

Model 261GC/GG/GJ/GM/GN Gauge Model 261AC/AG/AJ/AM/AN Absolute

Series 2600T Pressure Transmitters

Engineered solutions for all applications



With direct mount seal

Base accuracy

- $\pm 0.15\%$ ($\pm 0.1\%$ optional)

Span limits

- 0.3 ... 60000 kPa; 1.2 in H₂O up to 8700 psi
- 0.3 ... 3000 kPa abs; 2.25 mmHg up to 435 psia

Reliable sensing system coupled with the latest digital technologies

- provides large turndown ratio up to 20:1

Stainless steel housing

- optimized for harsh environment
- extremely robust

Flexible configuration facilities

- local zero and span button
- local configuration with keys on LCD indicator
- remote configuration with hand terminal or PC user interface

Broad selection of variants, options and fill fluids

- allows total flexibility for hygienic applications or applications at extended temperature range

Full compliance with PED Category III

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1 General description

Model 261G and 261A detailed in this data sheet provide process connections with frontbonded diaphragms in several shapes and sizes to meet the requirements of different industries, e.g. oil & gas, pulp & paper, chemical, food & beverage and pharmaceutical.

Special filling liquids are available for applications with high temperature. For food and sanitary applications FDA approved filling liquids can be selected, which are defined as food fills and are Generally Recognized As Safe (GRAS) by the US Food and Drug Administration (FDA).

2 Functional Specifications

Measuring range and span limits

Sensor code	Upper range limit (URL)	Lower range limit (LRL)	Minimum span (sensor limits)	Overload limits
C	6 kPa 60 mbar 24 in H ₂ O	-6 kPa -60 mbar -24 in H ₂ O	0,3 kPa 3 mbar 1,2 in H ₂ O	1 MPa 10 bar 145 psi
F	40 kPa 400 mbar 160 in H ₂ O	-40 kPa -400 mbar -160 in H ₂ O	2 kPa 20 mbar 8 in H ₂ O	1 MPa 10 bar 145 psi
L	250 kPa 2500 mbar 1000 in H ₂ O	0 abs	12,5 kPa 125 mbar 50 in H ₂ O	0,5 MPa 5 bar 72,5 psi
D	1000 kPa 10 bar 145 psi	0 abs	50 kPa 500 mbar 7,25 psi	2 MPa 20 bar 290 psi
U	3000 kPa 30 bar 435 psi	0 abs	150 kPa 1,5 bar 21,7 psi	6 MPa 60 bar 870 psi
1	4000 kPa 40 bar 580 psi	0 abs	200 kPa 2 bar 29 psi	8 MPa 80 bar 1160 psi
R	10000 kPa 100 bar 1450 psi	0 abs	500 kPa 5 bar 72,5 psi	20 MPa 200 bar 2900 psi
V	60000 kPa 600 bar 8700 psi	0 abs	3000 kPa 30 bar 435 psi	90 MPa 900 bar 13050 psi



Important

The lower range limit (LRL) for 261A is 0 absolute for all measuring ranges.

Span limits

Maximum span = URL = upper range limit

Minimum span: refer to table above and the recommended minimum span, which is based on the process connection and is provided in the dimensional drawings.

In order to optimise the transmitter performance it is advisable to select the transmitter sensor to provide the minimum possible turndown.

Turndown = Upper range limit / Calibrated span

Zero suppression and elevation

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

- Calibrated span \geq minimum span

Damping

Adjustable time constant: 0 ... 60 s

This is in addition to sensor response time, and can be set via optional LCD display, handheld terminal or PC user interface.

Warm-up period

Operation within specifications: \leq 10 sec with minimal damping.

Insulation resistance

>100 M Ω at 500 V DC (between terminals and ground)

3 Operating limits

3.1 Temperature limits in °C (°F)

Ambient (operating temperature)

	Ambient or operating temperature range
	-40 ... 85 °C (-40 ... 185 °F)
White oil filling	-6 ... 85 °C (21 ... 185 °F)
LCD display	-20 ... 70 °C (-4 ... 158 °F)
O ₂ measurement with sensor code C and F	-20 ... 60 °C (-4 ... 140 °F)



Important

For Hazardous Atmosphere applications, comply with the temperature range specified on the relevant certificate/approval.

Storage

	Storage temperature range
Storage temperature	-50 ... 85 °C (-58 ... 185 °F)
LCD display	-40 ... 85 °C (-40 ... 185 °F)
White oil filling	-6 ... 85 °C (21 ... 185 °F)

	Humidity during storage
Relative humidity	up to 75%

3.2 Pressure limits

The maximum permissible pressure depends on the permissible sensor overload (refer to table "Measuring range and span limits") and the permissible working pressure for the process connection according to the order information.

Fill fluids	Id	Density at 20 °C (68 °F) in kg / m ³	Process temperature in °C (°F) at maximum ambient temperature	
			40 °C (104 °F)	60 °C (140 °F)
Silicone oil	IC	1055	-30 ... 180 (-22 ... 356)	-30 ... 140 (-22 ... 284)
Carbon fluoride	L	1860	-30 ... 150 (-22 ... 302)	-30 ... 140 (-22 ... 284)
White oil (FDA)	WB	849	-6 ... 180 (21 ... 356)	-6 ... 140 (21 ... 284)
Silicone oil for vacuum applications	IC-V	1055	-30 ... 180 (-22 ... 356)	-30 ... 140 (-22 ... 284)
White oil (FDA) for vacuum applications	WB-V	849	-6 ... 180 (21 ... 356)	-6 ... 140 (21 ... 284)

Fill fluids	Id	Pressure in kPa abs			
		20 °C (68 °F)	100 °C (212 °F)	150 °C (302 °F)	180 °C (356 °F)
Silicone oil	IC	> 50	> 50	> 50	> 65
Carbon fluoride	L	> 100	> 100	> 100	-
White oil	WB	> 50	> 100	> 100	> 100
Silicone oil for vacuum applications	IC-V	> 0,5	> 2,5	> 3,8	> 4,5
White oil for vacuum applications	WB-V	> 0,5	> 2,5	> 5,0	> 60

4 Environmental limits

Electromagnetic compatibility (EMC)

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

Meets NAMUR recommendations.

Low voltage directive:

Meets 73/23/EC

Pressure equipment directive (PED)

Complies with 97/23/EC Category III module H.

Humidity

Relative humidity: up to 100 %

Condensation, icing: permissible

Vibration resistance

Acceleration up to 2 g at frequencies up to 1000 Hz (according to IEC 60068-2-6).

Shock resistance (acc. to IEC 60068-2-27)

acceleration: 50 g

Time: 11 ms

Protection class (wet and dust-laden atmospheres)

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

- IEC EN60529 (1989) with IP 67 (upon request with IP 68, IP 69K)
- NEMA 4X
- JIS C0920

Protection type with plugged connection: IP 65

5 Hazardous atmospheres

Transmitters with type of protection class "Intrinsically safe EEx ia/ib" acc. to Directive 94/9/EC (ATEX)

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

Marking (DIN EN 50014):

II 1/2 G EEx ia IIC T4 ... T6

II 2 G EEx ib IIC T4 ... T6

Max. permissible ambient temperatures depending on temperature class:

Ambient temperature	Temperature class
-40 °C ... 85 °C (-40 °F ... 185 °F)	T1 ... T4
-40 °C ... 71 °C (-40 °F ... 159 °F)	T5
-40 °C ... 56 °C (-40 °F ... 132 °F)	T6

or Marking (DIN EN 50014):

II 1/2 D IP65 T95 °C Ex ia D

II 2 D IP65 T95 °C Ex ib D

Permissible ambient temperature range:

-40 °C ... 85 °C (-40 °F ... 185 °F)

Supply and signal circuit in "Explosion protection class intrinsic safety EEx ia/ib IIB/IIC" with the following maximum values:

$U_i = 30 \text{ V}$

$I_i = 130 \text{ mA}$

$P_i = 0.8 \text{ W}$

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

Effective internal inductance: $L_i = 0.5 \text{ mH}$

Factory Mutual (FM)

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

Intrinsically Safe: Class I, II and III; Division 1; Groups A, B, C, D, E, F, G
Class I; Zone 0; AEx ia
Group IIC T6; T4

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

Protection class: NEMA type 4X (indoor or outdoor mount)

Canadian standard (CSA)

Transmitters with 4 ... 20 mA output signal and HART communication

Intrinsically Safe: Class I, II and III; Division 1; Groups A, B, C, D, E, F, G
Class I; Zone 0; Group IIC T6; T4

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

Protection class: NEMA type 4X (indoor or outdoor mount)

NEPSI (China)

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

Intrinsically Safe: (Gas, order code X3)

Marking: Ex ia II CT1~CT6

Max. permissible ambient temperatures depending on temperature class:

	$U_i \text{ max.} = 30 \text{ V}; I_i \text{ max.} = 130 \text{ mA}; P_i = 0.8 \text{ W}; C_i = 10 \text{ nF}; L_i = 0.5 \mu\text{H}$		
Ex ia II CT1 ... T6	T6	T5	T1 ... T4
	-40 ... 56 °C	-40 ... 71 °C	-40 ... 85 °C

Intrinsically Safe: (Gas and dust, order code X4)

Marking: Ex ia II CT1~T6; DIP A20 T_A 95 °C

Max. permissible ambient temperatures depending on temperature class:

	$U_i \text{ max.} = 30 \text{ V}; I_i \text{ max.} = 130 \text{ mA}; P_i = 0.8 \text{ W}; C_i = 10 \text{ nF}; L_i = 0.5 \mu\text{H}$		
Ex ia II CT1 ... T6	T6	T5	T1 ... T4
	-40 ... 56 °C	-40 ... 71 °C	-40 ... 85 °C
DIP A20 TA95°C	-40 ... 85 °C		

6 Electrical characteristics and options

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

Power supply

The transmitter operates from 11 ... 42 V DC with no load and is protected against reverse polarity connection (additional load allows operations over 42 V DC).

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

Ripple

Maximum permissible voltage ripple of power supply during communication:

Complies with HART FSK "Physical Layer" specification rev. 8.1.

Load limitations

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

$$R(k\Omega) = \frac{\text{Voltage supply} - \text{Minimum operating voltage (VDC)}}{23.6 \text{ mA}}$$



Important

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

LCD display (optional)

Digital, graphic LCD indicator for user specific indication of:

- Gauge pressure / absolute pressure or
- Output current in mA or % or
- HART output (freely assigned start/end values and unit)

Diagnostic messages, alarms, errors and measuring range overshoots are also displayed.

In addition, the LCD display can be used with 4 buttons for configuring and parametrizing the transmitter.

Output signal

Two wire 4 ... 20 mA output

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

Output current limits (according to NAMUR standard)

Overload condition:

- Lower limit: 3.8 mA (configurable down to 3.5 mA)
- Upper limit: 20.5 mA (configurable up to 23.6 mA)

Alarm current

Minimum alarm current:	Configurable from 3.5 ... 4 mA, Default: 3.6 mA
Max. alarm current:	Configurable from 20 ... 23.6 mA, Default: 21 mA
Default:	Max. alarm current

7 Measuring accuracy

Reference conditions acc. to IEC 60770

- Ambient temperature T_u = constant, in the range: 18 ... 30 °C (64 ... 86 °F)
- Humidity r.H. = constant, in the range: 30 ... 80 %
- Atmospheric pressure P_u = constant, in range: 950 ... 1060 mbar
- Zero based span on zero position
 - Transmitter with seal diaphragm made sensor of stainless steel
- Fill fluid: Silicone oil
- Supply voltage: 24 V DC
- Load with HART: 250 Ω
- Transmitter not grounded
- Characteristic setting: linear, 4 ... 20 mA



Important

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

The accuracies related to the Upper Range Limits (URL) are affected by the actual turndown (TD) as a ratio between Upper Range Limit (URL) and calibrated span (URL / span).



Important

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

Dynamic behavior (according to IEC 61298-1)

Dead time:	100 ms
Time constant (63 %)	200 ms (for all sensors)

Non-linearity (terminal based)

Percentage of calibrated span, consisting of non-linearity, hysteresis and non-repeatability.

Turndown	Non-linearity
1:1 to 10:1	± 0,15 %
>10:1	± (0.15 + 0.005 x TD - 0.05) %

Optional

Turndown	Non-linearity
1:1 to 10:1	± 0.10 %
>10:1	± (0.10 + 0.005 x TD - 0.05) %

7.1 Operating influences

Thermal change of ambient temperature to zero and span (turndown to 6:1), based on the set span.

Range	Maximum effect on zero and span
-10 ... 60 °C (14 ... 140 °F)	All measuring ranges ± (0.2 % x TD + 0.2 %)
-40 ... -10 °C (-40 ... 14 °F)	All measuring ranges $\pm \left(\frac{0,1\%}{10\text{K}} \times \text{TD} + \frac{0,1\%}{10\text{K}} \right)$
60 ... 85 °C (140 ... 185 °F)	

Temperature coefficient (T_k)

Effect of the ambient temperature for each 10 K (but limited to the maximum temperature effect on zero and span, refer to previous information). The information refers to the set span.

Range	Effect on zero and span
-10 ... 60 °C (14 ... 140 °F)	Sensor code C / F: ± (0.15 % x TD + 0.15 %)
	Sensor code L / D / U / R / V: ± (0.05 % x TD + 0.05 %)

Temperature limit for white oil, refer to "Operating limits"



Important

Additional temperature effects dependent on type and size of the process connection, provided in the dimensional drawings.

Power supply

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

Load

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

Electromagnetic fields

Total effect: less than 0.3 % of span from 80 ... 1000 MHz and for field strengths up to 10 V/m when tested with unshielded conduit, with or without meter.

8 Technical Specification



Important

Refer to the order information sheets for the availability of different versions of the respective model.

8.1 Materials

Process isolating diaphragms¹⁾

See order information

Process connection¹⁾

See order information

Fill fluid for process connection

See order information

Sensor fill fluid

Silicon oil, inert fill (carbon fluoride), white oil (FDA)

Mounting bracket

Stainless steel AISI 316 L ss

Sensor housing

Stainless steel (1.4404 / 316L)

Electronics housing and cover

Stainless steel (1.4404 / 316L)

Inspection glass for LCD display cover

Polycarbonate (Makrolon 6557)

Filter for atmospheric ventilation

Filter housing: Plastic (standard), stainless steel (code EA, AB)

Filter material: polyamide (PA)

Cover O-ring

EPDM

Type plate

Plastic data plate attached to the electronics housing

¹⁾ Wetted transmitter parts

8.2 Calibration

- Standard: 0 to upper range limit (URL)
- Optional: for specified measuring span

8.3 Optional accessories

LCD display

Graphical display, plug-in and rotatable design.

