ABB MEASUREMENT & ANALYTICS | DATA SHEET

Model 261GR and 261AR

Gauge and absolute pressure transmitters with remote seal



Measurement made easy

Engineered solutions for all applications

Featuring remote seal with capillary tube
Base accuracy
- ± 0.1 %

Span limits
- 6 to 60000 kPa; 24 in H2O up to 8700 psi
- 6 to 3000 kPa abs; 45 mm Hg up to 1450 psia

Proven sensor technology together with state-of-the-art digital technology
- Large turn down ratio of up to 20:1

Stainless steel housing
- Optimized for use in harsh ambient conditions
- Extremely robust

Flexible configuration options
- Local configuration via setup button for upper and lower range values
- Local configuration via buttons on LCD indicator
- Via handheld terminal or PC user interface

Large selection of versions, options, filling fluids, and parts that make contact with the medium
- Enables complete flexibility and therefore maximum cost effectiveness

PED compliance to Sound Engineering Practice (SEP)

Product in compliance with Directive 2011/65/UE (RoHS II)

General description

This data sheet describes transmitters that are equipped with a remote seal connected to the transmitter sensor via a capillary tube.

IMPORTANT
All data and detailed information relating to the remote seal can be obtained from remote seal data sheet SS/S261-EN.

Functional specification

Measuring range limits and span limits

Sensor code	Measuring range upper limit (URL)	Measuring range lower limit (LRL) Model 261GS	Overload limits Measuring equipment	Minimum measuring span				
				Flush diaphragm			With tube	
				DN 25 / 1 in	DN 50 / 2 in	DN 80 / 3 in	DN 50 / 2 in	DN 80 / 3 in
				max. 250 bar 25 MPa 3625 psi	max. 100 bar 10 MPa 1450 psi	max. 100 bar 10 MPa 1450 psi	max. 100 bar 10 MPa 1450 psi	max. 100 bar 10 MPa 1450 psi
				Max. capillary tube length = 6 m	Max. capillary tube length = 16 m	Max. capillary tube length = 16 m	Max. capillary tube length = 16 m	Max. capillary tube length = 16 m
C	6 kPa 60 mbar 24 inH_2O	-6 kPa -60 mbar 24 inH_2O	1 MPa 10 bar 145 psi	-	-	6 MPa 60 mbar 24 in H_2O	-	6 MPa 60 mbar 24 in H_2O
F	40 kPa 400 mbar 160 inH_2O	-40 kPa -400 mbar -160 inH_2O	1 MPa 10 bar 145 psi	16 kPa 160 mbar 64 in H_2O	10 kPa 100 mbar 40 in H_2O	6 kPa 60 mbar 24 in H_2O	16 kPa 160 mbar 64 in H_2O	6 kPa 60 mbar 24 in H_2O
L	250 kPa 2500 mbar 1000 inH_2O	0 abs	500 kPa 5 bar 72,5 psi	16 kPa 160 mbar 64 in H_2O	12,5 kPa 125 mbar 50 in H_2O	12,5 kPa 125 mbar 50 in H_2O	16 kPa 160 mbar 64 in H_2O	12,5 kPa 125 mbar 50 in H_2O
D	1000 kPa 10 bar 145 psi	0 abs	2 MPa 20 bar 290 psi	50 kPa 500 mbar 200 in H_2O	50 kPa 500 mbar 200 in H_2O	50 kPa 500 mbar 200 in H_2O	50 kPa 500 mbar 200 in H_2O	50 kPa 500 mbar 200 in H_2O
U	3000 kPa 30 bar 435 psi	0 abs	6 MPa 60 bar 870 psi	150 kPa 1,5 bar 21,8 psi	150 kPa 1,5 bar 21,8 psi	150 kPa 1,5 bar 21,8 psi	150 kPa 1,5 bar 21,8 psi	150 kPa 1,5 bar 21,8 psi
R	10 MPa 100 bar 1450 psi	0 abs	20 MPa 200 bar 2900 psi	500 kPa 5 bar 72,5 psi	500 kPa 5 bar 72,5 psi	500 kPa 5 bar 72,5 psi	500 kPa 5 bar 72,5 psi	500 kPa 5 bar 72,5 psi
V	60 MPa 600 bar 8700 psi	0 abs	90 MPa 900 bar 13050 psi	3 MPa 30 bar 435 psi	3 MPa 30 bar 435 psi	3 MPa 30 bar 435 psi	3 MPa 30 bar 435 psi	3 MPa 30 bar 435 psi

NOTE
The measuring range lower limit (LRL) for model 261AR sensor codes C, F, L, D, and U is absolute 0.

