

Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

Pressure transmitters
- 2600T series

Technical solutions
for any application

Measurement made easy



Base accuracy

- 0.075 % of calibrated span (266CSH, 266JSH)
- 0.04 % of calibrated span (266CST, 266JST)

266CSH/CST mass flow measurement with compensation, level measurement with compensation for gases, steam, and liquids

- Dynamic compensation of pressure and temperature changes

266JSH/JST high-performance transmitter for measuring differential pressure, absolute pressure, and process temperature in a single device

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

- Large turn down ratio of up to 100:1

Comprehensive range of functions

- Integrated counting function
- Binary output as pulse / frequency output or limit monitor

10-year stability

- 0.15 % of URL

Flexible configuration options

- Local configuration via buttons on LCD indicator

New TTG (Through-The-Glass) keypad technology

- Enables quick and easy local configuration without the need to open the cover - even in potentially explosive environments

Full compliance with Pressure Equipment Directive (PED) category III

Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

Introduction

266CSH / 266CST

Thanks to their multisensor technology, these transmitters are capable of measuring three separate process variables at the same time and offer the option of calculating the following values:

- Mass flow for gases, steam, and liquids by means of dynamic compensation
- Standard volume flow for gases by means of dynamic compensation
- Heat flow for water and steam
- Drum water level and level measurement with density compensation of liquids

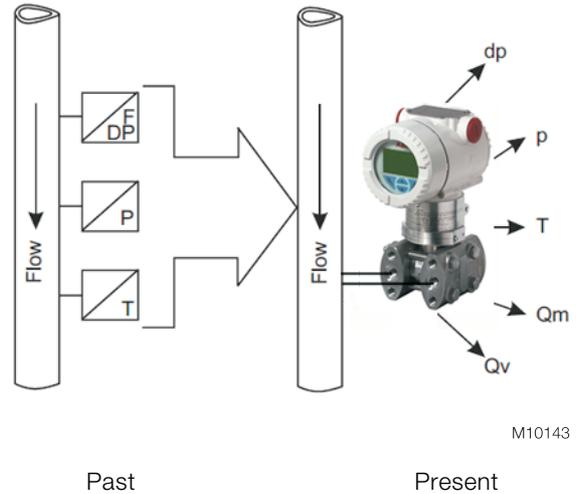
The differential pressure and absolute pressure are measured by two integrated sensors. The process temperature is measured by an external standard Pt100 resistance thermometer.

Flow calculation

The flow calculation carried out by these transmitters includes compensation of pressure and / or temperature as well as more complex variables such as discharge coefficient, thermal expansion, Reynolds number, and compressibility factor.

The 266CXX pressure transmitters include flow equations for superheated steam, saturated steam, gases, and liquids - so you only need one device for your system.

Multivariable transmitters represent a more economical solution than the designs that have been used for this type of measuring point up to now, in which three different transmitters for differential pressure, absolute pressure, and temperature report their values to a DCS, PLC, or flow computer.



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Fig. 1: Flow measurement - past and present

The dynamic mass flow of the 266CXX is calculated using the following equation:

$$Q_m \approx \frac{C}{\sqrt{1-\beta^4}} \cdot \varepsilon \cdot d^2 \cdot \sqrt{\rho_1 \cdot dp}$$

- Q_m = Mass flow
- C = Discharge coefficient
- β = Diameter ratio
- ε = Gas expansion factor
- d = Inside diameter of the differential flow sensor
- dp = Differential pressure
- ρ = Density

The flow calculation process is based on the following standards:

- AGA 3
- DIN EN ISO 5167

Flow coefficient

The discharge coefficient is defined as the actual flow divided by the theoretical flow. It corrects the theoretical equation for the effect on the velocity profile (Reynolds number), assuming that no energy is lost between the pressure taps and pressure tap location.

It is dependent on the differential flow sensor, the diameter ratio, and the Reynolds number.

Compensation for the discharge coefficient ensures a high level of measuring accuracy for flow measurement with primary elements.

Gas expansion factor

The gas expansion factor corrects for density differences between pressure taps due to expansion of compressible media. It does not apply to liquids which are essentially non-compressible.

The gas expansion factor is dependent on the diameter ratio, the isentropic exponent, the differential pressure, and the static pressure of the medium.

Diameter ratio

The diameter ratio is dependent on the inside diameter of the differential flow sensor and the pipe diameter, which in turn are subject to temperature functions.

If the temperature of the medium being measured changes, the material of the process pipe and differential flow sensor expands or contracts.

The thermal expansion coefficients are dependent on the material of the pipe and differential flow sensor, and are used for calculating the change in diameters. This ensures a high level of flow accuracy in applications with low and high temperatures.

Medium density

The medium density has a direct effect on the flow calculation. The 266CXX pressure transmitters compensate for the medium density resulting from changes in temperature and / or pressure as follows:

- Gases as a function of p and T based on gas laws, taking compressibility factors into account; for natural gas, based on AGA 8 or SGERG
- Superheated steam as a function of p and T based on steam tables
- Saturated steam as a function of p based on steam tables
- Liquids as a function of T

Mass flow calculations

With the 266CXX pressure transmitters, mass flow calculations can be configured for the following differential flow sensors:

- Orifice corner pressure taps, ISO
- Orifice flange pressure taps, ISO
- Orifice D and D/2 pressure taps, ISO
- Orifice corner pressure taps, ASME
- Orifice flange pressure taps, ASME
- Orifice D and D/2 pressure taps, ASME
- Orifice flange pressure taps, AGA 3
- Orifice 2.5D and 8D pressure taps
- Small bore orifice, flange pressure taps
- Small bore orifice, corner pressure taps
- ISA 1932 nozzle
- Long radius nozzle wall pressure taps, ISO
- Long radius nozzle wall pressure taps, ASME
- Standard Venturi pipe, rough-cast inlet, ISO
- Standard Venturi pipe, machined inlet, ISO
- Standard Venturi pipe, welded inlet, ISO
- Standard Venturi pipe, rough-cast inlet, ASME
- Standard Venturi pipe, machined inlet, ASME
- Standard Venturi pipe, welded inlet, ASME
- Venturi, nozzle, ISO
- Pitot tube
- Wedge element
- Plus all non-standard flow sensors

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ABB offers a complete range of differential flow sensors. We provide the full testing and documentation that your application needs. Whether the requirement is a single orifice plate with a simple Certificate of Conformity or a project requiring full material inspection, traceability, third-party verification, calibration and comprehensive data dossiers – ABB can satisfy all of the requirements.

In addition compact solutions are available, OriMaster, a compact orifice flowmeter, and PitoMaster, a compact pitot flowmeter.

Level measurement

The following functions are available for level measurement with pressure and temperature compensation:

- Level measurement with temperature compensation, on open tank
- Level measurement with pressure and temperature compensation, on closed tank, with and without diaphragm seal
- Fill volume measurement by means of tank shape specification
- Drum water level measurement

All of the functionality, including all the data required for compensated mass flow or for level measurement, is configured entirely using the PC-based DTM 266-MV. A simplified setting method, which uses the (optional) LCD indicator, is available for flow and level calculation. EDD-based systems such as handheld terminals are also supported.

266JSH / 266JST

This intelligent transmitter provides the user with precise measurements of differential pressure, absolute pressure, and process temperature (the latter by means of an externally connected Pt100 resistance thermometer), in just one device.

Functional specification

Measuring range limits and span limits Differential pressure sensor

Sensor code	Upper range limit (URL)	Lower range limit (LRL)		Minimum measuring span	
		Models 266CSH/CST	Models 266JSH/JST	Models 266CSH/CST	Models 266JSH/JST
A	1 kPa 10 mbar 4 inH ₂ O	0	-1 kPa -10 mbar -4 inH ₂ O	0.05 kPa 0.5 mbar 0.2 inH ₂ O	0.05 kPa 0.5 mbar 0.2 inH ₂ O
C	6 kPa 60 mbar 24 inH ₂ O	0	-6 kPa -60 mbar -24 inH ₂ O	0.2 kPa 2 mbar 0.8 inH ₂ O	0.2 kPa 2 mbar 0.8 inH ₂ O
F	40 kPa 400 mbar 160 inH ₂ O	0	-40 kPa -400 mbar -160 inH ₂ O	0.4 kPa 4 mbar 1.6 inH ₂ O	0.4 kPa 4 mbar 1.6 inH ₂ O
L	250 kPa 2500 mbar 1000 inH ₂ O	0	-250 kPa -2500 mbar -1000 inH ₂ O	2.5 kPa 25 mbar 10 inH ₂ O	2.5 kPa 25 mbar 10 inH ₂ O
N	2000 kPa 20 bar 290 psi	0	-2000 kPa -20 bar -290 psi	20 kPa 0.2 bar 2.9 psi	20 kPa 0.2 bar 2.9 psi
R	10000 kPa 100 bar 1450 psi	-	-10000 kPa -100 bar -1450 psi	-	100 kPa 1 bar 14.5 psi

Absolute pressure sensor (second sensor)

Sensor code	Upper range limit (URL)	Lower range limit (LRL)	Minimum measuring span
1	600 kPa 6 bar 87 psi	0 abs	6 kPa 0.06 bar 0.87 psi
2	2000 kPa 20 bar 290 psi	0 abs	20 kPa 0.2 bar 2.9 psi
3	10000 kPa 100 bar 1450 psi	0 abs	100 kPa 1 bar 14.5 psi
4	41000 kPa 410 bar 5945 psi	0 abs	410 kPa 4.1 bar 59.5 psi

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Span limits

Maximum measuring span = URL
(for differential pressure measurements, can be adjusted up to \pm URL (TD = 0.5) within the measuring range limits)

IMPORTANT (NOTICE)

To optimize performance characteristics, it is recommended that you select the transmitter sensor code with the lowest turn down ratio.