Supplemental measuring point marker tag

Tag with wire (both stainless steel) attached to the transmitter, with a maximum of 30 characters including spaces.

Cleanliness procedure for oxygen application

Certificates (test, model, calibration, material traceability)

Language of operating instructions

8.4 Process connections

See order information

8.5 Electrical connections

- one M16 x 1.5 threaded conduit entry with cable gland (cable diameter approx. 5 ... 10 mm) directly on housing or
- M20 x 1.5 (via adapter) with cable gland (cable diameter approx. 6 ... 11 mm) or
- 1/2 -14 NPT (via adapter, without cable gland) or
- Harting Han plug connector (with mating plug (socket outlet, for wire diameters of 0.75 ... 1 mm² and cable diameters of 5 ... 11 mm)) or
- Miniature plug connector (without mating plug (socket outlet))

Terminal block

HART version: Two terminals for signal / auxiliary power, for wire cross-sections from 0.5 ... 1.5 mm² (16 AWG)

Ground connection (optional)

External ground terminals for wire cross-sections up to 4 mm² (12 AWG)

8.6 Mounting position

The transmitter can be mounted in any position.

8.7 Weight (without options)

- Transmitter without process connections: approx. 0.7 kg (1.54 lb)
- Process connections: see dimensional drawings
- Packaging: addit. 650 g (1.43 lb)

8.8 Packaging

Carton approx. 240 x 140 x 190 mm (10 x 6 x 8 in).

9 Configuration

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

Standard configuration

The transmitters are factory calibrated to the customer's specified range. Calibrated range and tag No. are provided on the type plate. If this data has not been specified, the transmitter will be delivered configured as follows:

4 mA	Zero
20 mA	Upper range limit (URL)
Output	linear
Damping	0,1 sec
Transmitter failure mode	21 mA
Optional LCD display	0 ... 100 %

Any or all the above configurable parameters, including lower range value and upper range value, can be easily changed using the optional LCD display, a HART handheld communicator or a PC, running the configuration software SMART VISION with DTM for 2600T.

10 Mounting Dimensions (not design data)

10.1 Pressure transmitter

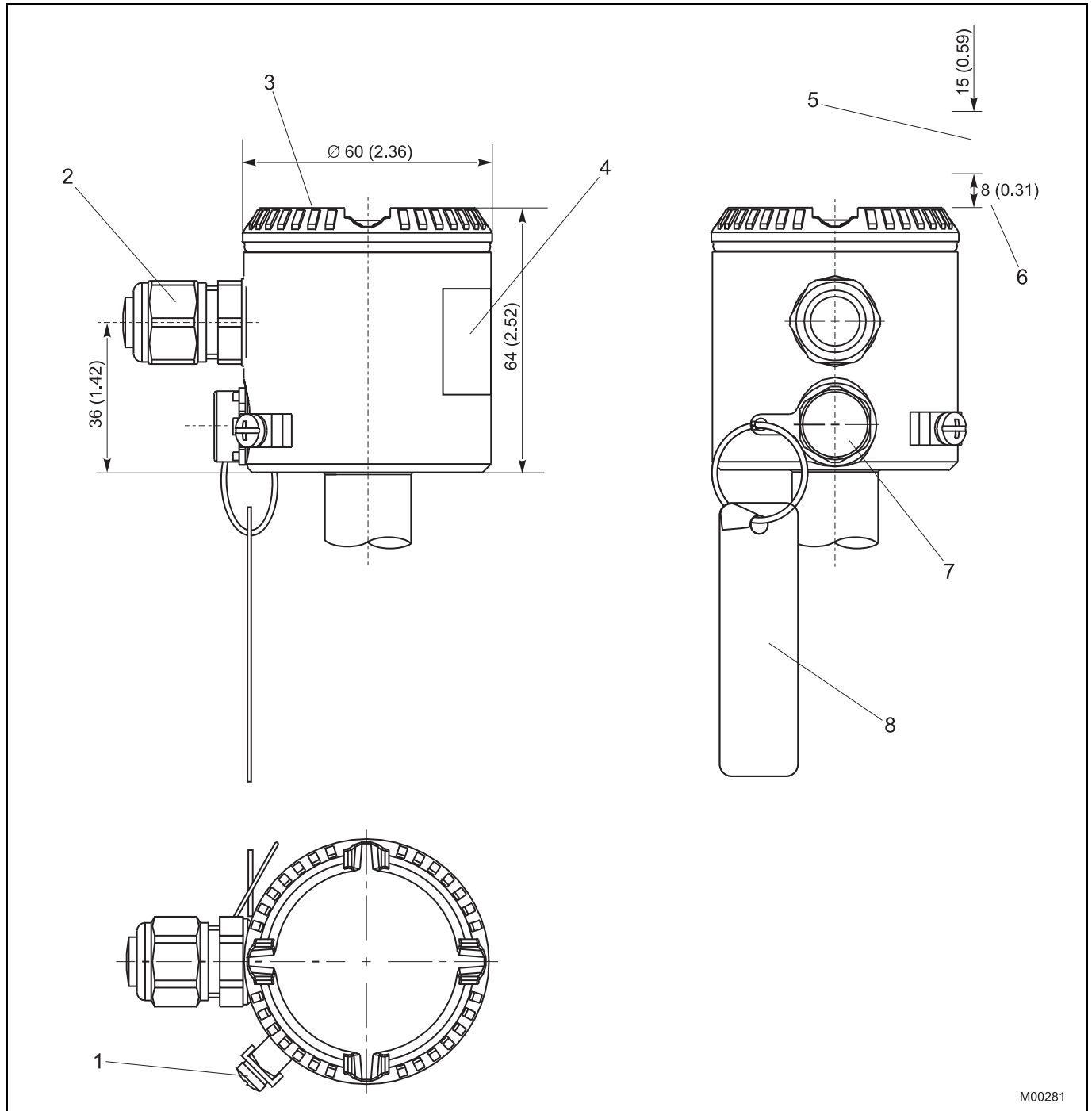


Fig. 1: Dimensions in mm (inch)

- 1 Grounding / potential equalizing terminal (optional)
- 2 Electrical connection (with cable gland)
- 3 Housing cover
- 4 Type plate

- 5 Clearance for cover removal required
- 6 With LCD display
- 7 Filter for atmospheric ventilation
- 8 Tag plate (optional)

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10.2 Version with LCD display and Harting Han plug

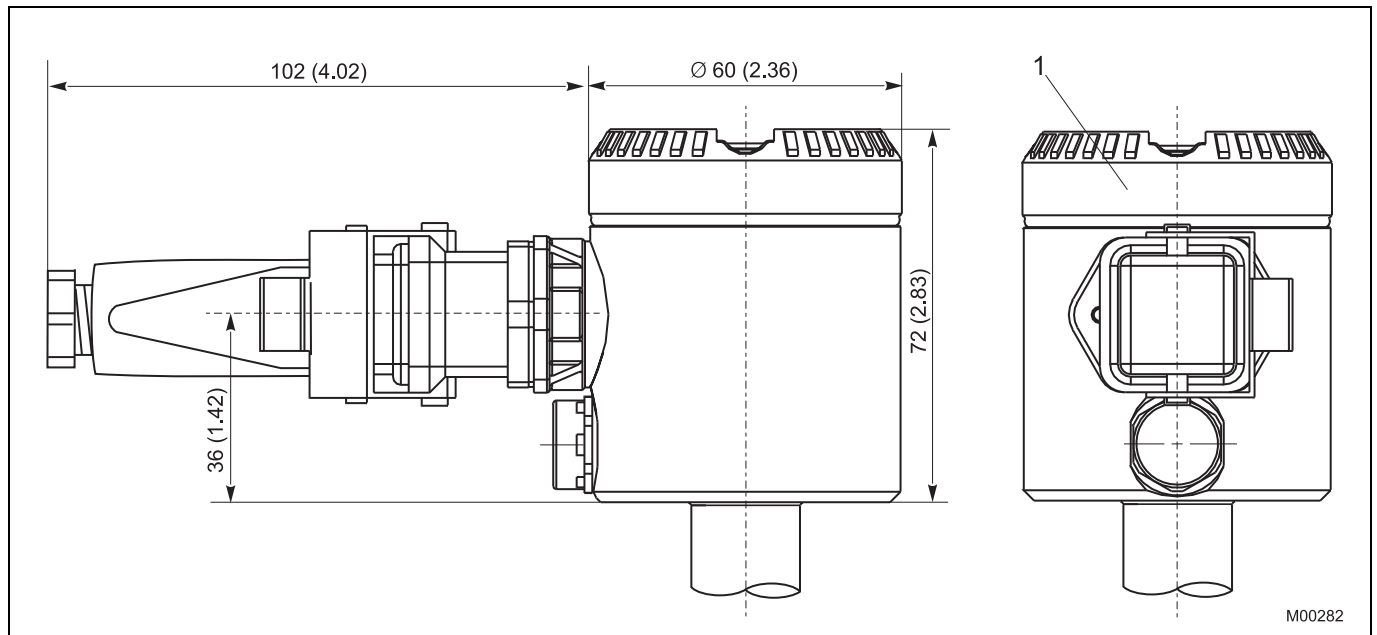


Fig. 2: Dimensions in mm (inch)

- 1 Housing cover for LCD display

10.3 Model 261GC / 261AC

10.3.1 Flush diaphragm remote seal

Form B (EN 1092)

Form RF (ASME B16.5)

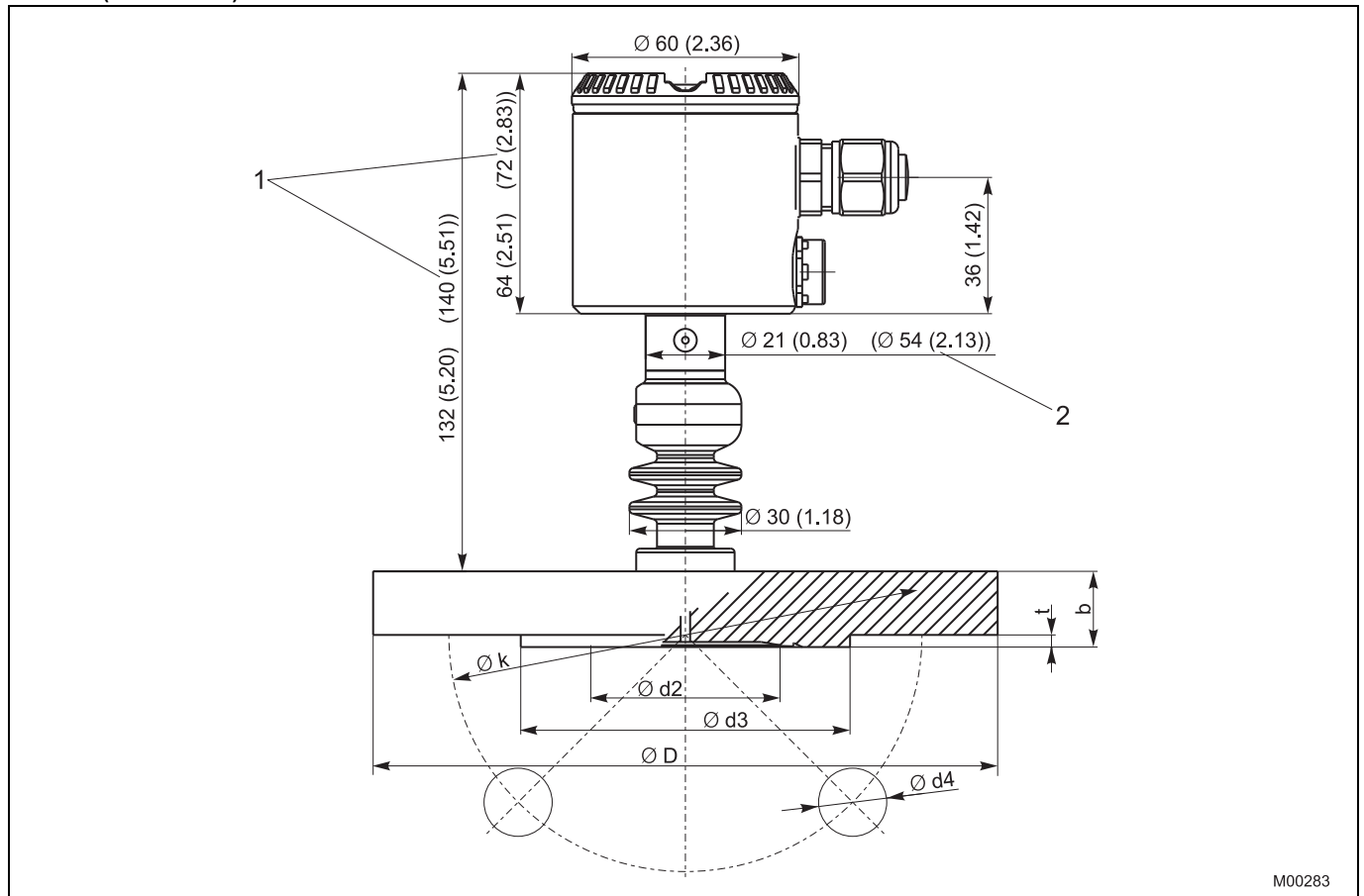


Fig. 3: Dimensions in mm (inch)