...Functional specification

Measuring range limits and span limits

Sensor code	Measuring range upper limit (URL)	Measuring range lower limit (LRL) Model 261GS	Overload limits Measuring equipment	Minimum measuring span			
				In-line diaphragm seal			
				DN 25 / 1 in	DN 40	DN 50 / 2 in	DN 80 / 3 in
				max. 100 bar 10 MPa 1450 psi	max. 100 bar 10 MPa 1450 psi	max. 100 bar 10 MPa 1450 psi	max. 100 bar 10 MPa 1450 psi
				Max. capillary tube length = 4 m	Max. capillary tube length = 6 m	Max. capillary tube length = 8 m	Max. capillary tube length = 8 m
C	6 kPa 60 mbar 24 inH_2O	-6 kPa -60 mbar 24 inH_2O	1 MPa 10 bar 145 psi	-	-	-	-
F	40 kPa 400 mbar 160 inH_2O	-40 kPa -400 mbar -160 inH_2O	1 MPa 10 bar 145 psi	-	-	-	-
L	250 kPa 2500 mbar 1000 inH_2O	0 abs	500 kPa 5 bar 72,5 psi	-	-	-	-
D	1000 kPa 10 bar 145 psi	0 abs	2 MPa 20 bar 290 psi	0,4 kPa 4 mbar 58 psi	250 kPa 2,5 mbar 36 psi	250 kPa 2,5 mbar 36 psi	250 kPa 2,5 mbar 36 psi
U	3000 kPa 30 bar 435 psi	0 abs	6 MPa 60 bar 870 psi	0,4 kPa 4 mbar 58 psi	250 kPa 2,5 mbar 36 psi	250 kPa 2,5 bar 36 psi	250 kPa 2,5 bar 36 psi
R	10 MPa 100 bar 1450 psi	0 abs	20 MPa 200 bar 2900 psi	500 kPa 5 bar 72,5 psi	500 kPa 5 bar 72,5 psi	500 kPa 5 bar 72,5 psi	500 kPa 5 bar 72,5 psi
V	60 MPa 600 bar 8700 psi	0 abs	90 MPa 900 bar 13050 psi	3 MPa 30 bar 435 psi	3 MPa 30 bar 435 psi	3 MPa 30 bar 435 psi	3 MPa 30 bar 435 psi

Span limits

Maximum span = measuring range upper limit (URL)
To optimize performance characteristics, it is recommended that you select the transmitter sensor code with the lowest turn down ratio.
TURNDOWN = Upper range limit/set span

Damping

Configurable time constant between 0 and 60 s.
This is in addition to the sensor response time, and can be adjusted via the optional LCD indicator, handheld terminal, or PC user interface.

Warm-up time

Ready for operation as per specifications in less than 10 s with minimum damping.

Insulation resistance

>100 MΩ at 500 V DC (between terminals and ground).
with minimum damping.

Zero suppression and elevation

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

Operating limits

Pressure limits

The maximum permissible pressure depends on the permissible sensor overload (refer to table "Measuring range limits and span limits") and the permissible working pressure for the process connection (according to the ordering information).
The table below specifies the minimum permissible pressure, as well as the process temperature depending on the remote seal filling fluid.

Filling fluids (applications)	ID	Density at 20 °C in kg / m3	Thermal expansion (x 10-4 / K)	Process temperature	Pressure in kPa					
					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	IL	935	10,8	-30 to 250 °C (-22 to 482 °F)	> 0,5	> 0,5	> 1,5	> 5	> 100	-
Fluorocarbon	G5	1830	10,9	-30 to 150 °C (-22 to 302 °F)	> 0,3	> 3,5	> 32,5	-	-	-
High temperature oil	SH	1070	7,7	-10 to 375 °C (-14 to 707 °F)	> 0,07	> 0,07	> 0,07	> 0,07	> 1,6	> 100
White oil (FDA)	WB	849	7,9	-6 to 200 °C (-21 to 392 °F)	> 50	> 100	> 100	> 50	> 100	> 100
Silicone oil for vacuum-tight design	IL-V	935	10,8	-30 to 250 °C (-22 to 482 °F)	> 0,07	> 0,07	> 0,5	> 4,5	> 38,5	-
White oil (FDA) for vacuum-proof design	WB-V	849	7,9	-6 to 200 °C (-21 to 392 °F)	> 0,5	> 2,5	> 5	> 100	-	-

Overpressure limits (without damage to the transmitter)

The transmitter may be exposed to a process pressure level of up to the overload limit of the sensor, or up to the maximum working pressure of the remote seal, without being damaged. This is dependent on which value is lower.

...Operating limits

Temperature limits °C (°F)

Environment

Model 261GR, 261AR	Ambient temperature limits
Operating temperature range	-40 to 85 °C (-40 to 185 °F)
White oil filling	-6 to 85 °C (21 to 185 °F)
LCD display	-20 to 70 °C (-4 to 158 °F)

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

Storage

Model 261GR, 261AR	Storage temperature range
Storage temperature range	-50 to 85 °C (-58 to 185 °F)
LCD display	-40 to 85 °C (-40 to 185 °F)
White oil filling	-6 to 85 °C (21 to 185 °F)

Model 261GR, 261AR	Humidity during storage
Relative humidity	Up to 75 %

Electromagnetic compatibility (EMC)

The devices conform to the requirements and tests for EMC Directive 2014/30/UE, as well as EN 61000-6-3 concerning emitted interference and EN 61000-6-1, EN 61000-6-2 concerning interference immunity.
The devices fulfill NAMUR recommendations.

Pressure Equipment Directive (PED)

The devices meet the requirements of Directive 2014/68/UE, following Sound Engineer Practice (SEP).