Recommendation for square root function

At least 10 % of measuring range upper limit (URL)

Zero position suppression and elevation

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

- already set span \geq minimum span

Temperature input

Process temperature range -200 ... 850 °C (-328 ... 1562 °F) with external resistance thermometer (Pt100) in four-wire circuit.

Damping

Configurable time constant between 0 and 60 s.
This is in addition to the sensor response time.

Warm-up time

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

Insulation resistance

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

Operating limits

Pressure limits

Gauge pressure limits

The transmitter models 266CSX/JSX can operate without damage within the following overpressure limits:

Sensors	Filling fluid	Gauge pressure limits
A	Silicone oil	0.5 kPa abs., 5 mbar abs., 0.07 psia and 0.6 MPa, 6 bar, 87 psi or 2 MPa, 20 bar, 290 psi depending on code variant selected ¹⁾
A	Fluorocarbon (Galden)	17.5 kPa abs., 175 mbar abs., 2.5 psia and 0.6 MPa, 6 bar, 87 psi or 2 MPa, 20 bar, 290 psi depending on code variant selected ¹⁾
C to R	Silicone oil	0.5 kPa abs., 5 mbar abs., 0.07 psia and 2 MPa, 20 bar, 290 psi or 10 MPa, 100 bar, 1450 psi or 41 MPa, 410 bar, 5,945 psi depending on code variant selected ¹⁾
C to R	Fluorocarbon (Galden)	17.5 kPa abs., 175 mbar abs., 2.5 psia and 2 MPa, 20 bar, 290 psi or 10 MPa, 100 bar, 1450 psi or 41 MPa, 410 bar, 5,945 psi depending on code variant selected ¹⁾

1) 1 MPa, 10 bar, 145 psi for Kynar-PVDF

Static pressure limits

The transmitter models 266CSX/JSX can operate within the specifications with the following limits:

Sensors	Filling fluid	Static pressure limits
A	Silicone oil	3.5 kPa abs., 35 mbar abs., 0.5 psia and 0.6 MPa, 6 bar, 87 psi or 2 MPa, 20 bar, 290 psi depending on code variant selected ¹⁾
A	Fluorocarbon (Galden)	17.5 kPa abs., 175 mbar abs., 2.5 psia and 0.6 MPa, 6 bar, 87 psi or 2 MPa, 20 bar, 290 psi depending on code variant selected ¹⁾
C to R	Silicone oil	3.5 kPa abs., 35 mbar abs., 0.5 psia and 2 MPa, 20 bar, 290 psi or 10 MPa, 100 bar, 1450 psi or 41 MPa, 410 bar, 5,945 psi depending on code variant selected ¹⁾
C to R	Fluorocarbon (Galden)	17.5 kPa abs., 175 mbar abs., 2.5 psia and 2 MPa, 20 bar, 290 psi or 10 MPa, 100 bar, 1450 psi or 41 MPa, 410 bar, 5,945 psi depending on code variant selected ¹⁾

1) 1 MPa, 10 bar, 145 psi for Kynar-PVDF

Test pressure

The transmitters can withstand a pressure test with the following line pressure without leaking:

Model	Test pressure
266CSX / JSX	1.5 x nominal pressure (static pressure limit) simultaneously on both sides ¹⁾

1) Meets hydrostatic test requirements of ANSI/ISA-S 82.03.

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Temperature limits °C (°F)

Environment

This is the operating temperature.

All models	Ambient temperature limits
Silicone oil	-40 and 85 °C (-40 and 185 °F)
Fluorocarbon (Galden)	-40 and 85 °C (-40 and 185 °F)

All models	Ambient temperature limits
Integrated digital display (LCD) ¹⁾	-40 and 85 °C (-40 and 185 °F)
Viton gasket	-20 and 85 °C (-4 and 185 °F)
PTFE gasket	-20 and 85 °C (-4 and 185 °F)

1) If may no longer be possible to read the digital display (LCD) clearly below -20 °C (-4 °F) and above 70 °C (158 °F).

IMPORTANT (NOTICE)

For applications in potentially explosive environments, the temperature specified on the certificate / approval which depends upon the type of protection sought shall apply.

Process

All models	Process temperature limits
Silicone oil	-40 and 121 °C (-40 and 250 °F) ¹⁾
Fluorocarbon (Galden)	-40 and 121 °C (-40 and 250 °F) ²⁾
Viton gasket	-20 and 121 °C (-4 and 250 °F)
PTFE gasket	-20 and 85 °C (-4 and 185 °F)

1) 85 °C (185 °F) for applications under 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 applications below atmospheric pressure up to 17.5 kPa abs., 175 mbar abs., 2.5 psia

Storage

Models 266XRT	Storage temperature range
Storage temperature	-50 and 85 °C (-58 and 185 °F)
Integrated digital display (LCD)	-40 and 85 °C (-40 and 185 °F)

	Humidity during storage
Relative humidity	Up to 75 %

Environmental limits

Electromagnetic compatibility (EMC)

In accordance with EN 61326

Overtoltage strength (with overvoltage protection): 4 kV
(in accordance with IEC 1000-4-5 EN 61000-4-5)

Pressure Equipment Directive (PED)

Instruments with a maximum operating pressure of 41 MPa, 410 bar, 5,945 psi comply with Directive 2014/68/EU category III, module H.

Humidity

Relative humidity: up to 100 %.
Condensation, icing: permitted.

Vibration resistance

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

Shock resistance

Acceleration: 50 g
Duration: 11 ms
(in accordance with IEC 60068-2-27).

Humid and dusty atmospheres (IP rating)

The transmitter is dust and sand-proof and protected against immersion effects in accordance with EN 60529 (2001) with IP 67 (IP 68 on request), by NEMA 4X, or by JIS C0920.

Hazardous atmospheres

With or without integrated digital display

Type of protection "Intrinsic Safety"

Approval acc. to ATEX Europa (code E1) and IEC Ex (code E8)

II 1 G Ex ia IIC T6/T5/T4 and II 1/2 G Ex ia IIC T6/T5/T4; IP67.

II 1 D Ex iaD 20 T85°C and II 1/2 D Ex iaD 21 T85°C; IP67.

NEPSI China (Code EY)

Ex ia IIC T4~T6, DIP A20T_A, T4~T6.

Type of protection "Flameproof Enclosure

Approval acc. to ATEX Europa (code E2) and IEC Ex (code E9)

II 1/2 G Ex d IIC T6 and

II 1/2 D Ex tD A21 T85°C (-50 °C ≤ T_a ≤ 75°C); IP67.

NEPSI China (Code EZ)

Ex d IIC T6, DIP A21T_A, T6.

Type of protection "nL":

ATEX Europa (code E3) and IEC Ex (code ER)

Declaration of Conformity

II 3 G Ex nL IIC T6/T5/T4 and II 3 D Ex tD A22 T85°C; IP67.

NEPSI China (code EY) Declaration of Conformity

Ex nL IIC T4~T6, DIP A22T_A, T6.

FM approvals for USA (code E6) and

FM approvals for Canada (code E4):

- Explosion proof (US): Class I, Div. 1, Groups A, B, C, D
 - Explosion proof (Canada): Class I, Div. 1, Groups B, C, D
 - Dust Ignition Proof: Class II, Div. 1, Groups E, F, G
 - Suitable for: Class II, Div. 2, Groups F, G; Class III, Div. 1, 2
 - Non-Incendive: Class I, Div. 2, Groups A, B, C, D
 - Intrinsic Safety: Class I, II, III, Div. 1, Groups A, B, C, D, E, F, G
Class I, Zone 0 AEx ia IIC T6/T4, Zone 0 (FM US)
Class I, Zone 0 Ex ia IIC T6/T4, Zone 0 (FM Canada)
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ATEX combined (code EW = E1 + E2 + E3), (code E7 = E1 + E2)

ATEX combined and FM approvals (code EN = EW + E4 + E6)

Combined FM approvals for USA and Canada

- Intrinsic Safety (Code EA)
 - Flameproof Enclosure (Code EB)
 - Non-incendive (Code EC)
-

IEC combined (code EH = E8 + E9), (code EI = E8 + E9 + ER)

NEPSI combined (code EP = EY + EZ), (code EQ = EY + EZ + ES)

- GOST (Russia), GOST (Kazakhstan), Inmetro (Brazil) based on ATEX
-

For ambient temperatures -40 ... 85°C (-40 ... 185°F) the information based on the temperature classes in the associated certificates, must be complied with. The temperature sensor circuit (Pt100) and the digital output (pulse / limit value output) must be connected in accordance with the requirements of the Ex certificate.

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Electrical data and options

Power supply

The transmitter operates from 10.5 ... 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

Max. 20 mV over a 250 Ω load in accordance with HART specifications.