1 With LCD display

2 Dimensions of sensor code C, F

10.3.2 Extended diaphragm remote seal

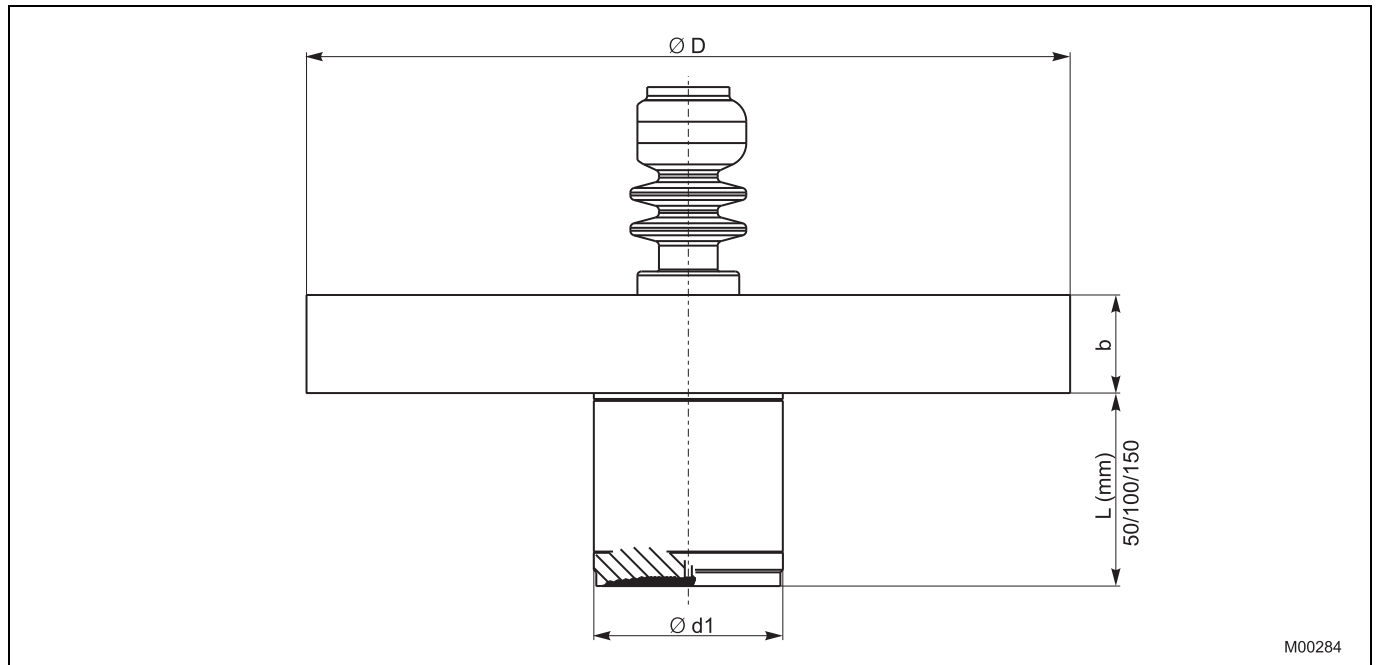


Fig. 4: Dimensions in mm (inch)

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10.4 Sealing surfaces

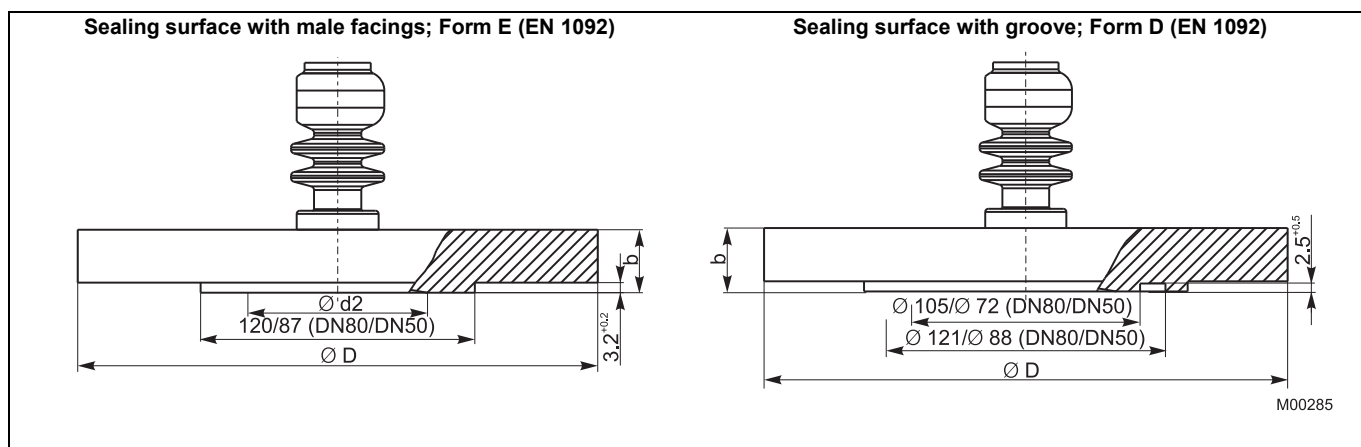


Fig. 5: Dimensions in mm (inch)

Sealing surface Form B, Form D, Form E (EN 1092), Form RF (ASME B16.5)

DN	PN	Ø D	Ø k	Ø d1	Ø d2	Ø d3	t	b	Ø d4	Weight (kg)	
										Flush diaphragm	Extended diaphragm (tube)
25	PN 10 / 40	115 (4.53)	85 (3.35)	-	32 (1.26)	68 (2.68)	2	18 (0.71)	4xØ14	1.38	-
50	PN 16 / 40	165 (6.50)	125 (4.92)	48.3 (1.9)	57 (2.24)	102 (4.02)	2 (0.08)	20 (0.79)	4xØ18	3.3	4.0
	PN 63	180 (7.09)	135 (5.31)	48.3 (1.9)	57 (2.24)	102 (4.02)	2 (0.08)	26 (1.02)	4xØ22	4.5	5.2
	PN 100	195 (7.68)	145 (5.71)	48.3 (1.9)	57 (2.24)	102 (4.02)	2 (0.08)	28 (1.10)	4xØ26	5.8	6.5
80	PN 16 / 40	200 (7.87)	160 (6.30)	73 (2.87)	75 (2.95)	138 (5.43)	2 (0.08)	24 (0.94)	8xØ18	5.8	7.5
	PN 63	215 (8.46)	170 (6.69)	73 (2.87)	75 (2.95)	138 (5.43)	2 (0.08)	28 (1.10)	8xØ22	6.9	8.6
	PN 100	230 (9.06)	180 (7.09)	73 (2.87)	75 (2.95)	138 (5.43)	2 (0.08)	32 (1.26)	8xØ26	9.4	11.1
1 in	class 150	107.9 (4.25)	79.4 (3.13)	-	32 (1.26)	50.8 (2)	1.6 (0.06)	14.2 (0.56)	4xØ15.7	0.9	-
	class 300	123.8 (4.87)	88.9 (3.5)	-	32 (1.26)	50.8 (2)	1.6 (0.06)	17.5 (0.69)	4xØ19.1	1.4	-
2 in	class 150	152.4 (6)	120.6 (4.75)	48.3 (1.9)	57 (2.24)	92.1 (3.63)	1.6 (0.06)	19.1 (0.75)	4xØ19.1	2.3	4.0
	class 300	165.1 (6.5)	127 (5)	48.3 (1.9)	57 (2.24)	92.1 (3.63)	1.6 (0.06)	22.4 (0.88)	8xØ19.1	3.7	5.4
	class 600	165.1 (6.5)	127 (5)	48.3 (1.9)	57 (2.24)	92.1 (3.63)	6.35 (0.25)	25.4 (1.0)	8xØ19.1	4.5	6.2
3 in	class 150	190.5 (7.5)	152.4 (6)	73 (2.87)	75 (2.95)	127 (5)	1.6 (0.06)	22.2 (0.87)	4xØ19.1	5.3	7.0
	class 300	209.5 (8.25)	168.3 (6.63)	73 (2.87)	75 (2.95)	127 (5)	1.6 (0.06)	28.4 (1.12)	8xØ22.4	7.3	9.0
	class 600	209.5 (8.25)	168.3 (6.63)	73 (2.87)	75 (2.95)	127 (5)	6.35 (0.25)	31.8 (1.25)	8xØ22.4	9.1	10.8

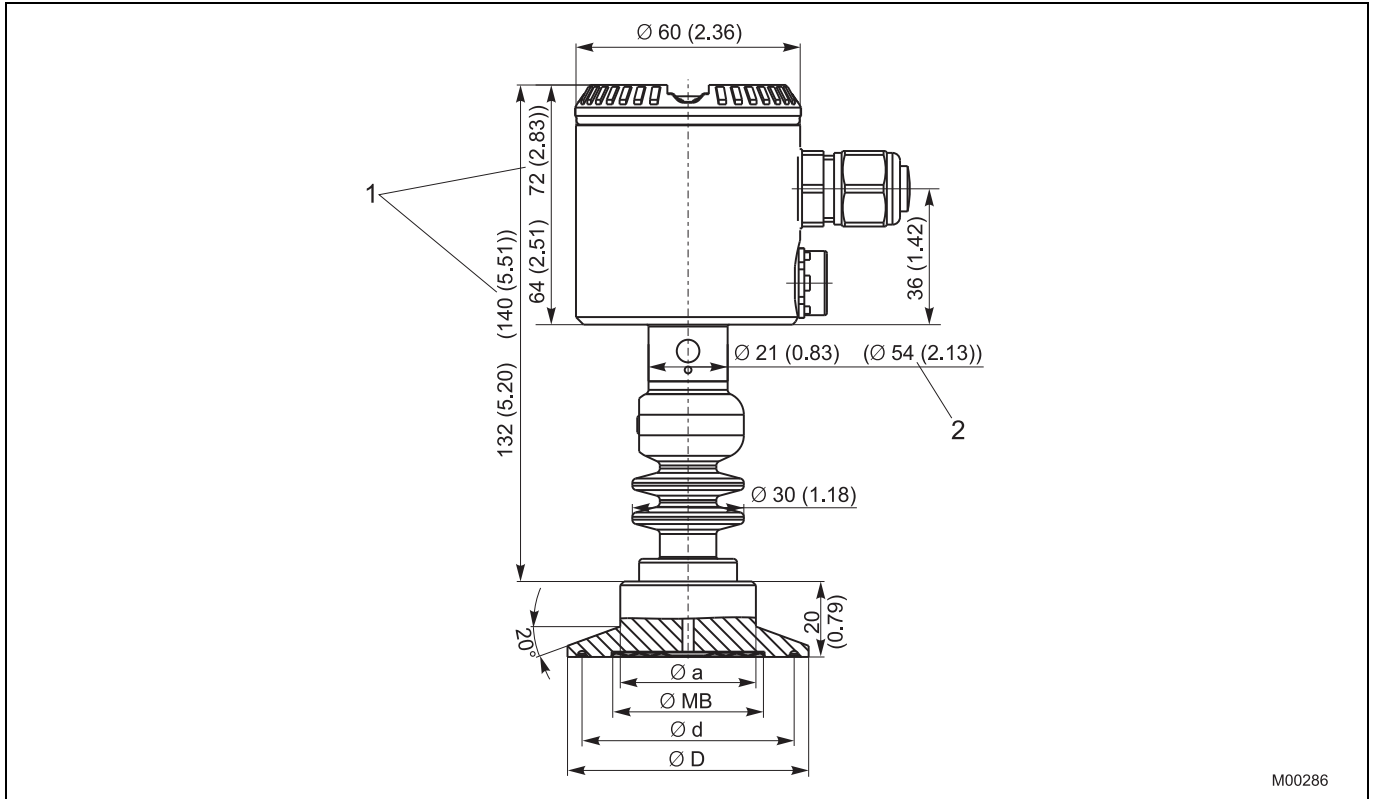
Accuracy information

Process connection	Temperature effect for each 10 K (18 °F)				Recommended min. measuring span	
	Ambient		Process			
	mbar	in H ₂ O	mbar	in H ₂ O	mbar	in H ₂ O
DN 25 flush diaphragm	0.77	0.31	1.20	0.48	1000	401.5
DN 50 flush diaphragm	0.075	0.03	0.4	0.16	100	40.15
DN 50 extended diaphragm	0.125	0.05	0.9	0.36	160	64.24
DN 80 flush diaphragm	0.05	0.02	0.1	0.04	60	24.09
DN 80 extended diaphragm	0.05	0.02	0.1	0.04	60	24.09
1 in ASME flush diaphragm	0.77	0.31	1.20	0.48	1000	401.5
2 in ASME flush diaphragm	0.075	0.03	0.4	0.16	100	40.15
2 in ASME extended diaphragm	0.125	0.05	0.9	0.36	160	64.24
3 in ASME flush diaphragm	0.05	0.02	0.1	0.04	60	24.09
3 in ASME extended diaphragm	0.05	0.02	0.1	0.04	60	24.09

10.5 Model 261GG / 261AG

10.5.1 Pressure transmitter with tri-clamp connection acc. to ASME

Roughness for wetted surfaces: $R_a \leq 0.8 \mu\text{m}$



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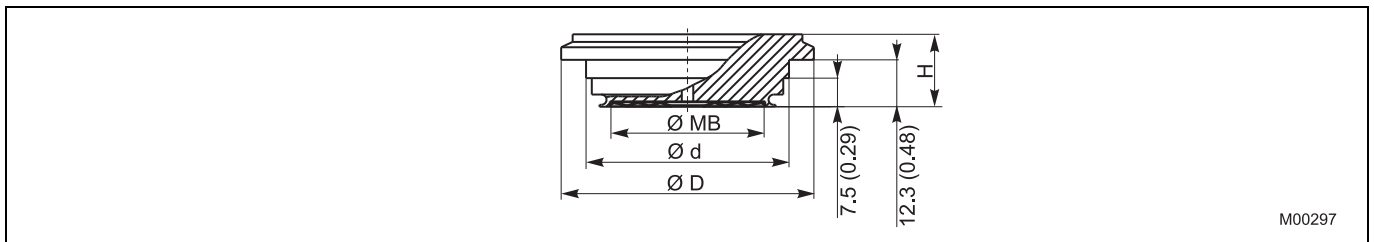
Fig. 6: Dimensions in mm (inch)

1 With LCD display

2 Dimensions of sensor code C, F

DN	PN	Ø MB	Ø D	Ø d	Ø a
1 1/2 in	40	32 (1.26)	50 (1.97)	43.5 (1.71)	36 (1.42)
2 in	40	40 (1.57)	64 (2.52)	56.5 (2.22)	36 (1.42)
3 in	25	72 (2.83)	91 (3.58)	83.5 (3.29)	77 (3.03)

10.5.2 Varivent connection



M00297

Fig. 7: Dimensions in mm (inch)

Form	Ø MB	Ø D	Ø d	H
N for pipes DN 40 to 125 and 1 1/2 in to 4 in	60 (2.36)	84 (3.31)	70,9 (2.79)	17 (0.67)
F for pipes DN 25 and 1 in	40 (1.57)	66 (2.60)	53 (2.08)	17 (0.67)