Humidity

Relative humidity: Up to 100 %
Condensation, icing: Permissible

Vibration resistance

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

Shock resistance

Acceleration: 50 g
Duration: 11 ms
(according to 60068-2-27)

Humid and dusty atmospheres (degree of protection)

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

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

IP65 degree of protection with plug connection

ATEX transmitter with type of protection "intrinsic safety Ex ia/ib" in accordance with Directive 2014/34/UE

Transmitter with 4 to 20 mA output signal and HART communication	
Certificate no.	PTB 05 ATEX 2032
Labeling	II 1/2 G Ex ia IIC T4 to T6 Ga/Gb II 2 G Ex ib IIC T4 to T6 Gb

Permissible ambient temperature range according to temperature class:	
Ambient temperature	**Temperature class**
-40 to 85 °C (-40 to 185 °F)	T1 to T4
-40 to 71 °C (-40 to 159 °F)	T5
-40 to 56 °C (-40 to 132 °F)	T6

Or

Labeling	II 1/2 D Ex ia IIIC T66 °C or T95 °C Da/Db II 2 D Ex ib IIIC T66 °C or T95 °C Db	II 1/2 D IP65 T95 °C Ex ia D II 2 D IP65 T95 °C Ex ib D

Permissible ambient temperature range:
-40 to 85 °C (-40 to 185 °F)

Supply and signal circuit with "Intrinsically safe Ex ia/ib IIB/IIC" type of protection", with the following maximum values	
	U_i = 30 V
	I_i = 130 mA
	P_i = 0.8 W
Effective internal capacitance	C_i = 10 nF
Effective internal inductance	L_i = 0.5 mH

IECEx transmitter with the following types of protection: "intrinsic safety ia", "non sparking nA" and "dust ignition protection by enclosure tb"

Transmitter with 4 to 20 mA output signal and HART communication	
Certificate no.	IECEx ZLM 10.0002
Labeling	Ex ia IIC T6 bzw. T4 Ga/Gb Ex ia IIIC T66°C bzw. T95°C Da/Db Ex nA IIC T6 bzw. T4 Gc Ex tb IIIC T66°C bzw. T95°C Db

Maximum permissible ambient temperature range according to temperature class		
Ambient temperature	**Temperature class**	**Surface temperature**
-40 to 85 °C (-40 to 185 °F)	T4	95 °C (203 °F)
-40 to 56 °C (-40 to 133 °F)	T6	66 °C (151 °F)

Electrical data according to designation Ex ia IIC T6 or T4 Ga/Gb and Ex ia IIIC T66°C or T95°C IP6X Da/Db

Supply and signal circuit with "intrinsic safety" Ex ia or Ex ib type of protection, for connection to power supply units with the following maximum values (terminal signal ±)	
	U_i = 30 V
	I_i = 130 mA
	P^i = 0.8 W
Effective internal capacitance	C_i = 10 nF
Effective internal inductance	L_i = 0.5 mH

If the transmitter is being integrated into a partition between equipment protection level Ga or Da and a lower protection level, the transmitter must be supplied with power by an Ex ia intrinsically safe circuit.
Electrical data according to designation Ex nA IIC T6 or T4 Gc and Ex tb IIIC T66°C or T95°C IP6X Db

	$I_N \leq$ 22,5 mA
	$U_N \leq$ 45 V

...Operating limits

Factory Mutual (FM)

Transmitter with 4 to 20 mA output signal and HART communication	
Intrinsic Safety	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, III, Division 2; Groups A, B, C, D, F, G
Degree of protection	NEMA type 4X (indoor and outdoor installation)

Canadian Standards Association (CSA)

Transmitter with 4 to 20 mA output signal and HART communication	
Intrinsic Safety	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
Degree of protection	NEMA type 4X (indoor and outdoor installation)

Permissible ambient temperature range according to temperature class:			
	U_i max. = 30 V; I_i max = 130 mA; P_i = 0,8 W; C_i = 10 nF; L_i = 0,5 µH		
Ex ia II CT1 to T6	T6	T5	T1 … T4
	-40 to 56 °C	-40 to 71 °C	-40 to 85 °C

Intrinsic safety	Gas and dust, order code X4
Degree of protection	Ex ia II CT1~T6; DIP A20 TA 95 °C

Electrical data and options

HART digital communication and 4 to 20 mA output

Power supply

The transmitter operates from 11 to 42 V DC with no load and is protected against reversed polarity (additional loads enable operation above 42 V DC).
During use in Ex ia zones and in other intrinsically safe applications, the power supply must not exceed 30 V DC.

Ripple

Maximum permissible supply voltage ripple during communication: Complies with HART FSK “Physical Layer” specification rev. 8.1.

Load limitations

Total loop resistance at 4 to 20 mA and HART:

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

A minimum resistance of 250 Ω is required for HART communication

LCD display (optional)

Digital, graphic LCD display for customized visualization of:

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

Diagnostic messages, alarms, errors, and measuring range upper limit violations are also displayed.
In addition, the LCD display can be used to configure and parameterize the transmitter using 4 buttons.

Output signal

Two-wire, 4 to 20 mA output.
HART® communication provides digital process variables (%, mA or engineering units) superimposed on the 4 to 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 up to 3.5 mA)
- Upper limit: 20.5 mA (configurable up to 23.6 mA)

Alarm current

- Minimum alarm current: 3.5 mA (configurable from 3.5 to 4 mA)
- Maximum alarm current: 21 mA (configurable from 20 to 23.6 mA)

Default setting: High Alarm Current

SIL: Functional safety (optional)

According to IEC 61508/61511
Device with certificate of conformity for use in safety-related applications, up to and including SIL 2.