Load limitations

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

$$R \text{ (k}\Omega\text{)} = \frac{\text{Supply voltage} - \text{Minimum operating voltage (VDC)}}{22 \text{ mA}}$$

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

Displays (optional)

Integrated LCD display (code L1)

Wide-screen LCD display, 128 x 64 pixels, 52.5 x 27.2 mm (2.06 x 1.07 in.) dot matrix. Multilingual.

Four keys for device configuration and management.

Easy setup for quick commissioning.

Customized visualizations which the user can select.

Total value and actual value flow indication.

The LCD display can also be used to show static pressure, sensor temperature, and diagnostics messages, as well as make configuration settings.

Integrated LCD display with TTG operation (code L5)

As with the integrated LCD display above, but featuring an innovative TTG (through-the-glass) keypad which can be used to activate the device's configuration and management menus without having to remove the transmitter housing cover.

The TTG keys are protected against accidental activation.



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Fig. 2: Integral LCD display with TTG operation

Output signal

Two-wire output, 266CXX:

4 ... 20 mA based on mass / standard volume flow or fill level, full compensation of all pressure (P) and temperature (T) effects.

Two-wire output, 266JXX:

4 ... 20 mA related to differential pressure, pressure, or temperature

The HART communication provides the digital process variables of differential pressure, absolute pressure, and process temperature, which are superimposed on the 4 ... 20 mA signal (protocol in accordance with Bell 202 FSK standard).

Digital output (pulse / limit output)

This digital output can be set as a pulse or limit output (transistor output) by making parameter changes using the software.

NPN transistor with open collector output

Contact switching capacity	10 ... 30 V, maximum 120 mA DC
Low-level output voltage	0 ... 2 V
High-level output voltage	Maximum 30 V
Quiescent current	500 μ A

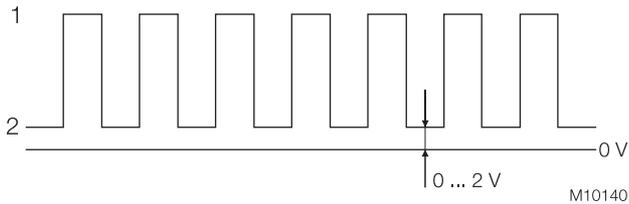


Fig. 3: High and low level (pulse output)
1 High level | 2 Low level

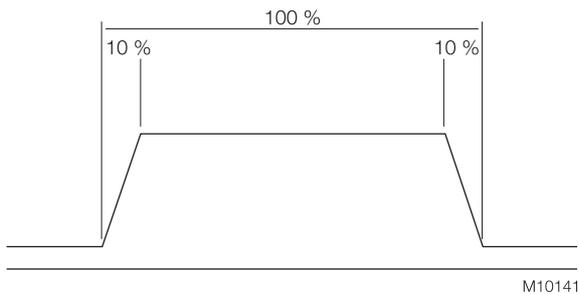


Fig. 4: Edge steepness

Pulse output

The scaled, electrically isolated pulse output can be used for flow measurement by means of an external counter.

Pulse output frequency with 100 % output	Maximum 10 kHz
Duty cycle	50 % \pm 10 % @ 0.1 Hz to 10 kHz
Minimum pulse width	50 μ s at 10 kHz, duty cycle 1:1

Limit output

The output is set to a static high or low signal when a given limit is overshoot / undershot.

Output function, model 266CXX

The 4 ... 20 mA output signal is not linear; instead, it corresponds to the compensated flow or fill level.

Output function, model 266JXX

The 4 ... 20 mA output signal corresponds to the differential pressure, pressure, or temperature, depending on the configuration.

Output current limits (in accordance with NAMUR standard)

Overload condition

- Lower limit: 3.8 mA (configurable from 3.8 ... 4 mA)
- Upper limit: 20.5 mA (configurable from 20 ... 21 mA)

Alarm current

- Minimum alarm current: 3.6 mA (configurable from 3.6 ... 4 mA)
- Maximum alarm current: 21 mA (configurable from 20 ... 22 mA)

Standard setting: High alarm current (max. alarm current)

Process diagnostics (PILD)

Plugged impulse line detection (PILD) generates a warning via the HART communication. The device can also be configured to drive the analog output signal to the "alarm current".

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Measuring accuracy

Reference conditions according to IEC 60770

Ambient temperature 20 °C (68 °F), rel. humidity 65 %, atmospheric pressure 1,013 hPa (1,013 mbar), position of measuring cell (separating diaphragm areas) vertical, measuring span based on zero point, separating diaphragms made from stainless steel AISI 316 L or Hastelloy, silicone oil filling fluid, HART digital trim values equal to 4 and 20 mA span end points.

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

Some measuring accuracy levels relating to the upper measuring range limit (URL) are affected by the current turn down (TD); i.e., the ratio of the upper measuring range limit to the already set span.

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

Dynamic response (in accordance with IEC 61298-1)

Sensors	Time constant (63.2 % of total step response)
Sensors F to R	150 ms
Sensor C	400 ms
Sensor A	1000 ms
266CXX: Delay time for all sensors	70 ms
266JXX: Delay time for all sensors	40 ms

Response time (total) = delay time + time constant

Measuring error

% of calibrated span, consisting of terminal-based non-linearity, hysteresis, and non-repeatability.

Model	DP-Sensor	For TD range	Measuring error
266CSH	A to R ¹⁾	From 1:1 to 10:1	± 0.075 %
266JSH	A	From 10:1 to 20:1	± (0.075 + 0.005 x TD - 0.05) %
	C	From 10:1 to 30:1	± (0.075 + 0.005 x TD - 0.05) %
	F to R ¹⁾	From 10:1 to 100:1	± (0.075 + 0.005 x TD - 0.05) %
266CST	A to R ¹⁾	From 1:1 to 10:1	± 0.04 %
266JST	A	From 10:1 to 20:1	± (0.04 + 0.005 x TD - 0.05) %
	C	From 10:1 to 30:1	± (0.04 + 0.005 x TD - 0.05) %
	F to R ¹⁾	From 10:1 to 100:1	± (0.04 + 0.005 x TD - 0.05) %

1) Sensor R not with model 266CSH/CST

Recommendation for square root function

At least 10 % of upper measuring range limit (URL)

Model	Pabs sensor (second sensor)	Measuring error
266CXX 266JXX	1 to 4	± 0.1 %

Model	Process temperature measurement (Pt100) in acc. with IEC 60751	Measuring error - transmitter part
266CXX 266JXX	-200 ... 850 °C (-328 ... 1562 °F)	± 0.3 K (0.54 °F)

266CXX: The accuracy of the mass or standard volume flow is not affected by the accuracy of the dp, p, and T measurement alone; rather, it also depends upon the primary device used (flow coefficient), the pressure and temperature range to be compensated, as well as other parameters.

In typical applications, the flow measurement accuracy (without the primary device accuracy) is ± 0.7 ... 0.9 % of the mass flow.

Ambient temperature

Per 20 K change within the limits of -40 to 85 °C
(per 36 °F change within the limits of
-40 to 185 °F):

Model	Sensor	For TD range	
266CSH 266JSH	A	10:1	± (0.08 % URL + 0.06 % measuring span)
	C to R ¹⁾	10:1	± (0.04 % URL + 0.06 % measuring span)
266CST 266JST	A	10:1	± (0.06 % URL + 0.045 % measuring span)
	C to R ¹⁾	10:1	± (0.03 % URL + 0.045 % measuring span)

1) Sensor R not with model 266CSH/CST

In the event of a change to the ambient temperature of
-10 °C to 60 °C (14 to 140 °F):

Model	Sensor	For TD range	
266CSH 266JSH	A	10:1	± (0.16 % URL + 0.065 % measuring span)
	C to R ¹⁾	10:1	± (0.08 % URL + 0.065 % measuring span)
266CST 266JST	A	10:1	± (0.12 % URL + 0.05 % measuring span)
	C to R ¹⁾	10:1	± (0.06 % URL + 0.05 % measuring span)

1) Sensor R not with model 266CSH/CST

Per 10 K change within the limits of -40 to -10 °C or 60 bis
85 °C
(per 18 °F change within the limits of -40 to 14 °F or 140° to
185 °F):

Model	Sensor	For TD range	
266CSH 266JSH	A	10:1	± (0.066 % URL + 0.04 % measuring span)
	C to R ¹⁾	10:1	± (0.033 % URL + 0.04 % measuring span)
266CST 266JST	A	10:1	± (0.05 % URL + 0.03 % measuring span)
	C to R ¹⁾	10:1	± (0.025 % URL + 0.03 % measuring span)

1) Sensor R not with model 266CSH/CST

Absolute pressure sensor

± (0.08 % URL + 0.08 % measuring span):
Limited to ± (0.1 % URL + 0.1 % measuring span) for the
entire temperature range of 125 K within the limits
of -40 ... 85 °C (-40 to 185 °F).

Static pressure

(zero signal errors may be calibrated out at operating
pressure)

Measuring range	Sensor A	Sensors C, F, L, N	Sensor R
Zero signal error	Up to 2 bar: 0.05 % URL	Up to 100 bar: 0.05 % URL	Up to 100 bar: 0.1 % URL
	> 2 bar: 0.05 % URL/bar	> 100 bar: 0.05 % URL/100 bar	> 100 bar: 0.1 % URL/100 bar
Span error	Up to 2 bar: 0.05 % measuring span	Up to 100 bar: 0.05 % measuring span	Up to 100 bar: 0.1 % measuring span
	> 2 bar: 0.05 % Measuring span / bar	> 100 bar: 0.05 % Measuring span / 100 bar	> 100 bar: 0.1 % Measuring span / 100 bar

Power supply

Within the limit values for the voltage / load, the total influence
is less than 0.005 % of the upper measuring range limit values
per volt.