10.5.3 NEUMO BioControl (flange connection)

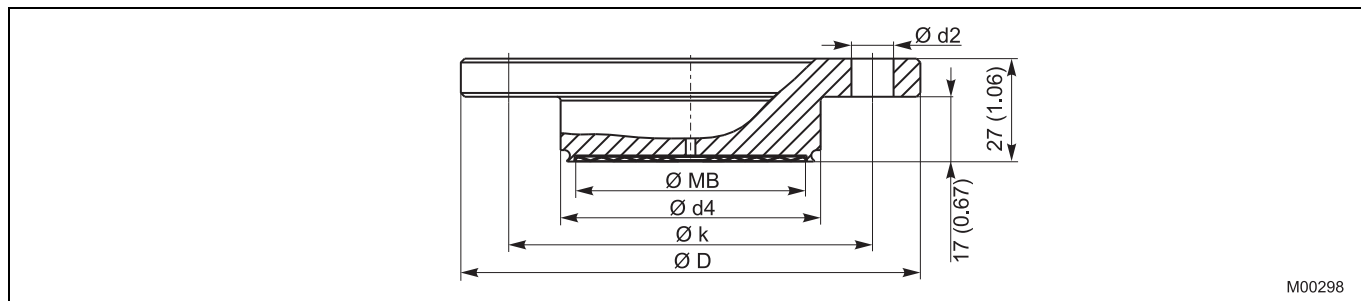


Fig. 8: Dimensions in mm (inch)

Model	PN	Ø MB	Ø D	Ø d2	Ø k	Ø d4
GR50	16	40 (1.57)	90 (3.54)	4xØ9	70 (2.76)	50 (1.97)
GR65	16	59 (2.32)	120 (4.72)	4xØ11	95 (3.74)	67.9 (2.67)

10.5.4 Pressure sensor with DRD flange

D = 65 mm; PN 40

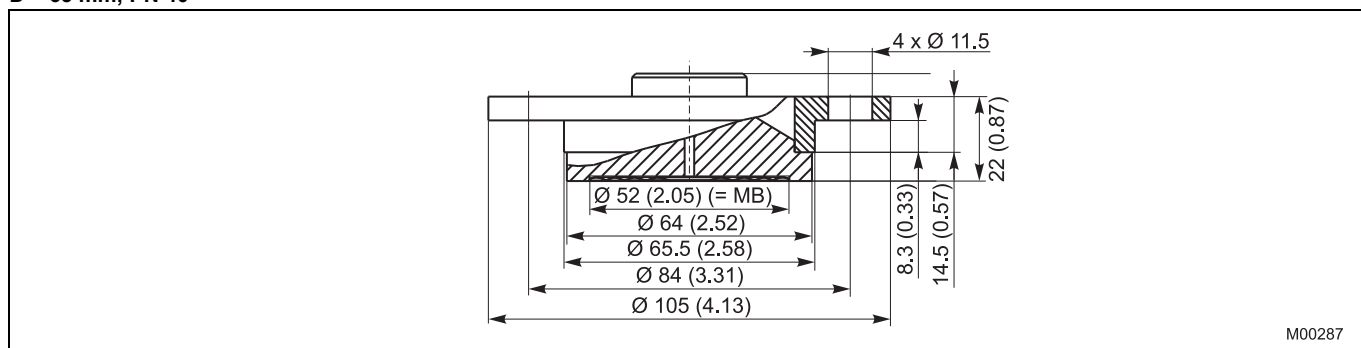


Fig. 9: Dimensions in mm (inch)

10.5.5 Dairy thread

DIN 11851

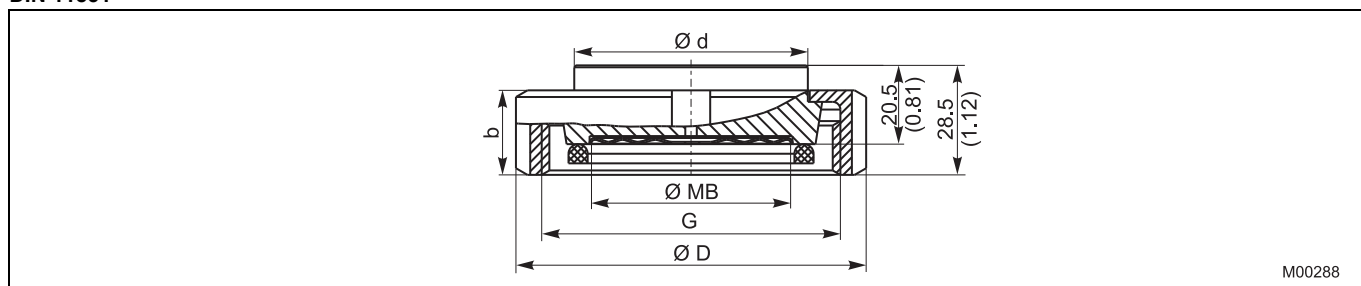


Fig. 10: Dimensions in mm (inch)

DN	PN	Ø MB	Ø D	Ø d	b	G
32	40	32 (1.26)	70 (2.76)	41 (1.61)	21 (0.83)	Rd 58 x 1/6 in
40	40	40 (1.57)	78 (3.07)	48 (1.89)	21 (0.83)	Rd 65 x 1/6 in
50	25	52 (2.05)	92 (3.62)	61 (2.40)	22 (0.87)	Rd 78 x 1/6 in

10.5.6 APV-RJT Union nut

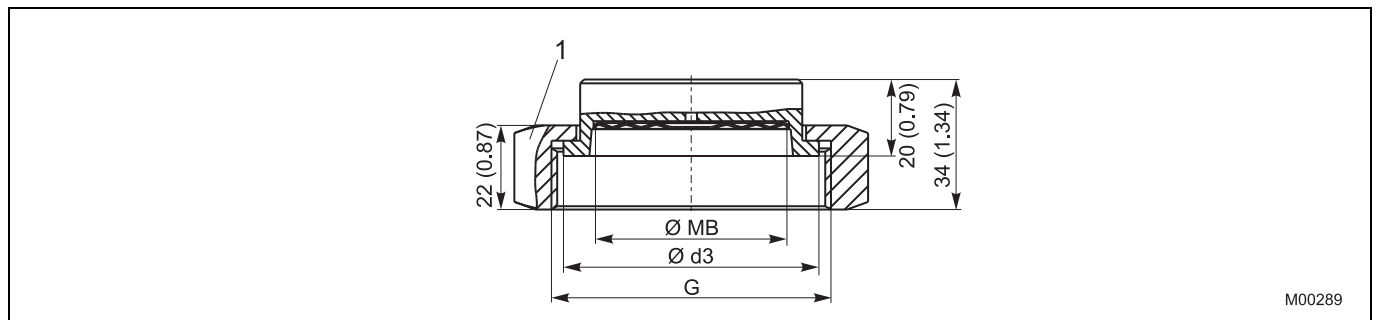


Fig. 11: Dimensions in mm (inch)

1 Wrench size

DN	PN	Ø MB	Ø d3	G	WS
1 1/2 in	40	32 (1.26)	54 (2.16)	2 5/16 x 8 in	65 (2.65)
2 in	40	40 (1.57)	66.7 (2.63)	2 7/8 x 6 in	80 (3.15)

10.5.7 SMS Union nut

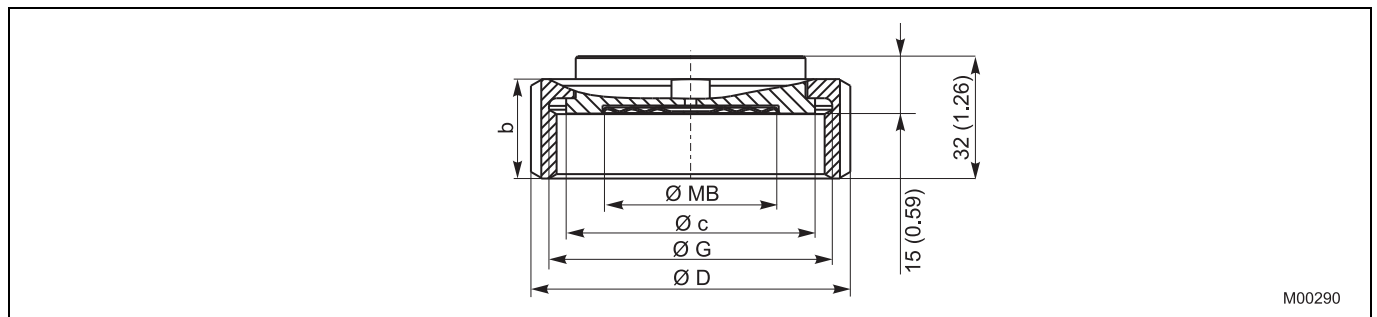


Fig. 12: Dimensions in mm (inch)

DN	PN	Ø MB	Ø D	Ø c	G	b
1 1/2 in	40	35 (1.38)	74 (2.91)	55 (2.17)	Rd 60 x 1/6 in	25 (0.98)
2 in	40	45 (1.77)	84 (3.30)	65 (2.56)	Rd 70 x 1/6 in	26 (1.02)

Additional effect of process connection, only when temperature of transmitter (ambient temperature) deviates from process connection

Process connection	Temperature effect for each 10 K (18 °F)		Recommended min. measuring span		Weight (kg)
	Process		mbar	in H ₂ O	
	mbar	in H ₂ O			
Dairy thread DIN 11851, DN 32, PN 40	0.22	0.09	45	18.07	0.5
Dairy thread DIN 11851, DN 40, PN 40	0.20	0.08	40	16.06	0.75
Dairy thread DIN 11851, DN 50, PN 25	0.12	0.05	40	16.06	0.8
SMS Union nut DN 1 1/2 in, PN 40	0.35	0.14	70	28.10	0.8
SMS Union nut DN 2 in, PN 40	0.12	0.05	40	16.06	1.0
Tri-clamp connection ASME, DN 1 1/2 in, PN 40	0.35	0.14	70	28.10	0.6
Tri-clamp connection per ASME, DN 2 in, PN 40	0.12	0.05	40	16.06	0.75
Tri-clamp connection per ASME, DN 3 in, PN 25	0.08	0.03	40	16.06	1.3
DRD flange, D = 65 mm	0.12	0.05	40	16.06	2.0

Additional effect of process connection based on calibration temperature

Process connection	Temperature effect for each 10 K (18 °F)				Recommended min. measuring span		Weight (kg)
	Ambient		Process		mbar	in H ₂ O	
	mbar	in H ₂ O	mbar	in H ₂ O			
APV-RJT Union nut DN 1 1/2 in, PN 40	0.77	0.31	1.20	0.48	400	160.59	0.9
APV-RJT Union nut DN 2 in, PN 40	0.24	0.09	0.78	0.31	200	80.29	1.1
Varivent for DN 25 pipes	0.28	0.11	0.79	0.32	215	86.31	0.33
Varivent for DN 40-DN 125 pipes	0.19	0.07	0.90	0.36	220	88.32	0.58
NEUMO BioControl G50	0.16	0.07	0.52	0.21	135	54.20	0.65
NEUMO BioControl G65	0.18	0.07	0.88	0.35	220	88.32	1.3

10.6 Model 261GJ / 261AJ

10.6.1 Pressure transmitter with inline remote seal and tri-clamp connection acc. to ASME

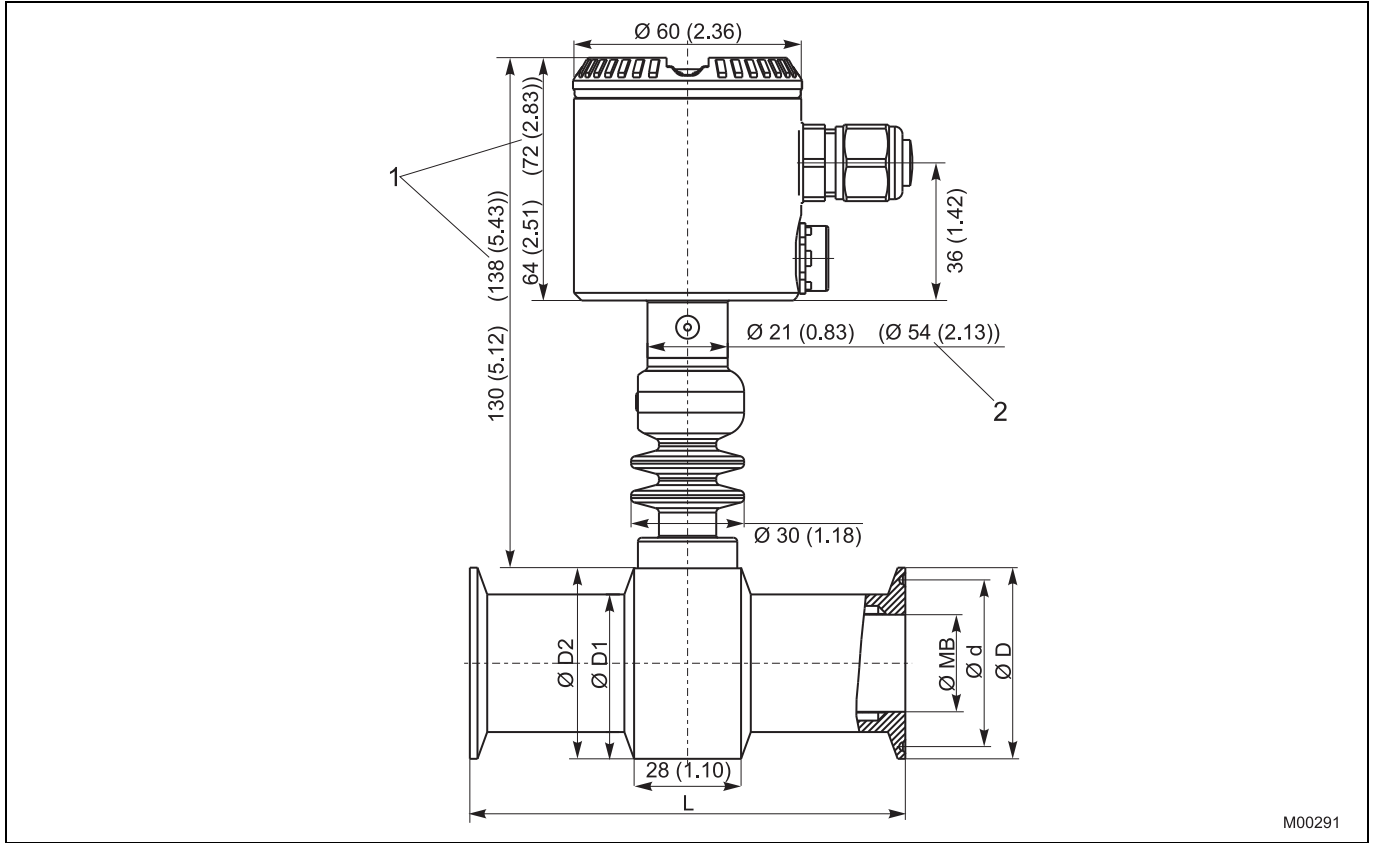


Fig. 13: Dimensions in mm (inch)