Measuring accuracy

Reference conditions according to IEC 60770

- Ambient temperature TU = constant in the range 18 to 30 °C (64 to 86 °F)
- Relative humidity = constant in the range 30 to 80 %
- Ambient pressure PU = constant in the range 950 to 1060 mbar.
- Measuring span based on zero position
- Transmitter with ceramic or Hastelloy separation diaphragm
- Filling fluid: Silicone oil
- Supply voltage: 24 V DC
- Load with HART: 250 Ω
- Transmitter not grounded
- Characteristic setting: linear, 4 to 20 mA.

Unless otherwise stated, errors are specified as a % of the measuring 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).

FOR OPTIMUM MEASURING ACCURACY, IT IS RECOMMENDED THAT YOU SELECT THE SENSOR CODE WHICH WILL PROVIDE THE LOWEST TD VALUE.

Measuring error for setting cut-off point

Turndown	Measuring error
1:1 to 10:1	± 0.1 %
>10:1	± (0.1 + 0.005 x TD - 0.05) %

Ambient temperature

Thermal change in ambient temperature as regards the zero signal and span (turndown up to 6:1), in relation to the set span

Temperature range	Maximum effect on zero signal and span
-10 to 60 °C (14 to 140 °F)	All measuring ranges ± (0.2 % x TD + 0.2 %)
-40 to -10 °C (-40 to 14 °F) 60 to 85 °C (140 to 185 °F)	All measuring ranges ±((0.1 % / 10 K) x TD + (0.1 / 10K))

Temperature coefficient (Tk)

Effect of the ambient temperature per 10 K (but limited to the maximum effect of the temperature change, see previous information). The information refers to the set measuring span.

Temperature range	Effect on zero signal and span
-10 to 60 °C (14 to 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"

NOTE
Additional temperature effects that are dependent on the type and size of the process connection are provided in the dimension drawings for the remote seal.

Power supply

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

Load

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

Electromagnetic fields

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

Mounting position

The transmitter can be installed in any position.

Technical specification

(Please refer to the order information to check the availability of different versions of the relevant model)

Materials

Process separation diaphragms[1]
Hastelloy C276, Hastelloy C276 gold plated, Stainless steel (1.4435 / 316L)

Process connection[1]
Stainless steel (1.4404 / 316L)

Sensor filling fluid
Silicone oil, inert fill (fluorocarbon), white oil (FDA)

Mounting bracket
Stainless steel

Sensor housing, electronics housing and cover
Stainless steel (1.4404 / 316L)

Filter for atmospheric ventilation
Filter housing: plastic (standard), stainless steel (code EA, AB)
Filter material: polyamide (PA)

Viewing window in cover (LCD display)
Polycarbonate, Makrolon 6557

Cover O-ring
EPDM

Plates
Plastic data plate attached to the electronics housing

Calibration
Standard: 0 to upper range limit (URL)
Optional: To specified measuring span

(1) W etted parts of the transmitter.

Optional extras

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

LCD display
Can be rotated in 90° increments into 4 positions

Additional tag plates
Code I2: For measuring point tag (up to 30 characters) and calibration specifications (up to 30 characters: lower and upper value plus unit), attached to transmitter housing.
Code I1: For customer data (4 lines with 30 characters each), attached to transmitter housing with wire.

Cleaning stage for oxygen applications (O2)

Certificates (test, design, characteristics, material traceability)

Name plate and operating instruction language

Communication plug connectors

Process connections

See order information for remote seals.

Electrical connections

M16 x 1.5 tap hole with cable gland (cable diameter approx. 5 to 10 mm), directly on housing
or
M20 x 1.5 (via adapter) with cable gland (cable diameter approx. 6 to 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 to 1 mm^2 and cable diameters of 5 to 11 mm))
or
Miniature plug connector (without mating plug (socket outlet))

Terminals
HART version:
Two connections for signal / auxiliary power, for wire cross-sections from 0.5 to 1.5 mm^2 (16 AWG)

Grounding (optional)
External ground terminals for wire cross-sections up to 4 mm^2 (12 AWG).

Weight
(without options)

- Approx. 0.7 kg (1.54 lb)

Packaging
Carton

Configuration

Transmitter with HART communication and 4 to 20 mA

Standard configuration

Transmitters are set to the customer's specified span at the factory. The set 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:

Parameter	Factory setting
4 mA	Zero position
20 mA	Measuring range upper limit (URL)
Output	Linear
Damping	0.1 s
Transmitter failure mode	21 mA
Opitional LCD display	0 to 100 %

