angle Entry														U4
Harting Han 7D														U5
<b>Output Characteristic</b>														
Square Root Characteristic														224
<b>Material: 2.1 Compliance</b>														
Certificate of Compliance with the Order EN 10204-2.1 of Process Wetted Parts														H1
<b>Material: 3.1 Inspection</b>														
Inspection Certificate EN 10204-3.1 of of the Pressure-Bearing and Process Wetted Parts with Analysis Certificates as Material Verification													17)	H3
<b>Material: 2.2 Test Report</b>														
Test Report EN 10204-2.2 of the Pressure Bearing and Process Wetted Parts														H4
<b>Certificates: 3.1 Calibration</b>														
Inspection Certificate EN 10204-3.1 of Calibration														C1
<b>Certificates: 3.1 Cleanliness Stage</b>														
Inspection Certificate EN 10204-3.1 of the Cleanliness Stage														C3
<b>Certificates: 3.1 Helium Leakage Test</b>														
Inspection Certificate EN 10204-3.1 of Helium Leakage Test of the Sensor Module														C4
<b>Certificates: 3.1 Pressure Test</b>														
Inspection Certificate EN 10204-3.1 of the Pressure Test														C5
<b>Certificates: 2.1 Instrument Design</b>														
Certificate of Compliance with the Order EN 10204-2.1 of Instrument Design														C6
<b>Certificates: Overfill Protection</b>														
Overfill Protection													18)	C9
<b>Certificates: SIL2</b>														
SIL2 - Declaration of Conformity														CL
<b>Certificates: GOST</b>														
GOST (Russia) without explosion protection														WC
GOST (Kazakhstan) without explosion protection														WD
GOST (Ukraine) without explosion protection														WE

- 16) only with DIN-Electronic Housing Code J
- 17) Minor Parts with Factory Certificate acc. to EN 10204
- 18) Not available with Sensor Code N, R

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### **13 Standard scope of delivery (changes may be made by using additional ordering code)**

- Adapters supplied loose
- A seal plug for the connection flange (horizontal process axis); no threaded plug for remote seal connection at both ends
- No drain/vent valves
- For general-purpose applications (no Ex applications)
- No display, no mounting bracket, no lightning protection
- English-language operating instructions and labels
- Name plate material:     Barrel electronics housing code A, B, E, G, S, T – Stainless steel  
                                  DIN electronics housing code J, K, W – Plastic
- Configuration with kPa and °C units
- No test, inspection, or material certificates

Unless otherwise specified prior to manufacture, the customer shall be responsible for the selection of suitable parts that make contact with the medium and appropriate filling liquids in order to ensure compatibility with the relevant process medium.

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## Note

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