1 With LCD display

2 Dimensions of sensor code C, F

DN	PN	Ø MB	Ø D1	Ø D2	L	Ø d
1 in	40	22.2 (0.87)	36 (1.42)	50 (1.97)	114 (4.49)	43.5 (1.71)
1 1/2 in		34.8 (1.37)	43 (1.69)	55 (2.17)	146 (5.75)	43.5 (1.71)
2 in		47.5 (1.87)	56 (2.20)	64 (2.52)	156 (6.14)	56.5 (2.22)

10.6.2 Inline remote seal with dairy thread

DIN 11851

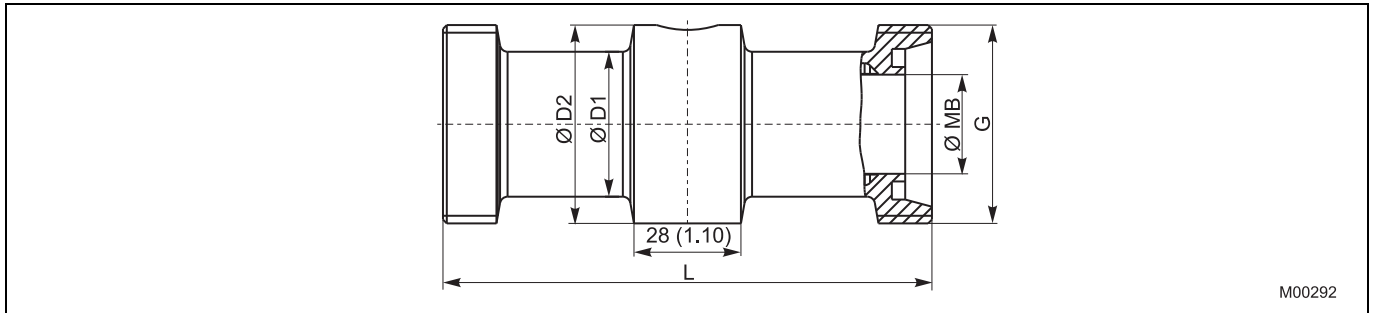
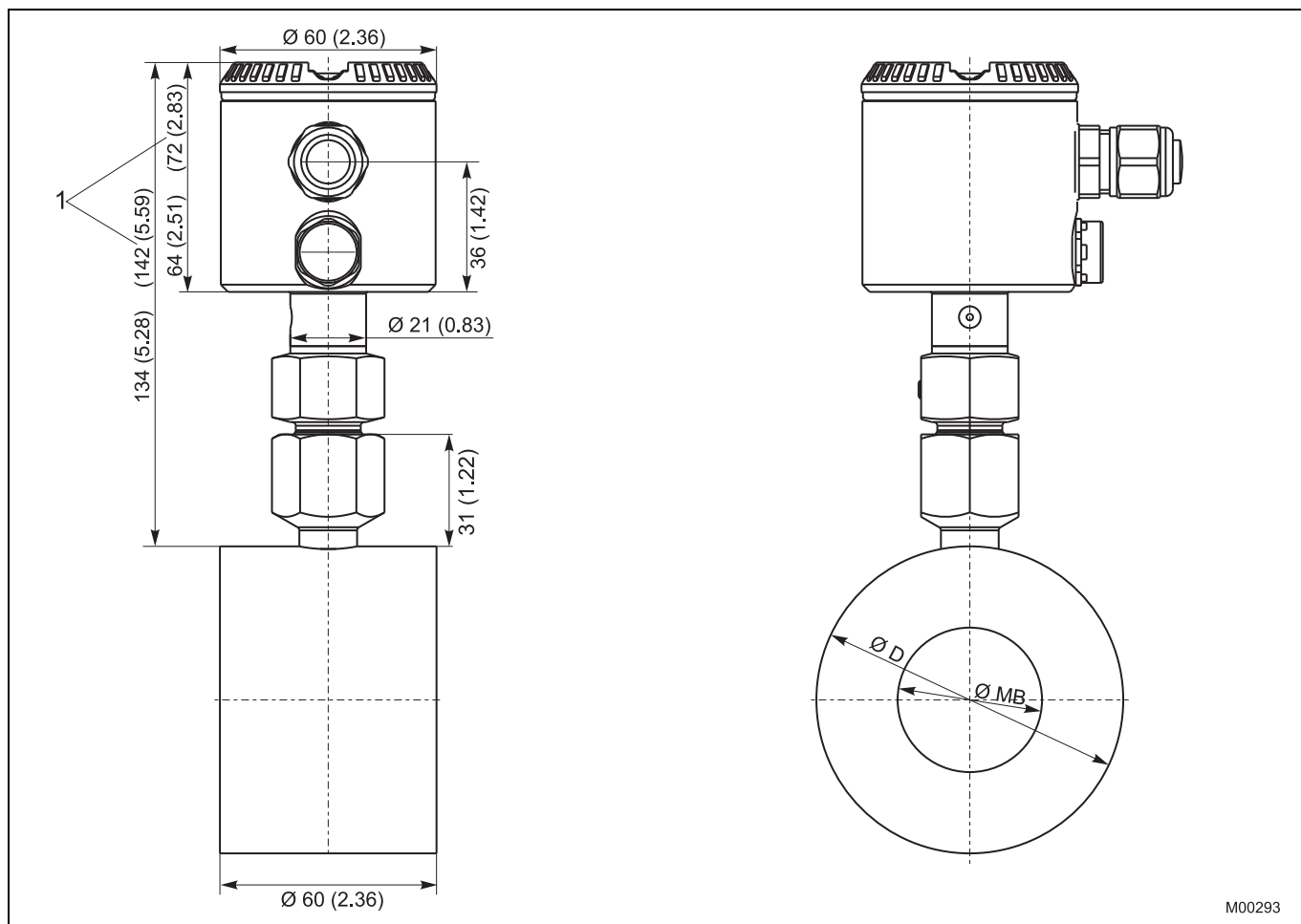


Fig. 14: Dimensions in mm (inch)

DN	PN	Ø MB	Ø D1	Ø D2	L	G
25	40	26 (1.02)	38 (1.50)	52 (2.05)	114 (4.49)	Rd 52 x 1/6 in
40	40	38 (1.50)	55 (2.17)	65 (2.56)	146 (5.75)	Rd 65 x 1/6 in
50	25	50 (1.97)	68 (2.68)	78 (3.07)	156 (6.14)	Rd 78 x 1/6 in

10.6.3 Inline remote seal with sandwich design



M00293

Fig. 15: Dimensions in mm (inch)

1 With LCD display

DN	PN (bar)	PN (psi)	Ø MB	Ø D
25 / 1 in	6 ... 400	150 ... 2500	28.5 (1.12)	63 (2.48)
40 in	6 ... 400		43 (1.69)	85 (3.35)
1 1/2 in	-		43 (1.69)	78 (3.07)
50 / 2 in	6 ... 320		54.5 (2.15)	95 (3.74)
80 / 3 in	6 ... 250		82.5 (3.25)	130 (5.12)

Accuracy information

Process connection	Temperature effect for each 10 K (18 °F)				Recommended min. measuring span		Weight (kg)
	Ambient		Process		mbar	in H ₂ O	
	mbar	in H ₂ O	mbar	in H ₂ O			
Dairy thread DIN 11851, DN 25, PN 40	0.63	0.25	8.19	3.29	2200	883	1.0
Dairy thread DIN 11851, DN 40, PN 40	0.07	0.03	1.92	0.77	500	201	1.9
Dairy thread DIN 11851, DN 50, PN 25	0.04	0.01	1.86	0.75	500	201	2.8
Tri-clamp for pipes acc. to ASME, DN 1 in, PN 40	1.92	0.77	18.54	7.44	5000	2008	1.0
Tri-clamp for pipes acc. to ASME, DN 1 1/2 in, PN 40	0.08	0.03	0.99	0.40	250	100	1.9
Tri-clamp for pipes acc. to ASME, DN 2 in, PN 40	0.06	0.02	2.25	0.90	600	241	2.8
DN 25 / ASME 1 in	1.76	0.71	9.21	3.70	2800	1124	1.4
DN 40 / ASME 1 1/2 in	0.57	0.23	5.03	2.02	1400	562	2.2
DN 50 / ASME 2 in	1.57	0.63	16.62	6.67	4500	1807	2.5
DN 80 / ASME 3 in	0.74	0.30	7.11	2.85	2000	803	4.0

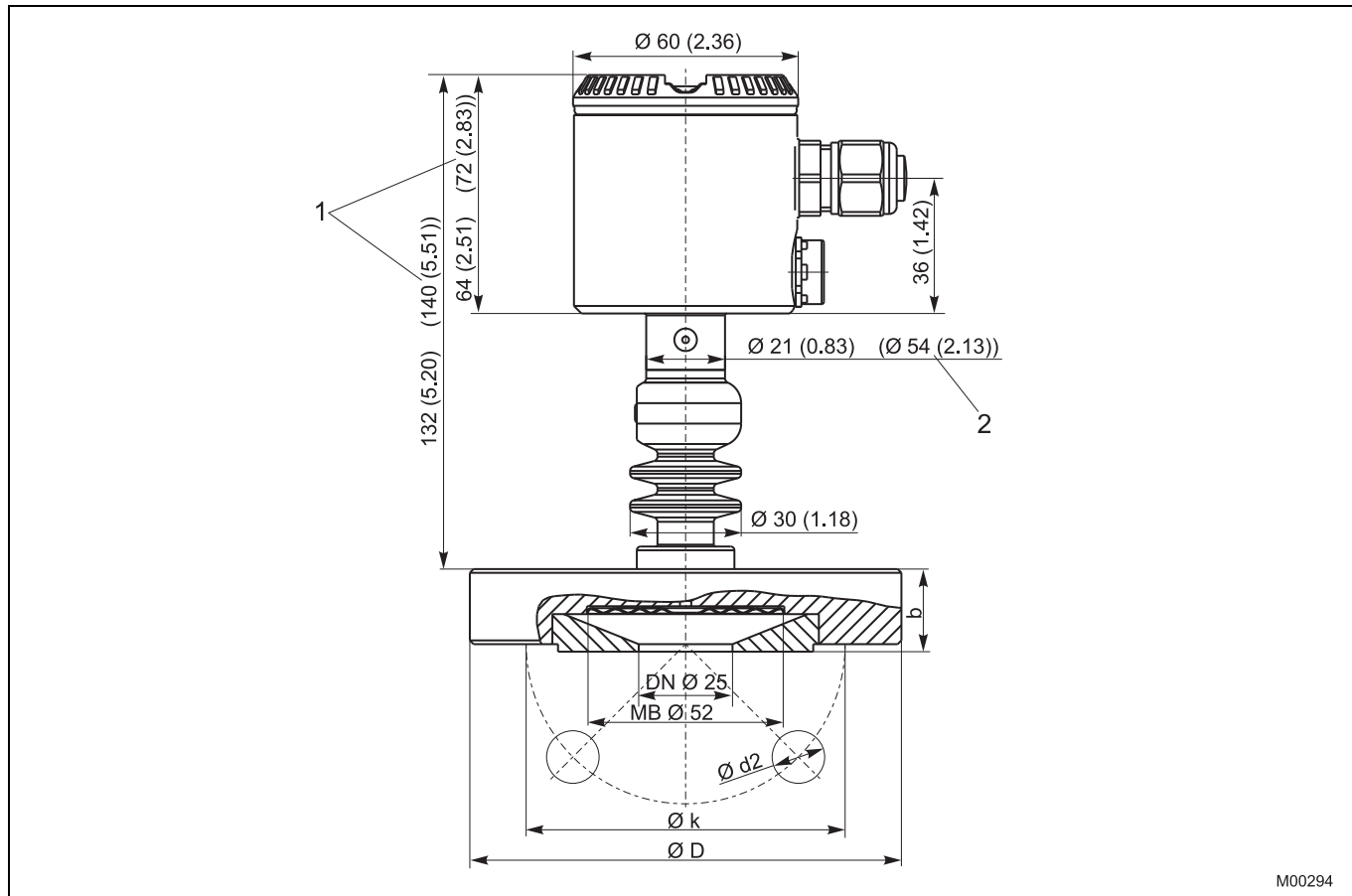
10.7 Model 261GM / 261AM

10.7.1 Transmitter with flange type seal and internal diaphragm

DN 25, PN 10 / 40

DN 1 in CL 150

DN 1 in CL 300



M00294

Fig. 16: Dimensions in mm (inch)

1 With LCD display

2 Dimensions of sensor code C

DN	PN	Ø D	Ø k	Ø d2
25	10 / 40	115 (4.53)	85 (3.35)	14 (0.55)
1 in	ASME CL 150	110 (4.33)	79.5 (3.13)	16 (0.63)
1 in	ASME CL 300	125 (4.92)	89 (3.50)	20 (0.79)