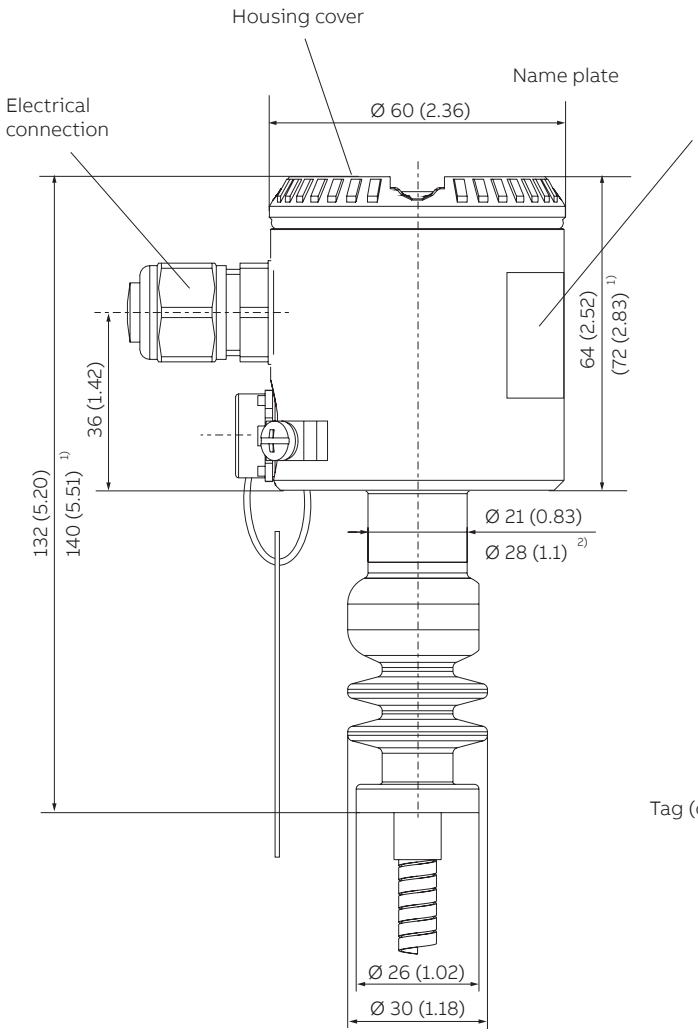
Any or all of the configurable parameters listed above - including the upper and lower range values - can easily be changed using the optional LCD indicator, a HART handheld communicator, or a PC running the configuration software SMART VISION with DTM for 2600T.

Mounting dimensions

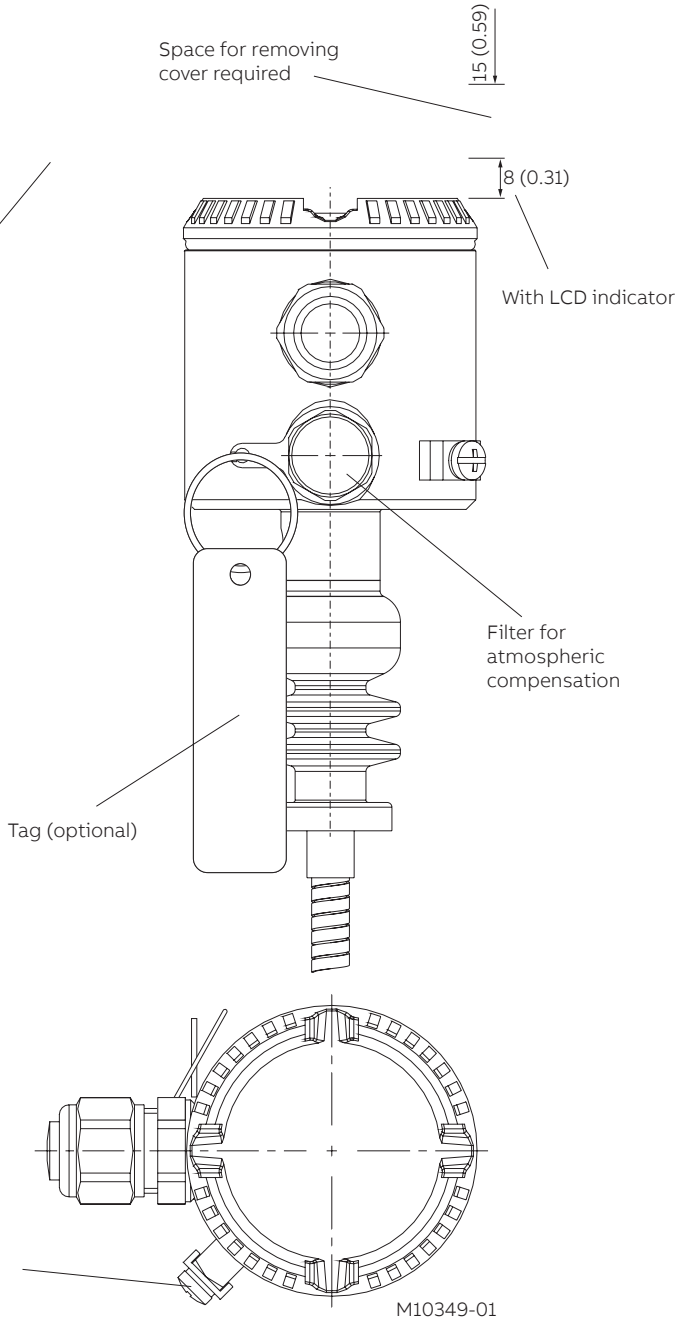
(No design information) — dimensions in mm (inches)