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Load

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

Electromagnetic field

Meets all requirements of EN 61326

Common-mode interference

No influence from 100 V rms @ 50 Hz, or 50 V DC

Mounting position

Rotations in the plane of the diaphragm have a negligible effect. A tilt from the vertical of up to 90° causes a zero [point] shift of up to 0.35 kPa (3.5 mbar, 1.4 in H₂O), which can be corrected by making an appropriate zero position adjustment. There is no effect on the measuring span.

Long-term stability

Sensors C to R:

± 0.15 % of URL over a period of 10 years

(± 0.05 % URL/year)

Sensor A:

± 0.3 % of URL over a period of 10 years (± 0.2 % URL/year)

Total performance

Only for differential pressure measurement; similar to DIN 16086.

Within an ambient temperature change range of -10 to 60 °C (14 to 140 °F), up to 10 MPa, 100 bar, 1,450 psi static pressure

Model	Sensor	For TD range	Total performance (DP)
266CSH 266JSH	C to N	1:1	± 0.17 % of calibrated span
266CST 266JST	C to N	1:1	± 0.14 % of calibrated span

The total performance includes the measuring error (non-linearity including hysteresis and non-repeatability), the thermal change in the ambient temperature as regards the zero signal and measuring span, as well as the effect of the static pressure on the zero signal and measuring span.

$$E_{\text{perf}} = \sqrt{(E_{\Delta\text{TZ}} + E_{\Delta\text{TS}})^2 + E_{\Delta\text{PZ}}^2 + E_{\Delta\text{PS}}^2 + E_{\text{lin}}^2}$$

E_{perf} = Total Performance

$E_{\Delta\text{TZ}}$ = Effect of the ambient temperature on the zero signal.

$E_{\Delta\text{TS}}$ = Effect of the ambient temperature on the measuring span

$E_{\Delta\text{PZ}}$ = Effect of the static pressure on the zero signal

$E_{\Delta\text{PS}}$ = Effect of the static pressure on the measuring span

E_{lin} = Measuring error

Technical specification

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

Materials

Process separating diaphragms¹⁾

Stainless steel 1.4435 (AISI 316L);
Hastelloy C276;
Monel 400; Monel 400, gold-plated; tantalum

Process flanges, adapters, screw plugs, and vent / drain valves¹⁾

Stainless steel 1.4404 / 1.4408 (AISI 316L);
Hastelloy C276; Monel 400; Kynar (flange made from stainless steel AISI 316L with PVDF insert)

Sensor filling fluid

Silicone oil, fluorocarbon (Galden)

Mounting bracket²⁾

Galvanized C steel with chromium passivation;
stainless steel AISI 316, AISI 316 L

Seals¹⁾

Viton (FPM); Buna (NBR); EPDM; PTFE or FEP-coated Viton (only for PVDF Kynar process connection); graphite

Pressure sensor housing

Stainless steel 1.4404 (AISI 316L)

Screws and nuts

Screws and nuts made from stainless steel AISI 316, class A4-70 as per UNI 7323 (ISO 3506) in compliance with NACE MR0175 Class II

Electronics housing and cover

Aluminum alloy (copper content ≤ 0.3 %) with baked epoxy finish (color RAL9002); stainless steel AISI 316L.

Cover O-ring

Buna N (Perbunan)

1) Wetted parts of the transmitter.

2) U-bolt material: Stainless steel AISI 400;

Screw material: high-strength alloy steel or stainless steel AISI 316

Local zero point, measuring span, and write protection settings

Fiber glass-reinforced polyphenylene oxide (removable)

Plates

Stainless steel AISI 316 for transmitter name plate, certification plate, optional measuring point tag plate / settings plate attached to electronics housing, and optional tag plate with customer data. All plates laser-labeled.

Calibration

Standard:

- 0 to measuring range upper limit, for ambient temperature and atmospheric pressure

Optional:

- To specified measuring span

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.

Surge protector

Cleaning stage for oxygen applications (O2)

Certificates (test, design, characteristics, material traceability)

Name plate and operating instruction language

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Process connections

Flanges: 1/4-18 NPT on the process axis

Adapters: 1/2-14 NPT on the process axis

Center distance:

54 mm (2.13 in.) between flanges; 51 mm, 54 mm, or 57 mm (2.01 in., 2.13 in., or 2.24 in.) between adapters

Fastening screw threads:

7/16–20 UNF with 41.3 mm center distance

or with process flange code C:

M10 with operating pressures of up to 10 MPa, 100 bar, 1450 psi

M12 with higher operating pressures of up to 41 MPa, 410 bar, 5945 psi

Electrical connections

Two 1/2-14 NPT or M20 x 1.5 threaded bores for cable glands, directly on housing.

Terminals

Three connections for signal / external display, four connections for a Pt100 resistance thermometer with 4-wire technology, and two connections for the digital output (pulse / alarm output). For wire cross sections of up to 2.5 mm² (14 AWG) and connection points for testing and communication purposes.

Grounding

Internal and external ground terminals are provided for 6 mm² (10 AWG) wire cross sections.

Mounting position

The transmitters can be installed in any position.

The electronic housing can be rotated into any position. A stop is provided to prevent overturning.

Weight

(without options)

Approximately 3.8 kg (8.4 lb); add 1.5 kg (3.3 lb) for housings made from stainless steel.

Add 650 g (1.5 lb) for packaging

Packaging

Carton with dimensions of approx.

28 x 23 x 24 cm (11 x 9 x 9 in.)

Configuration

Standard configuration

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

Physical unit	kPa
4 mA	Zero
20 mA	Upper range limit (URL)
Output	266CXX: Square root 266JXX: Linear
Damping	1 s
Transmitter	
Failure mode	High alarm
Software tag (max. 8 characters)	Blank
Optional LCD display	PV in kPa; output in percent as bargraph display

Any or all of the configurable parameters listed above - including the lower and upper range values (with the same unit of measurement) - can easily be changed using a portable HART handheld communicator or a PC running the configuration software with the DTM for 266 models. Specifications concerning the flange type and materials, O-ring and vent / drain valve materials, and additional device options are stored in the transmitter database.

Customer-specific configuration (optional)

The following information can be specified in addition to the standard configuration parameters:

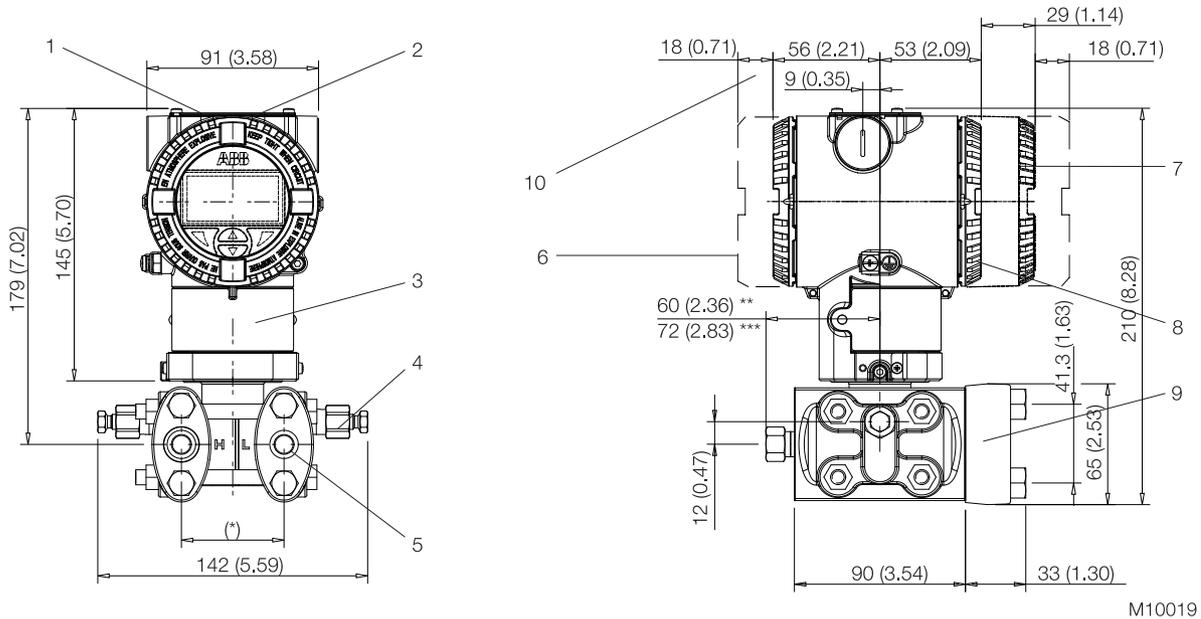
Description	16 alphanumeric characters
Supplementary information	32 alphanumeric characters
Date	Day, month, year

Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

Mounting dimensions

(not design data) - dimensions in mm (inch)

Transmitter with barrel housing - Horizontal flanges



M10019

Fig. 5: Barrel housing - Horizontal flanges

1 Settings | 2 Name plate | 3 Certification plate | 4 Vent / drain valve | 5 Process connection |
6 Terminal side | 7 LCD display housing cover | 8 Electronics side | 9 Process flange adapter | 10 Space for removing the cover