10.7.2 Transmitter with flange type seal and internal diaphragm

- DN 25, PN 63 / 100
- DN 25, PN 160
- DN 25, PN 250
- DN 1 in CL 600
- DN 1 in CL 1500

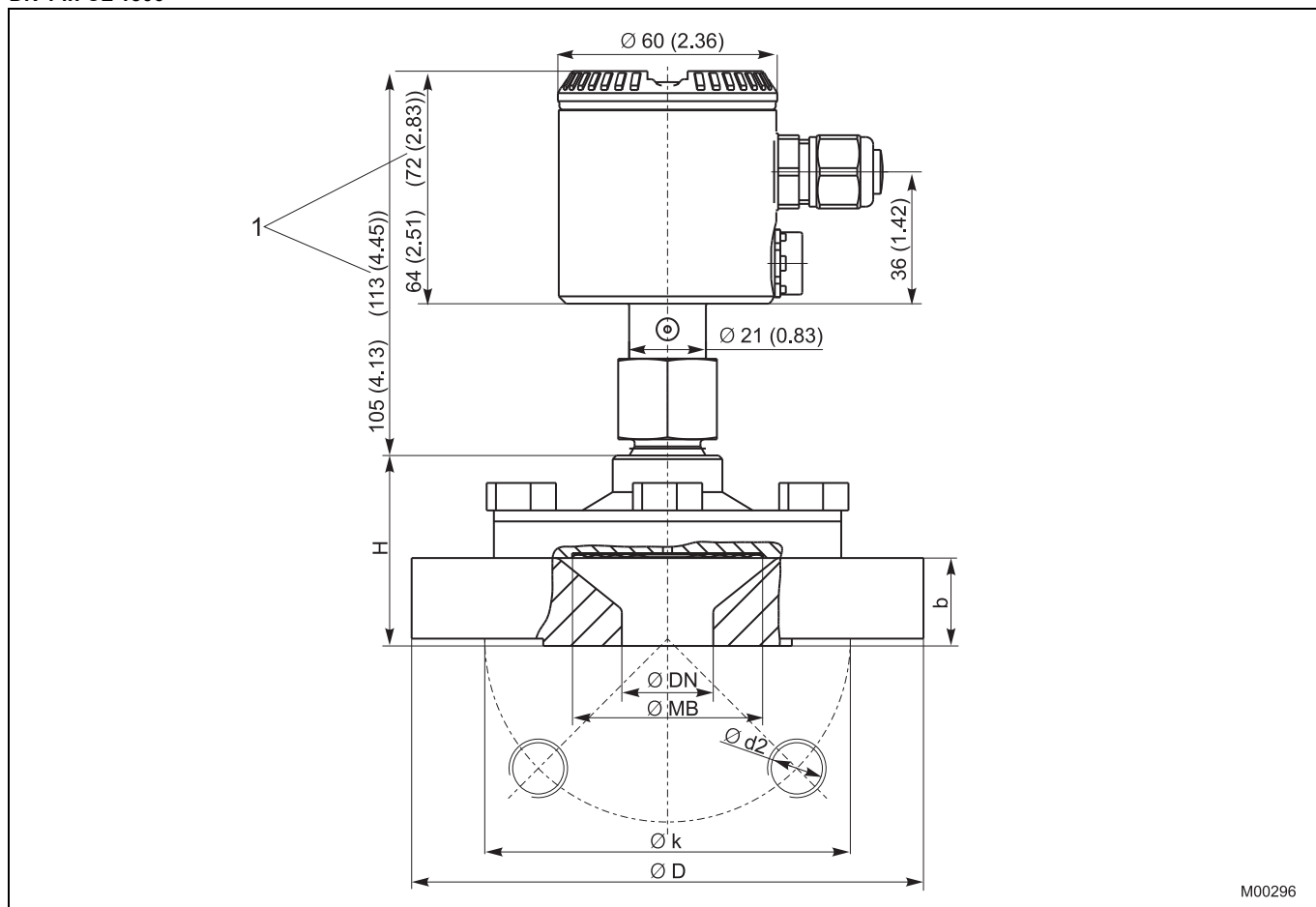


Fig. 17: Dimensions in mm (inch)

1 With LCD display

DN	PN	Ø MB	Ø D	Ø k	b	H	Ø d2
25	63 / 100	52 (2.04)	140 (5.51)	100 (3.94)	24 (0.94)	52 (2.05)	4 x M16
	160		140 (5.51)	100 (3.94)	24 (0.94)	52 (2.05)	4 x M16
	250		150 (5.91)	105 (4.13)	28 (1.10)	56 (2.20)	4 x M20
1 in	ASME CL 600	52 (2.04)	125 (4.92)	89 (3.50)	24.5 (1.42)	52.5 (0.96)	4 x 5/8 in
	ASME CL 1500		150 (5.91)	101.5 (4.00)	36 (1.42)	64 (1.42)	4 x 7/8 in

Accuracy information

Process connection	Nominal pressure	Temperature effect for each 10 K (18 °F)				Recommended min. measuring span		Weight (kg)
		Ambient		Process		mbar	in H ₂ O	
		mbar	in H ₂ O	mbar	in H ₂ O			
1 in	ASME CL 150	0.24	0.096	0.78	0.313	160	64.24	1.4
1 in	ASME CL 300							1.7
1 in	ASME CL 600							3.6
1 in	ASME CL 1500							4.0
DN 25	DIN - 10 / 40 bar	0.24	0.096	0.78	0.313	160	64.24	1.5
DN 25	DIN - 63 / 100 bar							3.2
DN 25	DIN - 160 bar							3.6
DN 25	DIN - 250 bar							4.0

10.8 Model 261GN / 261AN

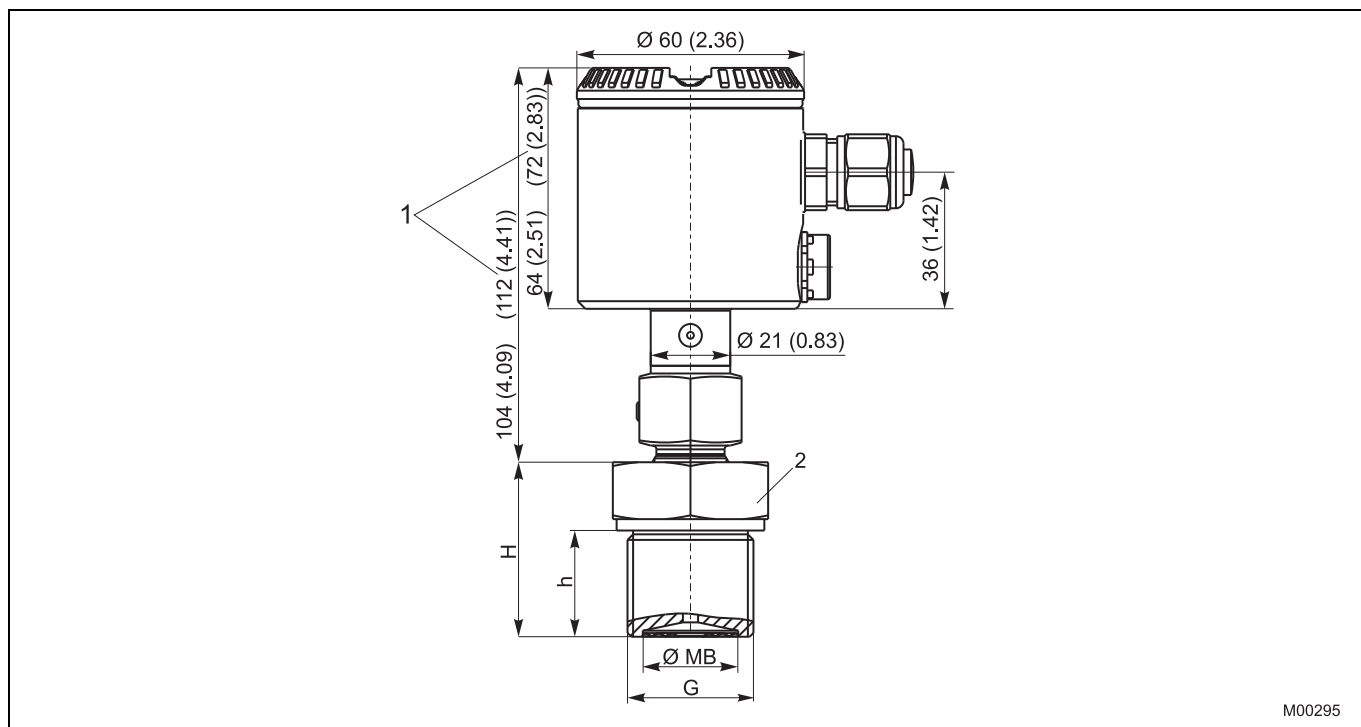


Fig. 18: Dimensions in mm (inch)

1 With LCD display

2 Wrench size (WS)

DN	PN	Ø MB	G	WS	h	H	Weight (kg)
1 in	600	25 (0.98)	G 1 A	41 (1.61)	28 (1.10)	46 (1.81)	0.3
1 ½ in		40 (1.57)	G 1 1/2 A	55 (2.17)	30 (1.18)	50 (1.97)	0.5

Accuracy information

Process connection	Temperature effect for each 10 K (18 °F)				Recommended min. measuring span	
	Ambient		Process		mbar	in H ₂ O
	mbar	in H ₂ O	mbar	in H ₂ O		
G 1 A - PN 600	14	5.62	35	14.05	6000	2409
G 1 1/2 A - PN 600	2	0.80	4	1.61	1200	482

11 Electrical connections

11.1 Standard terminal strip

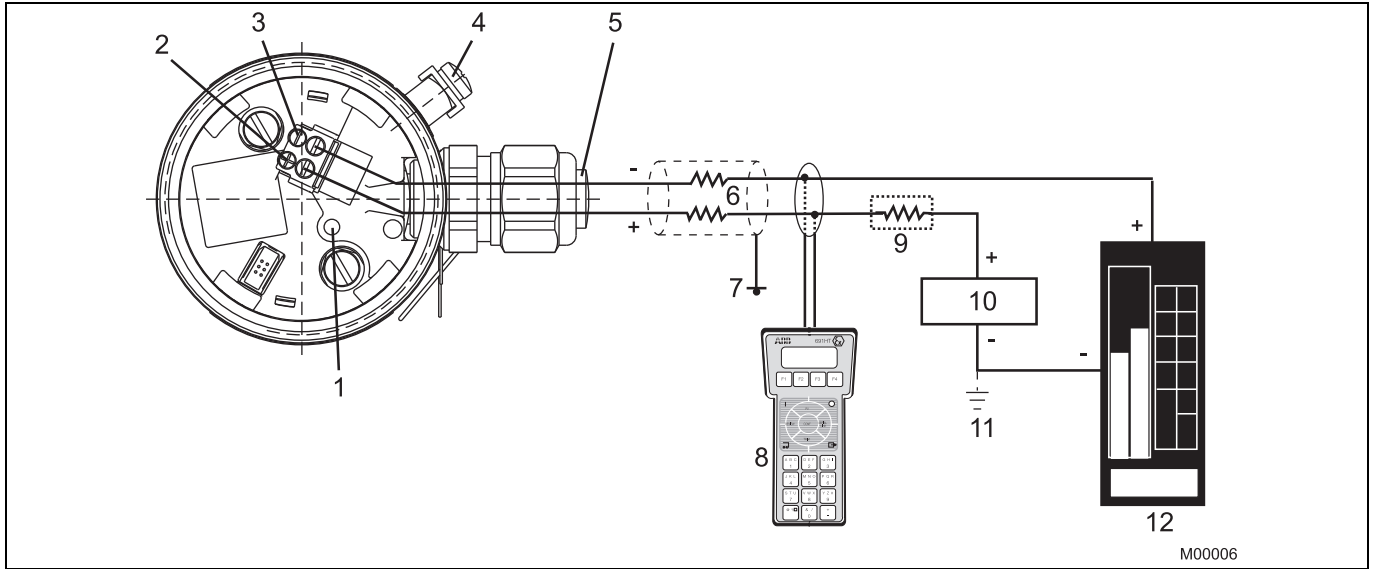


Fig. 19

- | | |
|--|----------------------------|
| 1 Pushbutton for lower/upper range values | 6 Line load |
| 2 + Signal screw terminal for wires with 0.5 ... 1.5 mm ² cross-section | 7 Ground |
| 3 - Signal screw terminal for wires with 0.5 ... 1.5 mm ² cross-section | 8 Handheld terminal |
| 4 Grounding/potential equalizing terminal (optional) | 9 Resistor with min. 250 Ω |
| 5 Cable entry | 10 Power source |
| | 11 Optional ground |
| | 12 Receiver |

11.2 Optional plug connectors

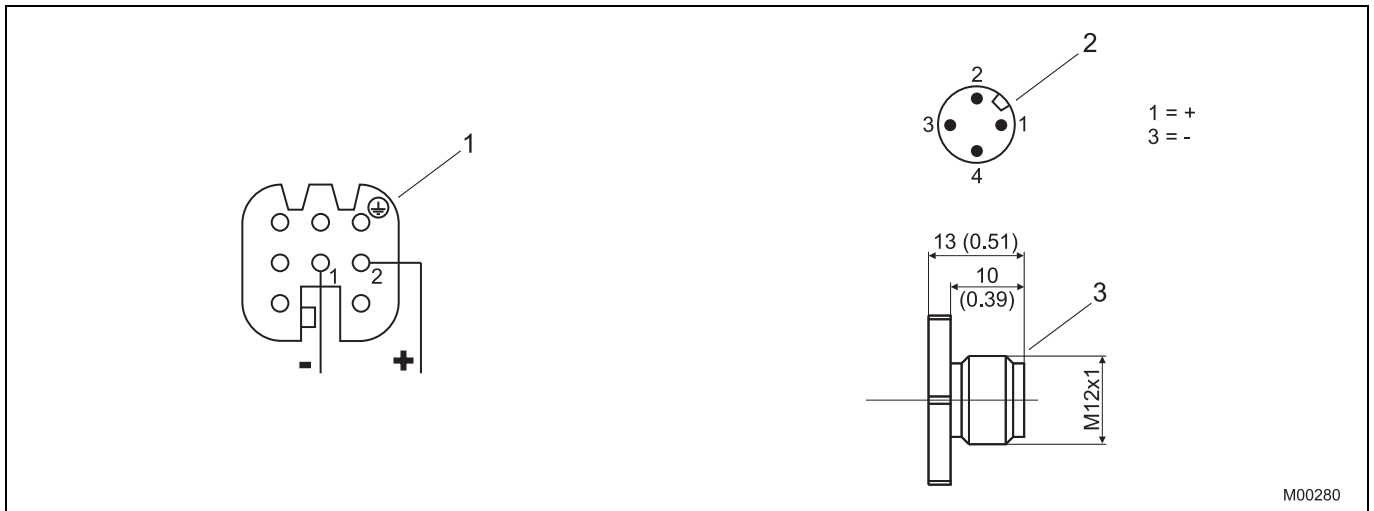


Fig. 20: Dimensions in mm (inch)

- | | |
|--|------------------------------|
| 1 Harting Han 8D (8U) pin identification (socket view) | 3 Plug (socket) not supplied |
| 2 M12x1 miniature plug (pins) | |