Standard Version

With LCD indicator

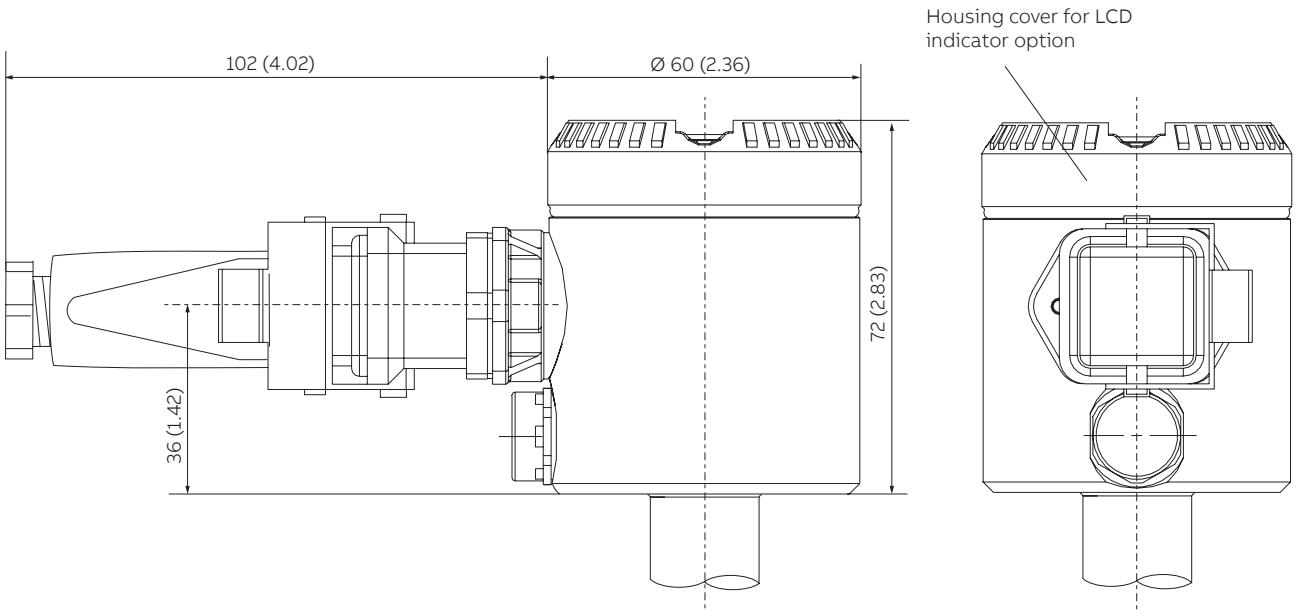


Dimensions for sensor code C and F



...Mounting dimensions

Dimensions in mm (inch) - with options

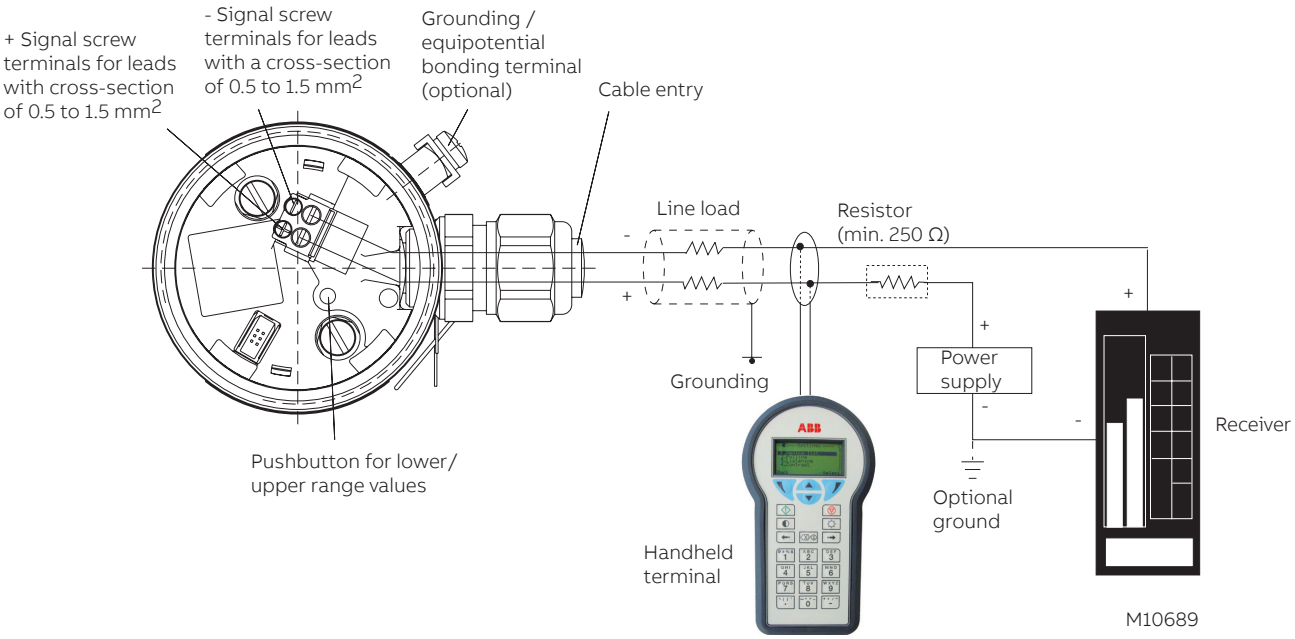


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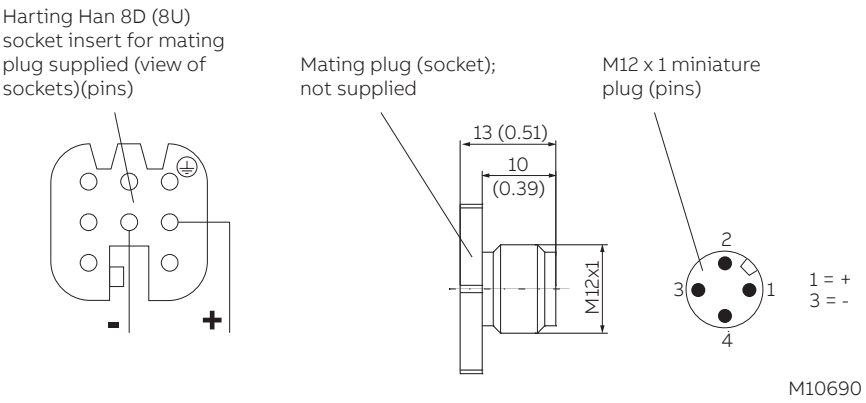
Electrical connections

HART version

Electrical connections - HART version



Optional plug connectors



Ordering Information

Basic ordering information model 261GR Pressure Transmitters

Select one character or set of characters from each category and specify complete catalog number.

Refer to additional ordering information and specify one or more codes for each transmitter if additional options are required.

Base model 1st to 5th characters **Gauge pressure transmitter, with remote seal with capillary tube, base accuracy 0.1 %**				**261GR**	**X**	**X**	**X**	**X**
Sensor - Span Limits – 6th characters								
6 kPa	60 mbar	24 in. H_2O (45 mm Hg)			C			
40 kPa	400 mbar	160 in. H_2O (300 mm Hg)			F			
250 kPa	2500 mbar	1000 in. H_2O (1875 mm Hg)			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			
Diaphragm Material / Fill Fluid – 7th characters								
With remote seal / Silicone oil						R		
With remote seal / Inert fluid				(Note: 1)		2		
With remote seal / White oil (FDA)						6		
Electronic Housing Material / Electrical Connection– 8th characters								
AISI 316L SST (1.4404) / M16 x 1.5 (with cable gland made of plastic)				(Note: 2)			2	
AISI 316L SST (1.4404) / 1/2-14 NPT (without cable gland)							S	
AISI 316L SST (1.4404) / M20 x 1.5 (with cable gland made of plastic)				(Note: 2)			T	
AISI 316L SST (1.4404) / Harting Han Connector				(Note: 3)			3	
AISI 316L SST (1.4404) / Miniature Connector				(Note: 3)			Z	
Output– 9th characters								
HART digital communication and 4 to 20 mA (Additional options to be ordered by additional ordering code)				(Note: 4)				1

Additional ordering information for model 261GR

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

		XX	XX	XX	XX	XX	XX	XX
Explosion Protection Certification								