* 54 (2.13) mm (in.) via 1/4 - 18 NPT process flanges

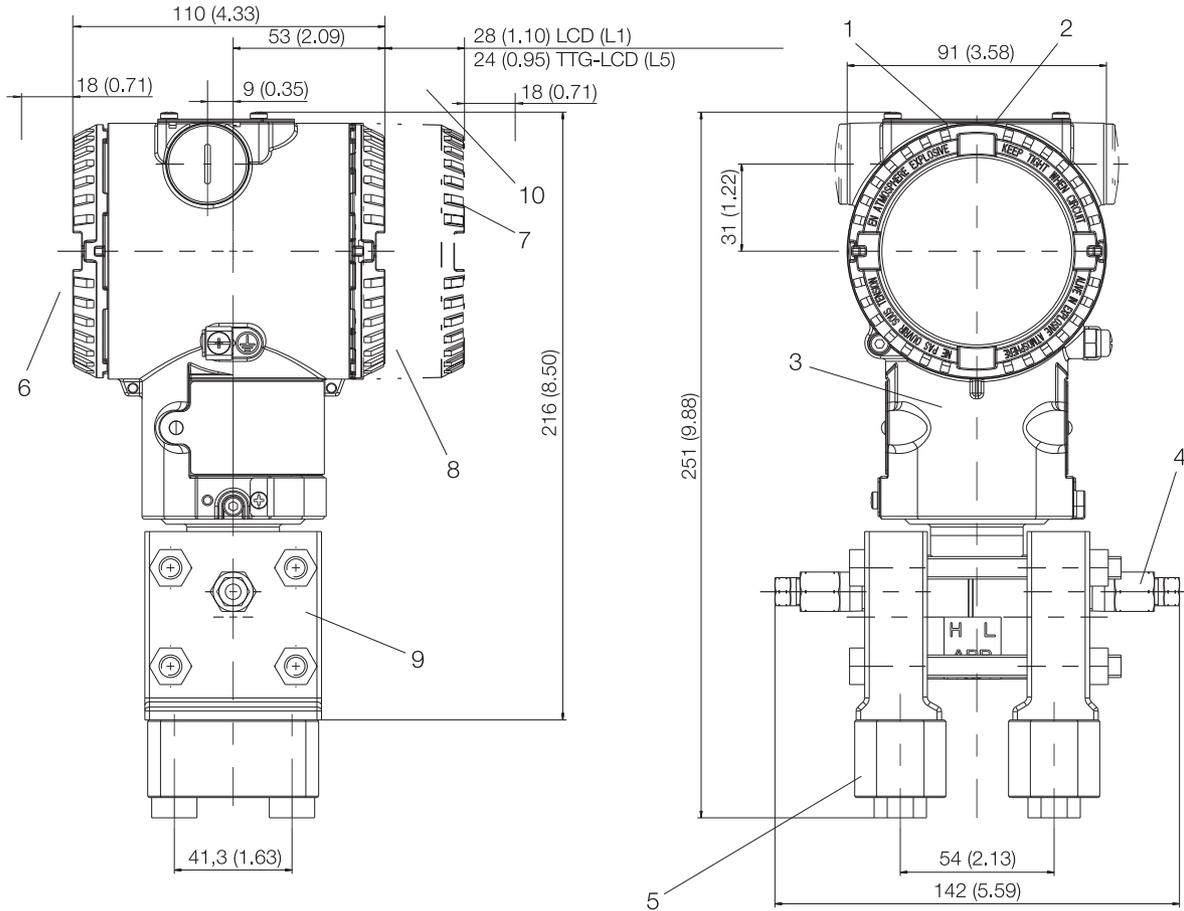
51 (2.01), 54 (2.13), or 57 (2.24) mm (in) via 1/2 - 14 NPT adapter flanges.

Note: Process connection and gasket groove comply with IEC 61518. Thread for attaching adapter flanges or other components (e.g., manifold) to process flange: 7/16 -20 UNF.

** With screw plug

*** With vent/ drain valve

Transmitter with barrel housing - Vertical flanges



M10139

Fig. 6: Barrel housing - Vertical flanges

- 1 Settings | 2 Name plate | 3 Certification plate | 4 Vent / drain valve | 5 Process connection |
 6 Terminal side | 7 LCD display housing cover | 8 Electronics side | 9 Process flange adapter | 10 Space for removing the cover

Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

Transmitter with mounting bracket, for vertical or horizontal mounting on 60 mm (2 in.) pipe

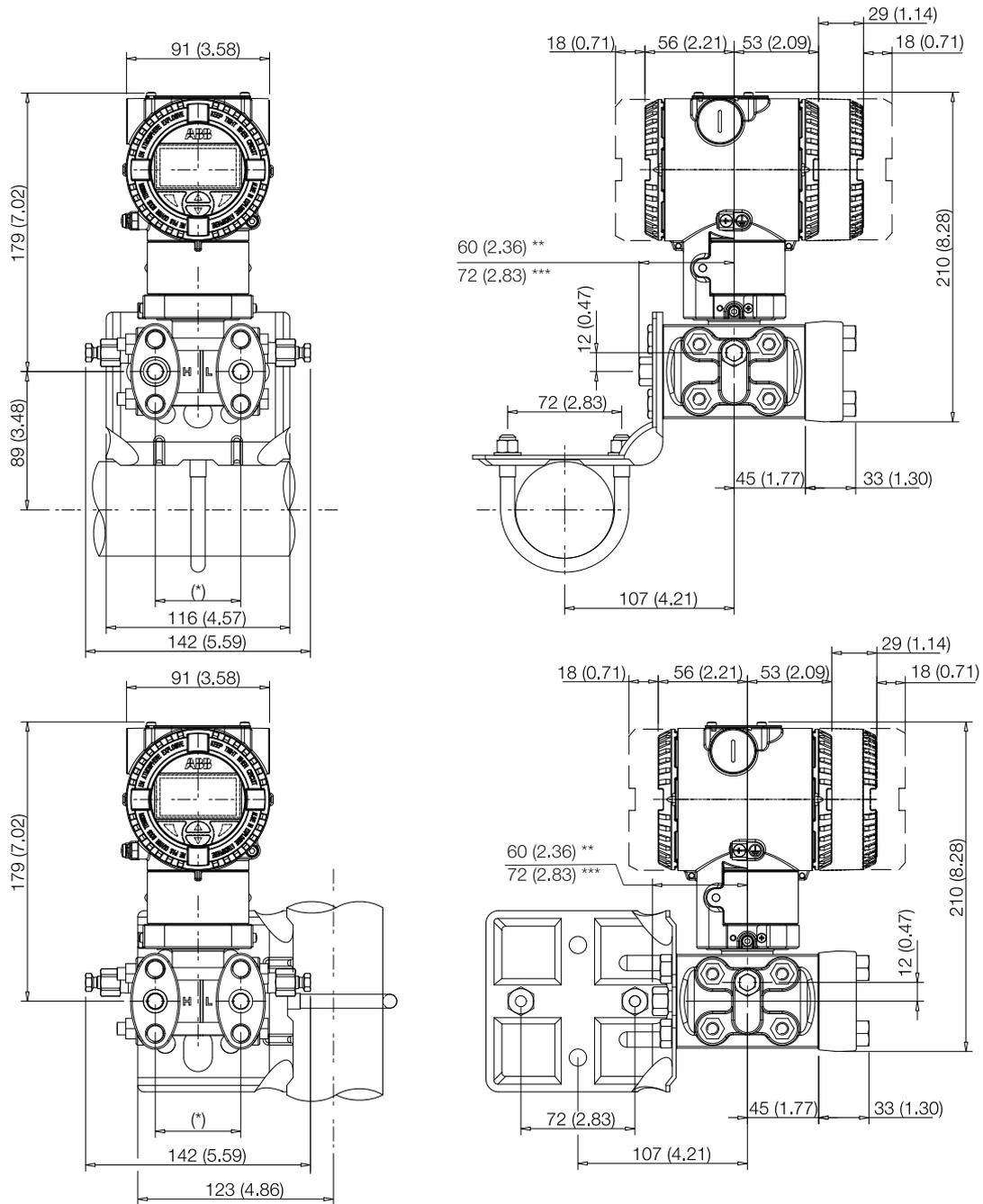


Fig. 7: Pipe mounting - Barrel housing

* 54 (2.13) mm (in.) via 1/4 - 18 NPT process flanges
51 (2.01), 54 (2.13), or 57 (2.24) mm (in) via 1/2 - 14 NPT adapter flanges.