12 Ordering information

12.1 Ordering information for model 261GC/261AC

Gauge Pressure Transmitter			Variant digit No.	1 - 6	7	8	9	10	Code			
261GC	Base accuracy 0.15 %		Catalog No.	261GC-								
Sensor-Span limits												
6 kPa	60 mbar	24 in H ₂ O			C							
40 kPa	400 mbar	160 in H ₂ O			F							
250 kPa	2500 mbar	1000 in H ₂ O			L							
1000 kPa	10 bar	145 psi			D							
3000 kPa	30 bar	435 psi			U							
10000 kPa	100 bar	1450 psi			R							
Absolute Pressure Transmitter												
261AC	Base accuracy 0.15 %		Catalog No.	261AC-								
Sensor-Span limits												
40 kPa	400 mbar	300 mmHg			F							
250 kPa	2500 mbar	1875 mmHg			L							
1000 kPa	10 bar	7500 mmHg			D							
3000 kPa	30 bar	435 psi			U							
10000 kPa	100 bar	1450 psi			R							
Diaphragm material / Fill fluid (sensor)												
Front bonded diaphragm	Silicone oil					2)	R					
Front bonded diaphragm	Carbon fluoride					1, 2)	2					
Front bonded diaphragm	White oil					2)	6					
Front bonded diaphragm	No filling					3)	3					
Size / Mounting flange rating												
1 in	ASME CL 150							3				
1 in	ASME CL 300							4				
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 25	DIN PN 10/40					11)		2				
DN 50	DIN PN 16/40							M				
DN 50	DIN PN 63							P				
DN 50	DIN PN 100							R				
DN 80	DIN PN 16/40							L				
DN 80	DIN PN 63							Q				
DN 80	DIN PN 100							S				
Mounting flange / Seat form (flange)												
AISI 316 ss / 1.4401	Form RF – raised face	NACE				4)		E				
AISI 316 ss / 1.4401	EN 1092 - B2 (DIN 2526 - Form E)	NACE				5)		S				
AISI 316 ss / 1.4401	EN 1092 - B1 (DIN 2526 - Form D)	NACE				12)		4				
AISI 316 ss / 1.4401	EN 1092 - E (DIN 2513 - V13)	NACE				5)		M				
AISI 316 ss / 1.4401	EN 1092 - D (DIN 2512 - N)	NACE				5)		N				

- 1) suitable for oxygen applications
- 2) not available with sensor range 60 and 400 mbar
- 3) only available with sensor range 60 and 400 mbar
- 4) only for size / mounting flange rating according to ASME
- 5) only for size / mounting flange rating according to DIN
- 11) only with seat form EN 1092 - B1
- 12) only with size DN 25

Continued on next page

12.2 Ordering information for model 261GC/261AC (cont.)

Gauge Pressure Transmitter		Variant digit No.	1 - 6	11	12	13	14	Code				
261GC	Base accuracy 0.15 %	Catalog No.	261GC-									
Absolute Pressure Transmitter												
261AC	Base accuracy 0.15 %	Catalog No.	261AC-									
Extension length and material DN 25 / 1 in												
Without extension				F								
Extension length and material DN 50 / 2 in												
Without extension				F								
50 mm	AISI 316L ss / 1.4404			1								
50 mm	Hastelloy C276™			2								
100 mm	AISI 316L ss / 1.4404			3								
100 mm	Hastelloy C276™			4								
150 mm	AISI 316L ss / 1.4404			5								
150 mm	Hastelloy C276™			6								
Extension length and material DN 80 / 3 in												
Without extension				F								
50 mm	AISI 316L ss / 1.4404			1								
50 mm	Hastelloy C276™			2								
100 mm	AISI 316L ss / 1.4404			3								
100 mm	Hastelloy C276™			4								
150 mm	AISI 316L ss / 1.4404			5								
150 mm	Hastelloy C276™			6								
Diaphragm material (process connection)		Form RF / EN 1092 - B2/B1										
AISI 316L ss / 1.4435	NACE	6)		S								
Hastelloy C276™	NACE	7, 13)		H								
Tantalum	NACE	8, 13)		T								
AISI 316L ss / 1.4435 with FEP non-adhesive coating	NACE	8, 13)		1								
Hastelloy C276™ with FEP non-adhesive coating	NACE	8, 13)		2								
Diaphragm material (process connection)		EN 1092 - E										
AISI 316L ss / 1.4435	NACE	6)		S								
Hastelloy C276™	NACE	7, 13)		H								
Tantalum	NACE	8, 13)		T								
AISI 316L ss / 1.4435 with FEP non-adhesive coating	NACE	8, 13)		1								
Hastelloy C276™ with FEP non-adhesive coating	NACE	8, 13)		2								
Diaphragm material (process connection)		EN 1092 - D										
AISI 316L ss / 1.4435	NACE	6)		S								
Hastelloy C276™	NACE	7, 13)		H								
Fill fluid												
Silicone oil				S								
Carbon fluoride		9)		N								
White oil (FDA certified)		10)		W								
Silicone oil for vacuum applications				L								
White oil (FDA certified) for vacuum applications		10)		Y								
Electronic housing												
Housing material		Electrical connection										
AISI 316L ss / 1.4404	M16 x 1.5 (with cable gland made of plastic)							2				
AISI 316L ss / 1.4404	1/2-14 NPT (without cable gland)							S				
AISI 316L ss / 1.4404	M20 x 1.5 (with cable gland made of plastic)							T				
AISI 316L ss / 1.4404	Harting Han connector						14)	3				
AISI 316L ss / 1.4404	Miniature connector						14)	Z				

- 6) not with tube of Hastelloy C
- 7) not with tube of stainless steel
- 8) not with tube and not with seat form EN 1092 - D (groove)
- 9) suitable for oxygen applications
- 10) suitable for food applications
- 13) not with size 1" / DN 25
- 14) select connector type with additional ordering code

Continued on next page

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12.3 Ordering information for model 261GC/261AC (cont.)

Gauge Pressure Transmitter 261GC Base accuracy 0.15 %	Variant digit No.	1 - 6	12	13	14	15	Code			
	Catalog No.	261GC-								
Absolute Pressure Transmitter 261AC Base accuracy 0.15 %	Catalog No.	261AC-								
Output / Additional options HART digital communication and 4...20 mA HART digital communication and 4...20 mA	No additional options Options requested (to be ordered by "Additional Ordering Code")					15)	H 1			

15) not for electr. connection with connector

12.4 Additional ordering information for model 261GC/261AC

261GC , 261AC	Code			
Explosion protection ATEX Group II Category 1/2 G – Intrinsic Safety EEx ia ATEX Group II Category 1/2 G and 1/2 D – Intrinsic Safety EEx ia Factory Mutual (FM) – Intrinsically Safe Canadian Standard Association – Intrinsically Safe NEPSI Ex ia IIC T-T6 gas NEPSI Ex ia IIC T-T6 gas & dust	EH EL EA ED X3 X4			
Integrated digital display (LCD) With integrated LCD display	L1			
Electronic housing accessories Housing with external ground terminal Cable gland M16 x 1.5 / M20 x 1.5 and atmosphere ventilation of metal	AA AB			
Applications Oil and grease-free for oxygen measurement (O ₂) (only available with carbon fluoride fill) P _{max} = 21 MPa/210 bar/3045 psi, T _{max} = 60 °C/140 °F	P1			
Operating Instruction German Italian French English Swedish Russian	M1 M2 M4 M5 M7 MB			
Additional tag plate Stainless steel (Laser labeled, max. 30 characters)	I1			
Certificates / Approvals Inspection certificate EN 10204-3.1 of calibration Inspection certificate EN 10204-3.1 of the cleanliness stage Inspection certificate EN 10204-3.1 of helium leakage test of the sensor module Inspection certificate EN 10204-3.1 of the pressure test Confirmation of compliance with the order EN 10204-2.1 of instrument design SIL2 - Declaration of conformity MVO-approval (only with fill fluid white oil) Non-linearity 0.1 % with calibration record	C1 C3 C4 C5 C6 CL CR CQ			
Material certificates Confirmation of compliance with the order EN 10204-2.1 of process wetted parts Inspection certificate EN 10204-3.1 for pressure-bearing process wetted parts with analysis certificates as material verification (minor parts with Factory Certificate acc. to EN 10204) Test report EN 10204-2.2 for pressure bearing process wetted parts	H1 H3 H4			
Connector Miniature connector M12 x 1 (without mating female plug) Harting Han 8D (8U) – straight entry	U2 U3			16)

15) not available for electrical connection with connector

16) only for electr. connection with Harting Han connector

12.5 Ordering information for model 261GG/261AG

Gauge Pressure Transmitter			Variant digit No.	1 - 6	7	8	9	10	11	12	13	Code				
261GG	Base accuracy 0.15 %	Catalog No.	261GG-		0											
Sensor-Span limits																
40 kPa	400 mbar	160 in H ₂ O		F												
250 kPa	2500 mbar	1000 in H ₂ O		L												
1000 kPa	10 bar	145 psi		D												
4000 kPa	40 bar	580 psi		1												
Absolute Pressure Transmitter																
261AG	Base accuracy 0.15 %	Catalog No.	261AG-													
Sensor-Span limits																
40 kPa	400 mbar	300 mmHg		F												
250 kPa	2500 mbar	1875 mmHg		L												
1000 kPa	10 bar	7500 mmHg		D												
4000 kPa	40 bar	580 psi		1												
Process connection																
Dairy thread DIN 11851, DN 32, PN 40		available with 3A Approval					B									
Dairy thread DIN 11851, DN 40, PN 40		available with 3A Approval					C									
Dairy thread DIN 11851, DN 50, PN 25		available with 3A Approval					D									
SMS 1½ in Union nut PN 40		available with 3A Approval					F									
SMS 2 in Union nut PN 40		available with 3A Approval					G									
RJT Union nut DN 1½ in, PN 40							J									
RJT Union nut DN 2 in, PN 40							K									
Tri-Clamp connection acc. to ASME 1 1/2 in, PN 40		available with 3A Approval					M									
Tri-Clamp connection acc. to ASME 2 in, PN 40		available with 3A Approval					N									
Tri-Clamp connection acc. to ASME 3 in, PN 25		available with 3A Approval					P									
Varivent for pipes DN 25		available with 3A Approval					R									
Varivent for pipes DN 40...DN 125		available with 3A Approval					S									
Neumo-Biocontrol G50		available with 3A Approval					T									
Neumo-Biocontrol G65		available with 3A Approval					U									
DRD flange, D = 65 mm		available with 3A Approval					Y									
Diaphragm material (process connection)																
AISI 316L ss / 1.4435		NACE					S									
Fill fluid																
Silicone oil									S							
Carbon fluoride					1)				N							
White oil (FDA certified)					2)				W							
Silicone oil for vacuum applications									L							
White oil (FDA certified) for vacuum applications					2)				Y							
Sealing (O-ring)																
Without						3)			1							
Buna (max. 120 °C)						4)			4							
Viton						17)			3							
PTFE						4)			2							
Electronic housing																
Housing material		Electrical connection														
AISI 316L ss / 1.4404		M16 x 1.5 (with cable gland made of plastic)									2					
AISI 316L ss / 1.4404		1/2-14 NPT (without cable gland)									S					
AISI 316L ss / 1.4404		M20 x 1.5 (with cable gland made of plastic)									T					
AISI 316L ss / 1.4404		Harting Han connector					14)				3					
AISI 316L ss / 1.4404		Miniature connector					14)				Z					

Continued on next page

- 1) suitable for oxygen applications
- 2) suitable for food applications
- 3) for all connections except dairy thread
- 4) only for dairy thread
exception: no sealing will be supplied for 3A approval
- 14) select connector type with additional ordering code
- 17) only for DRD flange

12.6 Ordering information for model 261GG/261AG (cont.)

Gauge Pressure Transmitter 261GG Base accuracy 0.15 %	Variant digit No.	1 - 6	8	9	10	11	12	13	14	Code			
	Catalog No.	261GG-											
Absolute Pressure Transmitter 261AG Base accuracy 0.15 %	Catalog No.	261AG-											
Output / Additional options HART digital communication and 4...20 mA HART digital communication and 4...20 mA (to be ordered by "Additional Ordering Code")	No additional options Options requested						15)		H 1				

15) not for electr. connection with connector

12.7 Additional ordering information for model 261GG/261AG

261GG , 261AG	Code			
Explosion protection ATEX Group II Category 1/2 G – Intrinsic Safety EEx ia ATEX Group II Category 1/2 G and 1/2 D – Intrinsic Safety EEx ia Factory Mutual (FM) – Intrinsically Safe Canadian Standard Association – Intrinsically Safe NEPSI Ex ia IIC T-T6 gas NEPSI Ex ia IIC T-T6 gas & dust	EH EL EA ED X3 X4			
Integrated digital display (LCD) With integrated LCD display	L1			
Electronic housing accessories Housing with external ground terminal Cable gland M16 x 1.5 / M20 x 1.5 and atmosphere ventilation of metal	AA AB			
Applications Oil and grease-free for oxygen measurement (O ₂) (only available with carbon fluoride fill) P _{max} = 21 MPa/210 bar/3045 psi, T _{max} = 60 °C/140 °F Process connection electropolished	P1 P5			
Operating Instruction German Italian French English Swedish Russian	M1 M2 M4 M5 M7 MB			
Additional tag plate Stainless steel (Laser labeled, max. 30 characters)	I1			
Certificates / Approvals Inspection certificate EN 10204-3.1 of calibration Inspection certificate EN 10204-3.1 of the cleanliness stage Inspection certificate EN 10204-3.1 of helium leakage test of the sensor module Inspection certificate EN 10204-3.1 of the pressure test Confirmation of compliance with the order EN 10204-2.1 of instrument design SIL2 - Declaration of conformity 3A approval MVO-approval (only with fill fluid white oil) Non-linearity 0.1 % with calibration record	C1 C3 C4 C5 C6 CL CN CR CQ			
Material certificates Confirmation of compliance with the order EN 10204-2.1 of process wetted parts Inspection certificate EN 10204-3.1 for pressure-bearing process wetted parts with analysis certificates as material verification (minor parts with Factory Certificate acc. to EN 10204) Test report EN 10204-2.2 for pressure bearing process wetted parts	H1 H3 H4			
Connector Miniature connector M12 x 1 (without mating female plug) Harting Han 8D (8U) – straight entry	U2 U3			
			16)	