Factory Mutual (FM) - Intrinsically Safe	(Note: 5)	EA						
Canadian Standard Association (CSA) - Intrinsically Safe	(Note: 5)	ED						
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 (without Cable Gland)	(Note: 5)	EL						
IECEx Ex ia IIC T6 + Ex nA IIC T6, Gas		ER						
IECEx Ex ia IIC T6 + Ex nA IIC T6 + Ex tb. Gas & Dust		ES						
Integrated Digital Display (LCD)								
With integrated LCD display			L1					
Electronic Housing: Ground Terminal								
Housing with external grounding terminal				AA				
Electronic Housing: Cable Gland								
Cable Gland M16 x 1.5 / M20 x 1.5 and atmosphere ventilation of metal					AB			
Mounting Bracket Shape / Material								
For pipe mounting / AISI 304 SST (1.4301)						B2		
For wall mounting / AISI 304 SST (1.4301)						B4		
Applications: Oxygen								
Oil- and grease-free, for oxygen applications (O2) (Pmax = 10 MPa / 100 bar / 1450 psi, Tmax = 60 °C / 140 °F)	(Note: 6)						P1	
Operating Instruction Language								
German								M1
Italian								M2
Spanish								M3
French								M4
English								M5
Swedish								M6
Finnish								M7
Russian								MB
Dutch								MD

...Ordering information

Additional ordering information for model 261GR

	XX	XX	XX	XX	XX	XX	XX	XX	XX
Additional Tag Plate									
Stainless steel	I1								
Certificates: 3.1 Calibration									
Inspection certificate 3.1 acc. EN 10204 of calibration		C1							
Certificates: 3.1 Cleanliness Stage									
Inspection certificate 3.1 acc. EN 10204 of cleanliness stage			C3						
Certificates: 3.1 Helium Leakage Test									
Inspection certificate 3.1 acc. EN 10204 of helium leakage test of the sensor module				C4					
Certificates: 3.1 Pressure Test									
Inspection certificate 3.1 acc. EN 10204 of pressure test					C5				
Certificates: 2.1 Instrument Design									
Declaration of compliance with the order 2.1 acc. EN 10204 for instrument design						C6			
Certificates: SIL2									
SIL2 - Declaration of Conformity							CL		
Calibration Record									
Calibration record								CB	
Certificates: MVO Approval									
MVO approval (Note: 7)									CR