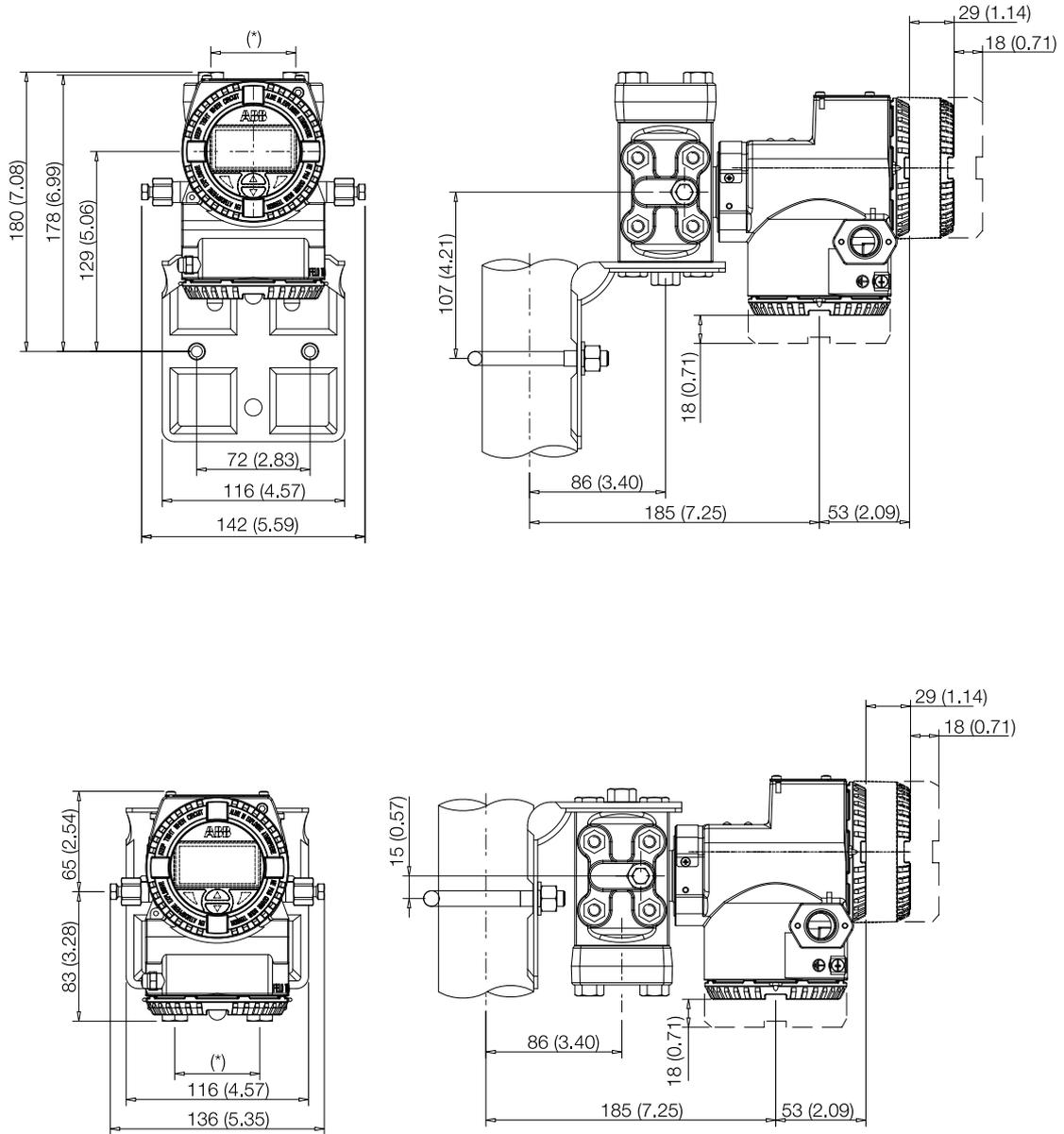
Note: Process connection and gasket groove comply with IEC 61518. Thread for attaching adapter flanges or other components (e.g., manifold) to process flange: 7/16 -20 UNF.

** With screw plug

*** With vent / drain valve

M10020

Transmitter with DIN aluminum housing - horizontal flanges with mounting bracket for vertical or horizontal mounting on 60 mm (2 in.) pipe



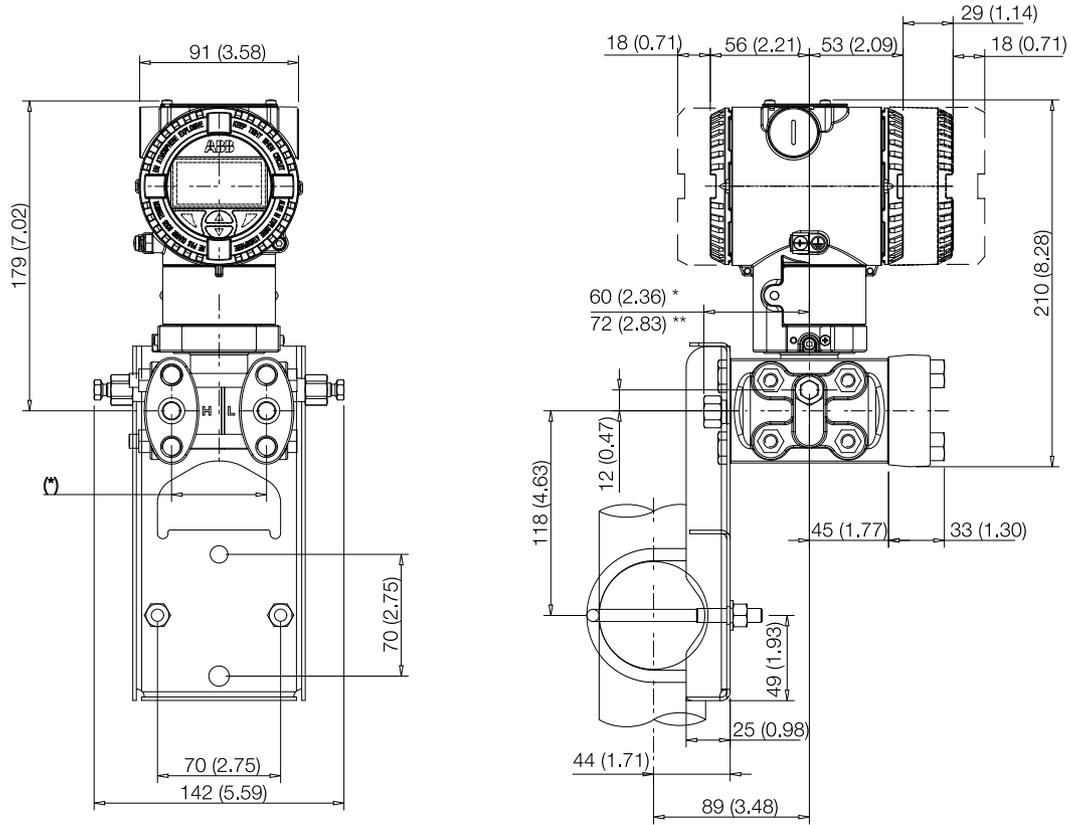
M10021

Fig. 8: Pipe mounting - DIN housing

* 54 (2.13) mm (in.) via 1/4 - 18 NPT process flanges
 51 (2.01), 54 (2.13), or 57 (2.24) mm (in) via 1/2 - 14 NPT adapter flanges.
 Note: Process connection and gasket groove comply with IEC 61518. Thread for attaching adapter flanges or other components (e.g., manifold) to process flange: 7/16 -20 UNF.

Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

Transmitter with flat bracket, for vertical or horizontal mounting on 60 mm (2 in.) pipe

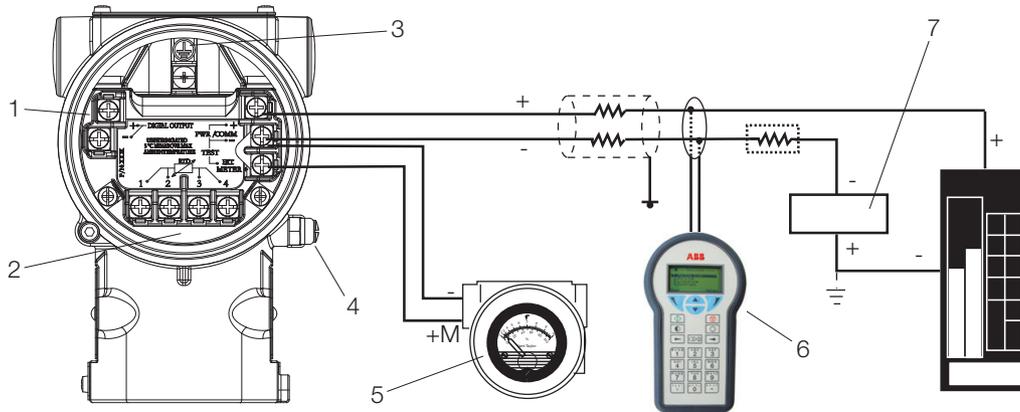


M10022

Fig. 9: Flat bracket for pipe mounting - Barrel housing

- * With screw plug
- ** With vent / drain valve

Electrical connections



M10137

Fig. 10: Electrical connections

1 Digital output | 2 Connection for Pt100 resistance thermometer | 3 Internal ground connection | 4 External ground connection | 5 Remote display | 6 Handheld communicator | 7 Power supply

The HART handheld terminal can be connected to any wiring termination point in the loop, provided there is a minimum resistance of $250\ \Omega$ between the handheld terminal and transmitter supply. If this is less than $250\ \Omega$, additional resistance needs to be incorporated in order to enable communication.