15) not available for electrical connection with connector

16) only for electr. connection with Harting Han connector and HART output

12.8 Ordering information for model 261GJ/261AJ

Gauge Pressure Transmitter			Variant digit No.	1 - 6	7	8	9	10	11	12	13	Code				
261GJ	Base accuracy 0.15 %	Catalog No.	261GJ-													
Sensor–Span limits																
40 kPa	400 mbar	160 in H ₂ O		F												
250 kPa	2500 mbar	1000 in H ₂ O		L												
1000 kPa	10 bar	145 psi		D												
3000 kPa	30 bar	435 psi		U												
10000 kPa	100 bar	1450 psi		R												
60000 kPa	600 bar	8700 psi		V												
Absolute Pressure Transmitter																
261AJ	Base accuracy 0.15 %	Catalog No.	261AJ-													
Sensor–Span limits																
40 kPa	400 mbar	300 mmHg		F												
250 kPa	2500 mbar	1875 mmHg		L												
1000 kPa	10 bar	7500 mmHg		D												
3000 kPa	30 bar	435 psi		U												
10000 kPa	100 bar	1450 psi		R												
Diaphragm material / Fill fluid (sensor)																
Mounted seal	Silicone oil					R										
Mounted seal	Carbon fluoride					2										
Mounted seal	White oil	necessary for 3A Approval				6										
Mounted seal	No filling					3										
Connection																
DN 25, PN 40, dairy thread acc. to DIN 11851			18)			E										
DN 40, PN 40, dairy thread acc. to DIN 11851			18)			F										
DN 50, PN 25, dairy thread acc. to DIN 11851			18)			G										
DN 1 in, PN 40, Tri-Clamp for pipes acc. to ASME			18)			H										
DN 1 1/2 in, PN 40, Tri-Clamp for pipes acc. to ASME			18)			J										
DN 2 in, PN 40, Tri-Clamp for pipes acc. to ASME			18)			K										
DN 25 / ASME 1 in						A										
DN 40						B										
DN 50 / ASME 2 in						C										
DN 80 / ASME 3 in						D										
Diaphragm material (seal)																
AISI 316L ss / 1.4435		NACE					R									
Fill fluid																
Silicone oil								S								
Carbon fluoride					1)			N								
White oil (FDA certified)					2)			W								
Silicone oil for vacuum applications								L								
White oil (FDA certified) for vacuum applications					2)			Y								
Electronic housing																
Housing material		Electrical connection														
AISI 316L ss / 1.4404		M16 x 1.5 (with cable gland made of plastic)								2						
AISI 316L ss / 1.4404		1/2-14 NPT (without cable gland)								S						
AISI 316L ss / 1.4404		M20 x 1.5 (with cable gland made of plastic)								T						
AISI 316L ss / 1.4404		Harting Han connector			14)					3						
AISI 316L ss / 1.4404		Miniature connector			14)					Z						
Output / Additional options																
HART digital communication and 4...20 mA		No additional options							15)	H						
HART digital communication and 4...20 mA		Options requested								1						
(to be ordered by "Additional Ordering Code")																

- 1) suitable for oxygen applications
- 2) suitable for food applications
- 14) select connector type with additional ordering code
- 15) not for electr. connection with connector
- 17) only available with sensor range 400 mbar
- 18) available with 3A approval

12.9 Additional ordering information for model 261GJ/261AJ

261GJ , 261AJ	Code			
Explosion protection				
ATEX Group II Category 1/2 G – Intrinsic Safety EEx ia	EH			
ATEX Group II Category 1/2 G and 1/2 D – Intrinsic Safety EEx ia	EL			
Factory Mutual (FM) – Intrinsically Safe	EA			
Canadian Standard Association – Intrinsically Safe	ED			
NEPSI Ex ia IIC T-T6 gas	X3			
NEPSI Ex ia IIC T-T6 gas & dust	X4			
Integrated digital display (LCD)				
With integrated LCD display	L1			
Electronic housing accessories				
Housing with external ground terminal	AA			
Cable gland M16 x 1.5 / M20 x 1.5 and atmosphere ventilation of metal	AB			
Applications				
Oil and grease-free for oxygen measurement (O ₂) (only available with carbon fluoride fill) P _{max} = 21 MPa/210 bar/3045 psi, T _{max} = 60 °C/140 °F	P1			
Operating Instruction				
German	M1			
Italian	M2			
French	M4			
English	M5			
Swedish	M7			
Russian	MB			
Additional tag plate				
Stainless steel (Laser labeled, max. 30 characters)	I1			
Certificates / Approvals				
Inspection certificate EN 10204-3.1 of calibration	C1			
Inspection certificate EN 10204-3.1 of the cleanliness stage	C3			
Inspection certificate EN 10204-3.1 of helium leakage test of the sensor module	C4			
Inspection certificate EN 10204-3.1 of the pressure test	C5			
Confirmation of compliance with the order EN 10204-2.1 of instrument design	C6			
SIL2 - Declaration of conformity	CL			
3A approval	CN			
MVO-approval (only with fill fluid white oil)	CR			
Non-linearity 0.1 % with calibration record	CQ			
Material certificates				
Confirmation of compliance with the order EN 10204-2.1 of process wetted parts	H1			
Inspection certificate EN 10204-3.1 for pressure-bearing process wetted parts with analysis certificates as material verification (minor parts with Factory Certificate acc. to EN 10204)	H3			
Test report EN 10204-2.2 for pressure bearing process wetted parts	H4			
Connector				
Miniature connector M12 x 1 (without mating female plug)	U2			
Harting Han 8D (8U) – straight entry	U3			

15) not available for electrical connection with connector

16) only for electr. connection with Harting Han connector and HART output

12.10 Ordering information for model 261GM/261AM

Gauge Pressure Transmitter			Variant digit No.	1 - 6	7	8	9	10	11	12	13	14	Code
261GM	Base accuracy 0.15 %	Catalog No.	261GM-										
Sensor-Span limits													
40 kPa	400 mbar	160 in H ₂ O		F									
250 kPa	2500 mbar	1000 in H ₂ O		L									
1000 kPa	10 bar	145 psi		D									
3000 kPa	30 bar	435 psi		U									
10000 kPa	100 bar	1450 psi		R									
60000 kPa	600 bar	8700 psi		V									
Absolute Pressure Transmitter													
261AM	Base accuracy 0.15 %	Catalog No.	261AM-										
Sensor-Span limits													
40 kPa	400 mbar	300 mmHg		F									
250 kPa	2500 mbar	1875 mmHg		L									
1000 kPa	10 bar	7500 mmHg		D									
3000 kPa	30 bar	435 psi		U									
10000 kPa	100 bar	1450 psi		R									
Diaphragm material / Fill fluid (sensor)													
Front bonded diaphragm	Silicone oil		1)	R									
Front bonded diaphragm	No filling		2)	3									
Size / Mounting flange rating													
1 in	ASME CL 150												
1 in	ASME CL 300												
1 in	ASME CL 600												
1 in	ASME CL 1500												
DN 25	DIN PN 10/40												
DN 25	DIN PN 63/100												
DN 25	DIN PN 160												
DN 25	DIN PN 250												
Mounting flange material / Seat form (seal)													
AISI 316 ss / 1.4401	Form RF – smooth finish	NACE	3)						E				
AISI 316 ss / 1.4401	EN 1092 - B1 (DIN 2526 - Form D)	NACE	4)						4				
AISI 316 ss / 1.4401	EN 1092 - D (DIN 2512 - N)	NACE	5)						N				
Diaphragm material (wetted parts)													
AISI 316L ss / 1.4435	NACE								S				
Fill fluid													
Silicone oil										S			
Silicone oil for vacuum applications										L			
Electronic housing													
Housing material			Electrical connection										
AISI 316L ss / 1.4404			M16 x 1.5 (with cable gland made of plastic)								2		
AISI 316L ss / 1.4404			1/2-14 NPT (without cable gland)								S		
AISI 316L ss / 1.4404			M20 x 1.5 (with cable gland made of plastic)								T		
AISI 316L ss / 1.4404			Harting Han connector				14)				3		
AISI 316L ss / 1.4404			Miniature connector				14)				Z		
Output / Additional options													
HART digital communication and 4...20 mA			No additional options				15)				H		
HART digital communication and 4...20 mA			Options requested								1		
(to be ordered by "Additional Ordering Code")													

- 1) not available with sensor range 400 mbar
- 2) only available with sensor range 400 mbar
- 3) only for size / mounting flange rating according to ASME
- 4) only for size / mounting flange rating according to DIN
- 5) only for size / mounting flange rating according to DIN and only for 10/40 bar
- 14) select connector type with additional ordering code
- 15) not for electr. connection with connector

12.11 Additional ordering information for model 265GM/265AM

261GM , 261AM	Code			
Explosion protection				
ATEX Group II Category 1/2 G – Intrinsic Safety EEx ia	EH			
ATEX Group II Category 1/2 G and 1/2 D – Intrinsic Safety EEx ia	EL	15)		
Factory Mutual (FM) – Intrinsically Safe	EA	15)		
Canadian Standard Association – Intrinsically Safe	ED	15)		
NEPSI Ex ia IIC T-T6 gas	X3			
NEPSI Ex ia IIC T-T6 gas & dust	X4			
Integrated digital display (LCD)				
With integrated LCD display	L1			
Electronic housing accessories				
Housing with external ground terminal	AA			
Cable gland M16 x 1.5 / M20 x 1.5 and atmosphere ventilation of metal	AB			
Operating Instruction				
German	M1			
Italian	M2			
French	M4			
English	M5			
Swedish	M7			
Russian	MB			
Additional tag plate				
Stainless steel (Laser labeled, max. 30 characters)	I1			
Certificates / Approvals				
Inspection certificate EN 10204-3.1 of calibration	C1			
Inspection certificate EN 10204-3.1 of the cleanliness stage	C3			
Inspection certificate EN 10204-3.1 of helium leakage test of the sensor module	C4			
Inspection certificate EN 10204-3.1 of the pressure test	C5			
Confirmation of compliance with the order EN 10204-2.1 of instrument design	C6			
SIL2 - Declaration of conformity	CL			
MVO-approval (only with fill fluid white oil)	CR			
Non-linearity 0.1 % with calibration record	CQ			
Material certificates				
Confirmation of compliance with the order EN 10204-2.1 of process wetted parts	H1			
Inspection certificate EN 10204-3.1 for pressure-bearing process wetted parts with analysis certificates as material verification (minor parts with Factory Certificate acc. to EN 10204)	H3			
Test report EN 10204-2.2 for pressure bearing process wetted parts	H4			
Connector				
Miniature connector M12 x 1 (without mating female plug)	U2			
Harting Han 8D (8U) – straight entry	U3	16)		

15) not available for electrical connection with connector

16) only for electr. connection with Harting Han connector and HART output

12.12 Ordering information for model 261GN/261AN

Gauge Pressure Transmitter			Variant digit No.	1 - 6	7	8	9	10	11	12	13	Code				
261GN Base accuracy 0.15 %			Catalog No.	261GN-												
Sensor–Span limits																
250 kPa	2500 mbar	1000 in H ₂ O			L											
1000 kPa	10 bar	145 psi			D											
3000 kPa	30 bar	435 psi			U											
10000 kPa	100 bar	1450 psi			R											
60000 kPa	600 bar	8700 psi			V											
Absolute Pressure Transmitter																
261AN Base accuracy 0.15 %			Catalog No.	261AN-												
Sensor–Span limits																
250 kPa	2500 mbar	1875 mmHg			L											
1000 kPa	10 bar	7500 mmHg			D											
3000 kPa	30 bar	435 psi			U											
10000 kPa	100 bar	1450 psi			R											
Diaphragm material / Fill fluid (sensor)																
Front bonded diaphragm	Silicone oil					R										
Front bonded diaphragm	Carbon fluoride					2										
Front bonded diaphragm	White oil					6										
Connection / Rating																
G 1 A - PN 600							1									
G 1 1/2 A - PN 600							2									
Diaphragm material (process connection)																
AISI 316L ss / 1.4435			NACE					S								
Fill fluid																
Silicone oil									S							
Carbon fluoride						1)			N							
White oil (FDA certified)						2)			W							
Silicone oil for vacuum applications									L							
White oil (FDA certified) for vacuum applications						2)			Y							
Electronic housing																
Housing material			Electrical connection													
AISI 316L ss / 1.4404			M16 x 1.5 (with cable gland made of plastic)							2						
AISI 316L ss / 1.4404			1/2-14 NPT (without cable gland)							S						
AISI 316L ss / 1.4404			M20 x 1.5 (with cable gland made of plastic)							T						
AISI 316L ss / 1.4404			Harting Han connector					14)		3						
AISI 316L ss / 1.4404			Miniature connector					14)		Z						
Output / Additional options																
HART digital communication and 4...20 mA			No additional options						15)		H					
HART digital communication and 4...20 mA			Options requested								1					
			(to be ordered by "Additional Ordering Code")													

- 1) suitable for oxygen applications
- 2) suitable for food applications
- 14) select connector type with additional ordering code
- 15) not for electr. connection with connector

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12.13 Additional ordering information for model 261GN/261AN

261GN , 261AN	Code			
Explosion protection				
ATEX Group II Category 1/2 G – Intrinsic Safety EEx ia	EH			
ATEX Group II Category 1/2 G and 1/2 D – Intrinsic Safety EEx ia	EL	15)		
Factory Mutual (FM) – Intrinsically Safe	EA	15)		
Canadian Standard Association – Intrinsically Safe	ED	15)		
NEPSI Ex ia IIC T-T6 gas	X3			
NEPSI Ex ia IIC T-T6 gas & dust	X4			
Integrated digital display (LCD)				
With integrated LCD display	L1			
Electronic housing accessories				
Housing with external ground terminal	AA			
Cable gland M16 x 1.5 / M20 x 1.5 and atmosphere ventilation of metal	AB			
Applications				
Oil and grease-free for oxygen measurement (O ₂) (only available with carbon fluoride fill) P _{max} = 21 MPa/210 bar/3045 psi, T _{max} = 60 °C/140 °F	P1			
Operating Instruction				
German	M1			
Italian	M2			
French	M4			
English	M5			
Swedish	M7			
Russian	MB			
Additional tag plate				
Stainless steel (Laser labeled, max. 30 characters)	I1			
Certificates / Approvals				
Inspection certificate EN 10204-3.1 of calibration	C1			
Inspection certificate EN 10204-3.1 of the cleanliness stage	C3			
Inspection certificate EN 10204-3.1 of helium leakage test of the sensor module	C4			
Inspection certificate EN 10204-3.1 of the pressure test	C5			
Confirmation of compliance with the order EN 10204-2.1 of instrument design	C6			
SIL2 - Declaration of conformity	CL			
MVO-approval (only with fill fluid white oil)	CR			
Non-linearity 0.1 % with calibration record	CQ			
Material certificates				
Confirmation of compliance with the order EN 10204-2.1 of process wetted parts	H1			
Inspection certificate EN 10204-3.1 for pressure-bearing process wetted parts with analysis certificates as material verification (minor parts with Factory Certificate acc. to EN 10204)	H3			
Test report EN 10204-2.2 for pressure bearing process wetted parts	H4			
Connector				
Miniature connector M12 x 1 (without mating female plug)	U2			
Harting Han 8D (8U) – straight entry	U3	16)		

15) not available for electrical connection with connector

16) only for electr. connection with Harting Han connector and HART output

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