Additional ordering information for model 261GR

		XX	XX	XX	XX
Material: 2.1 Compliance					
Certificate of compliance with the order 2.1 acc. EN 10204 for process wetted parts		H1			
Material: 3.1 Inspection					
Inspection certificate 3.1 acc. EN 10204 of process wetted parts	(Note: 8)		H3		
Material: 2.2 Test Report					
Test report 2.2 acc. EN 10204 of the pressure bearing and process wetted parts				H4	
Connector Type					
Miniature connector M12 x 1 (without mating plug)					U2
Harting Han 8D (8U) - Straight entry	(Note: 9)				U3

Note 1: Suitable for oxygen applications
Note 2: With Cable Gland made of Plastic
Note 3: Select connector with additional ordering code
Note 4: Additional options to be ordered by additional ordering code
Note 5: Not available with electrical connection with connector
Note 6: Only available with inert fill
Note 7: Only with Fill Fluid White oil
Note 8: Minor parts with factory certificate acc. EN 10204
Note 9: Only for electrical connection with Harting Han connector

Standard delivery scope (changes possible with additional ordering code)

- For general-purpose applications (no Ex applications)
- Buna O-ring for G 1/2 process connection, flush diaphragm
- No display, no mounting bracket
- English-language operating instructions; English and German-language labels
- 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 fluids in order to ensure compatibility with the relevant process medium.

...Ordering Information

Basic ordering information model 261AR Pressure Transmitters

Select one character or set of characters from each category and specify complete catalog number.

Refer to additional ordering information and specify one or more codes for each transmitter if additional options are required.

Base model – 1st to 5th characters **Absolute pressure transmitter, with remote seal with capillary tube, base accuracy 0.1 %**			**261AR**	**X**	**X**	**X**	**X**
Sensor - Span Limits – 6th characters							
6 kPa	60 mbar	24 in. H_2O (45 mm Hg)		C			
40 kPa	400 mbar	160 in. H_2O (300 mm Hg)		F			
250 kPa	2500 mbar	1000 in. H_2O (1875 mm Hg)		L			
1000 kPa	10 bar	145 psi		D			
3000 kPa	30 bar	435 psi		U			
10000 kPa	100 bar	1450 psi		R			
Diaphragm Material / Fill Fluid – 7th characters							
With remote seal / Silicone oil					R		
With remote seal / Inert fluid			(Note: 1)		2		
With remote seal / White oil (FDA)					6		
Electronic Housing Material / Electrical Connection– 8th characters							
AISI 316L SST (1.4404) / M16 x 1.5 (with cable gland made of plastic)			(Note: 2)			2	
AISI 316L SST (1.4404) / 1/2-14 NPT (without cable gland)						S	
AISI 316L SST (1.4404) / M20 x 1.5 (with cable gland made of plastic)			(Note: 2)			T	
AISI 316L SST (1.4404) / Harting Han Connector			(Note: 3)			3	
AISI 316L SST (1.4404) / Miniature Connector			(Note: 3)			Z	
Output– 9th characters							
HART digital communication and 4 to 20 mA (Additional options to be ordered by additional ordering code)			(Note: 4)				1

Additional ordering information for model 261AR

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

		XX	XX	XX	XX	XX	XX	XX
Explosion Protection Certification								
Factory Mutual (FM) - Intrinsically Safe	(Note: 5)	EA						
Canadian Standard Association (CSA) - Intrinsically Safe	(Note: 5)	ED						
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 (without Cable Gland)	(Note: 5)	EL						
IECEx Ex ia IIC T6 + Ex nA IIC T6, Gas		ER						
IECEx Ex ia IIC T6 + Ex nA IIC T6 + Ex tb. Gas & Dust		ES						
Integrated Digital Display (LCD)								
With integrated LCD display			L1					
Electronic Housing: Ground Terminal								
Housing with external grounding terminal				AA				
Electronic Housing: Cable Gland								
Cable Gland M16 x 1.5 / M20 x 1.5 and atmosphere ventilation of metal					AB			
Mounting Bracket Shape / Material								
For pipe mounting / AISI 304 SST (1.4301)						B2		
For wall mounting / AISI 304 SST (1.4301)						B4		
Applications: Oxygen								
Oil- and grease-free, for oxygen applications (O2) (Pmax = 10 MPa / 100 bar / 1450 psi, Tmax = 60 °C / 140 °F)	(Note: 6)						P1	
Operating Instruction Language								
German								M1
Italian								M2
Spanish								M3
French								M4
English								M5
Swedish								M6
Finnish								M7
Russian								MB
Dutch								MD

...Ordering information

Additional ordering information for model 261AR

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Inspection certificate 3.1 acc. EN 10204 of pressure test					C5				
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Declaration of compliance with the order 2.1 acc. EN 10204 for instrument design						C6			
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SIL2 - Declaration of Conformity							CL		
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MVO approval (Note: 7)									CR

Additional ordering information for model 261AR

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Trademarks
™ Hastelloy C-276 is a Cabot Corporation trademark
™ Viton is a DuPont de Nemours trademark

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