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Ordering Information

Basic ordering information model 266CSH Multivariable transmitter for mass flow and level,

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 – 1 st to 6 th characters				266CSH	X	X	X	X	X	X	X
Multivariable transmitter for mass flow and level, base accuracy 0.075 %											
Sensor Span Limits – 7th character											continued see next page
0.05 and 1 kPa	(0.5 and 10 mbar	0.2 and 4 in. H ₂ O)	(Note: 1)	A							
0.2 and 6 kPa	(2 and 60 mbar	0.8 and 24 in. H ₂ O)		C							
0.4 and 40 kPa	(4 and 400 mbar	1.6 and 160 in. H ₂ O)		F							
2.5 and 250 kPa	(25 and 2500 mbar	10 and 1000 in. H ₂ O)		L							
20 and 2000 kPa	(0.2 and 20 bar	2.9 and 290 psi)		N							
Maximum Working Pressure – 8th character											
0 and 0.6 MPa	0 and 6 bar	0 and 87 psi	(only with Sensor Span Limits code A)	1							
0 and 2 MPa	0 and 20 bar	0 and 290 psi		2							
0 and 10 MPa	0 and 100 bar	0 and 1450 psi	(not with Sensor Span Limits code A)	3							
0 and 41 MPa	0 and 410 bar	0 and 5945 psi	(not with Sensor Span Limits code A)	4							
Diaphragm Material / Fill Fluid – 9th character											
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 - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)				A			
Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)				F			
Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)				C			
Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)				Y			
Tantalum / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)				D			
Process Flanges and Adapters Material / Connection – 10th character											
AISI 316L SST (1.4404 / 1.4408)		1/4-18 NPT female direct	(horizontal connection)	(NACE)				A			
AISI 316L SST (1.4404 / 1.4408)		1/2-14 NPT female through adapter	(horizontal connection)	(NACE)				B			
AISI 316L SST (1.4404 / 1.4408)		1/4-18 NPT female direct (DIN 19213)	(horizontal connection)	(NACE)				C			
Hastelloy C-276		1/4-18 NPT female direct	(horizontal connection)	(NACE)				D			
Hastelloy C-276		1/2-14 NPT female through adapter	(horizontal connection)	(NACE)				E			
Monel 400		1/4-18 NPT female direct	(horizontal connection)	(NACE)				G			
Monel 400		1/2-14 NPT female through adapter	(horizontal connection)	(NACE)				H			
Kynar (PVDF)		1/4-18 NPT female direct (MWP = 1 MPa / 10 bar / 145 psi)	(insert on side of flange)					P			
AISI 316L SST (1.4404 / 1.4408)		1/4-18 NPT female direct	(vertical connection)	(NACE)				Q			

Basic ordering information model 266CSH Multivariable transmitter			X	X	X
Bolts Material / Gaskets Material – 11 th character					
AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)	(Note 2)		3		
AISI 316L SST (NACE - non exposed) / PTFE (Max. 25 MPa / 250 bar / 3625 psi)			4		
AISI 316L SST (NACE - non exposed) / EPDM			5		
AISI 316L SST (NACE - non exposed) / Perbunan			6		
AISI 316L SST (NACE - non exposed) / Graphite			7		
AISI 316L SST (NACE - non exposed) / FEP (only available with Kynar [PVDF] process connection)			T		
Housing Material / Electrical Connection – 12 th character					
Aluminium alloy (Barrel type)	1/2-14 NPT			A	
Aluminium alloy (Barrel type)	M20 x 1.5			B	
AISI 316L SST (Barrel type)	1/2-14 NPT			S	
AISI 316L SST (Barrel type)	M20 x 1.5			T	
Aluminium alloy (DIN type)	M20 x 1.5			J	
Output – 13 th character					
HART digital communication and 4 ... 20 mA		(No additional options)			H
HART digital communication and 4 ... 20 mA		(Options requested by "Additional ordering code")			1

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Additional ordering information for model 266CSH

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

	XX	XX
Vent and Drain Valve Material / Position		
AISI 316L SST (1.4404) On process axis (NACE)	V1	
AISI 316L SST (1.4404) On flanges side top (NACE)	V2	
AISI 316L SST (1.4404) On flanges side bottom (NACE)	V3	
Hastelloy C-276 On process axis (NACE)	V4	
Hastelloy C-276 On flanges side top (NACE)	V5	
Hastelloy C-276 On flanges side bottom (NACE)	V6	
Monel 400 On process axis (NACE)	V7	
Monel 400 On flanges side top (NACE)	V8	
Monel 400 On flanges side bottom (NACE)	V9	
Explosion Protection Certification		
ATEX Group II Category 1 GD - Intrinsic Safety Ex ia		E1
ATEX Group II Category 1/2 GD - Flameproof Ex d (Note: 3)		E2
ATEX Group II Category 3 GD - Type of protection "N" Ex nL design compliance		E3
FM approval (Canada, CSA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI) (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)		E4
FM approval (USA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI) (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)		E6
Combined ATEX Ex ia and Ex d (Note: 3)		E7
Combined ATEX - Intrinsic Safety, Flameproof and Type "N" (Note: 3)		EW
FM approvals (USA and Canada) Intrinsic Safety		EA
FM approvals (USA and Canada) Explosion-proof (Note: 3)		EB
FM approvals (USA and Canada) Non-incendive		EC
Combined ATEX, FM and CSA (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)		EN
IEC Approval Group II Category 1 GD - Intrinsic Safety Ex ia		E8
IEC Approval Group II Category 1/2 GD - Flameproof Ex d (Note: 3)		E9
IEC Approval Group II Category 3 GD - Type of protection "N" Ex nL design compliance		ER
Combined IEC Approval Ex ia and Ex d (Note: 3)		EH
Combined IEC Approval Ex ia, Ex d and Ex nL (Note: 3)		EI
NEPSI IIC Ex ia		EY
NEPSI IIC Ex d (Note: 3)		EZ
NEPSI IIC Ex nL		ES
Combined NEPSI Ex ia and Ex d (Note: 3)		EP
Combined NEPSI Ex ia, Ex d and Ex nL (Note: 3)		EQ

Additional ordering information for model 266CSH	XX	XX	XX	XX	XX	XX
Integral LCD						
With integral LCD display	L1					
TTG (Through The Glass) integral digital LCD display	L5					
Mounting Bracket Shape / Material						
For pipe mounting / Carbon steel (not suitable for AISI housing)	B1					
For pipe mounting / AISI 316 SST (1.4401) (not suitable for AISI housing)	B2					
For wall mounting / Carbon steel (not suitable for AISI housing)	B3					
For wall mounting / AISI 316 SST (1.4401) (not suitable for AISI housing)	B4					
Flat type bracket / AISI 316 SST (1.4401) (suitable for AISI housing)	B5					
Operating Instruction Language						
German				M1		
English				M5		
Label and Tag Language						
German					T1	
Italian					T2	
Spanish					T3	
French					T4	
Additional Tag Plate						
Supplemental wired-on stainless steel plate (4 lines, 32 characters each)						I1
Laser printing of tag on stainless steel plate						I2
Stainless steel tag, certification and wire-on plates						I3
Configuration						
Standard pressure = in. H2O / psi at 68 °F						N2
Standard pressure = in. H2O / psi at 39.2 °F						N3
Standard pressure = in. H2O / psi at 20 °C						N4
Standard pressure = in. H2O / psi at 4 °C						N5
Custom						N6

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Additional ordering information for model 266CSH		XX	XX	XX	XX	XX
Preparation Procedure						
Oxygen service cleaning, Pmax = 12 MPa (120 bar, 1740 psi) or maximum working pressure (lower value), Tmax = 60 °C / 140 °F (only available with inert fill and Viton gasket)	P1					
Hydrogen service preparation (Fluid film)	P2					
Certificates						
Inspection certificate 3.1 acc. EN 10204 of calibration		C1				
Inspection certificate 3.1 acc. EN 10204 of cleanliness stage		C3				
Inspection certificate 3.1 acc. EN 10204 of helium leakage test of the sensor module		C4				
Inspection certificate 3.1 acc. EN 10204 of pressure test		C5				
Declaration of compliance with the order 2.1 acc. EN 10204 for instrument design		C6				
Separate calibration record		CC				
Printed record of configured data of transmitter		CG				
PMI test on wetted parts		CT				
Material Traceability						
Certificate of compliance with the order 2.1 acc. EN 10204 for process wetted parts					H1	
Inspection certificate 3.1 acc. EN 10204 of pressure-bearing and process wetted parts with analysis certificates as material verification (Note 4)					H3	
Material certificate 2.2 acc. EN 10204 of the pressure bearing and process wetted parts					H4	
Connector						
With cable gland M20 x 1.5						U8
Housing Accessories						
Integral mount manifold (price adder just for assembling, not for manifold)						A1
Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA (Note 5)						A4
Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA (Note 5)						A6
Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA (Note 5)						A5
Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA (Note 5)						A7
Plug upside welded						A8
Plug bottom welded						A9

- Note 1: Not available with Diaphragm Material code M, V, T, C, Y, D
 Note 2: Suitable for Oxygen service
 Note 3: Not available with Housing Material / Electrical Connection code J
 Note 4: Minor Parts with Factory Certificate acc. to EN 10204
 Note 5: Only available with Housing Material / Electrical Connection code J (DIN housing)

Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plugs for horizontal connection flanges on the process axis; not for PVDF Kynar insert or for vertical connection flanges (no vent / drain valves)
- For standard applications (without explosion protection)
- No display, no mounting bracket, no surge protector
- Multilanguage short operating instruction and English labeling
- Configuration with kPa and °C units
- No test, inspection, or material certificates

Basic ordering information model 266CST Multivariable transmitter for mass flow and level

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 – 1 st to 6 th characters				266CST	X	X	X	X	X	X	X
Multivariable transmitter for mass flow and level base accuracy 0.04 %											
Sensor Span Limits – 7th character											continued see next page
0.05 and 1 kPa	(0.5 and 10 mbar	0.2 and 4 in. H2O)	(Note: 1)	A							
0.2 and 6 kPa	(2 and 60 mbar	0.8 and 24 in. H2O)		C							
0.4 and 40 kPa	(4 and 400 mbar	1.6 and 160 in. H2O)		F							
2.5 and 250 kPa	(25 and 2500 mbar	10 and 1000 in. H2O)		L							
20 and 2000 kPa	(0.2 and 20 bar	2.9 and 290 psi)		N							
Maximum Working Pressure – 8th character											
0 and 0.6 MPa	0 and 6 bar	0 and 87 psi	(only with Sensor Span Limits code A)		1						
0 and 2 MPa	0 and 20 bar	0 and 290 psi			2						
0 and 10 MPa	0 and 100 bar	0 and 1450 psi	(not with Sensor Span Limits code A)		3						
0 and 41 MPa	0 and 410 bar	0 and 5945 psi	(not with Sensor Span Limits code A)		4						
Diaphragm Material / Fill Fluid – 9th character											
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 - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)			A				
Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)			F				
Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)			C				
Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)			Y				
Tantalum / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)			D				
Process Flanges and Adapters Material / Connection – 10th character											
AISI 316L SST (1.4404 / 1.4408)	1/4-18 NPT female direct	(horizontal connection)	(NACE)				A				
AISI 316L SST (1.4404 / 1.4408)	1/2-14 NPT female through adapter	(horizontal connection)	(NACE)				B				
AISI 316L SST (1.4404 / 1.4408)	1/4-18 NPT female direct (DIN 19213)	(horizontal connection)	(NACE)				C				
Hastelloy C-276	1/4-18 NPT female direct	(horizontal connection)	(NACE)				D				
Hastelloy C-276	1/2-14 NPT female through adapter	(horizontal connection)	(NACE)				E				
Monel 400	1/4-18 NPT female direct	(horizontal connection)	(NACE)				G				
Monel 400	1/2-14 NPT female through adapter	(horizontal connection)	(NACE)				H				
Kynar (PVDF)	1/4-18 NPT female direct (MWP = 1 MPa)	(insert on side of flange)					P				
AISI 316L SST (1.4404 / 1.4408)	1/4-18 NPT female direct	(vertical connection)	(NACE)				Q				

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Basic ordering information model 266CST Multivariable transmitter			X	X	X
Bolts Material / Gaskets Material – 11 th character					
AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)	(Note 2)		3		
AISI 316L SST (NACE - non exposed) / PTFE (Max. 25 MPa / 250 bar / 3625 psi)			4		
AISI 316L SST (NACE - non exposed) / EPDM			5		
AISI 316L SST (NACE - non exposed) / Perbunan			6		
AISI 316L SST (NACE - non exposed) / Graphite			7		
AISI 316L SST (NACE - non exposed) / FEP (only available with Kynar [PVDF] process connection)			T		
Housing Material / Electrical Connection – 12 th character					
Aluminium alloy (Barrel type)	1/2-14 NPT			A	
Aluminium alloy (Barrel type)	M20 x 1.5			B	
AISI 316L SST (Barrel type)	1/2-14 NPT			S	
AISI 316L SST (Barrel type)	M20 x 1.5			T	
Aluminium alloy (DIN type)	M20 x 1.5			J	
Output – 13 th character					
HART digital communication and 4 ... 20 mA	(No additional options)				H
HART digital communication and 4 ... 20 mA	(Options requested by "Additional ordering code")				1

Additional ordering information for model 266CST

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

	XX	XX
Vent and Drain Valve Material / Position		
AISI 316L SST (1.4404) On process axis (NACE)	V1	
AISI 316L SST (1.4404) On flanges side top (NACE)	V2	
AISI 316L SST (1.4404) On flanges side bottom (NACE)	V3	
Hastelloy C-276 On process axis (NACE)	V4	
Hastelloy C-276 On flanges side top (NACE)	V5	
Hastelloy C-276 On flanges side bottom (NACE)	V6	
Monel 400 On process axis (NACE)	V7	
Monel 400 On flanges side top (NACE)	V8	
Monel 400 On flanges side bottom (NACE)	V9	
Explosion Protection Certification		
ATEX Group II Category 1 GD - Intrinsic Safety Ex ia		E1
ATEX Group II Category 1/2 GD - Flameproof Ex d (Note: 3)		E2
ATEX Group II Category 3 GD - Type of protection "N" Ex nL design compliance		E3
FM approval (Canada, CSA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI) (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)		E4
FM approval (USA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI) (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)		E6
Combined ATEX Ex ia and Ex d (Note: 3)		E7
Combined ATEX - Intrinsic Safety, Flameproof and Type "N" (Note: 3)		EW
FM approvals (USA and Canada) Intrinsic Safety		EA
FM approvals (USA and Canada) Explosion-proof (Note: 3)		EB
FM approvals (USA and Canada) Non-incendive		EC
Combined ATEX, FM and CSA (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)		EN
IEC Approval Group II Category 1 GD - Intrinsic Safety Ex ia		E8
IEC Approval Group II Category 1/2 GD - Flameproof Ex d (Note: 3)		E9
IEC Approval Group II Category 3 GD - Type of protection "N" Ex nL design compliance		ER
Combined IEC Approval Ex ia and Ex d (Note: 3)		EH
Combined IEC Approval Ex ia, Ex d and Ex nL (Note: 3)		EI
NEPSI IIC Ex ia		EY
NEPSI IIC Ex d (Note: 3)		EZ
NEPSI IIC Ex nL		ES
Combined NEPSI Ex ia and Ex d (Note: 3)		EP
Combined NEPSI Ex ia, Ex d and Ex nL (Note: 3)		EQ

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Additional ordering information for model 266CST	XX	XX	XX	XX	XX	XX
Integral LCD						
With integral LCD display	L1					
TTG (Through The Glass) integral digital LCD display	L5					
Mounting Bracket Shape / Material						
For pipe mounting / Carbon steel (not suitable for AISI housing)		B1				
For pipe mounting / AISI 316 SST (1.4401) (not suitable for AISI housing)		B2				
For wall mounting / Carbon steel (not suitable for AISI housing)		B3				
For wall mounting / AISI 316 SST (1.4401) (not suitable for AISI housing)		B4				
Flat type bracket / AISI 316 SST (1.4401) (suitable for AISI housing)		B5				
Operating Instruction Language						
German				M1		
English				M5		
Label and Tag Language						
German					T1	
Italian					T2	
Spanish					T3	
French					T4	
Additional Tag Plate						
Supplemental wired-on stainless steel plate (4 lines, 30 characters each)						I1
Laser printing of tag on stainless steel plate						I2
Stainless steel tag, certification and wire-on plates						I3
Configuration						
Standard pressure = in. H2O / psi at 68 °F						N2
Standard pressure = in. H2O / psi at 39.2 °F						N3
Standard pressure = in. H2O / psi at 20 °C						N4
Standard pressure = in. H2O / psi at 4 °C						N5
Custom						N6

Additional ordering information for model 266CST		XX	XX	XX	XX	XX
Preparation Procedure						
Oxygen service cleaning, Pmax = 12 MPa (120 bar, 1740 psi) or maximum working pressure (lower value), Tmax = 60 °C / 140 °F (only available with inert fill and Viton gasket)	P1					
Hydrogen service preparation (Fluid film)	P2					
Certificates						
Inspection certificate 3.1 acc. EN 10204 of calibration		C1				
Inspection certificate 3.1 acc. EN 10204 of the cleanliness stage		C3				
Inspection certificate 3.1 acc. EN 10204 of helium leakage test of the sensor module		C4				
Inspection certificate 3.1 acc. EN 10204 of the pressure test		C5				
Declaration of compliance with the order 2.1 acc. EN 10204 for instrument design		C6				
Separate calibration record		CC				
Printed record of configured data of transmitter		CG				
PMI test on wetted parts		CT				
Material Traceability						
Certificate of compliance with the order 2.1 acc. EN 10204 for process wetted parts					H1	
Inspection certificate 3.1 acc. EN 10204 of pressure-bearing and process wetted parts with analysis certificates as material verification (Note 4)					H3	
Material certificate 2.2 acc. EN 10204 of the pressure bearing and process wetted parts					H4	
Connector						
With cable gland M20 x 1.5						U8
Housing Accessories						
Integral mount manifold (price adder just for assembling, not for manifold)						A1
Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA (Note 5)						A4
Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA (Note 5)						A6
Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA (Note 5)						A5
Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA (Note 5)						A7
Plug upside welded						A8
Plug bottom welded						A9

- Note 1: Not available with Diaphragm Material code M, V, T, C, Y, D
Note 2: Suitable for Oxygen service
Note 3: Not available with Housing Material / Electrical Connection code J
Note 4: Minor Parts with Factory Certificate acc. to EN 10204
Note 5: Only available with Housing Material / Electrical Connection code J (DIN housing)

Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plugs for horizontal connection flanges on the process axis; not for PVDF Kynar insert or for vertical connection flanges (no vent / drain valves)
- For standard applications (without explosion protection)
- No display, no mounting bracket, no surge protector
- Multilanguage short operating instruction and English labeling
- Configuration with kPa and °C units
- No test, inspection, or material certificates

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Basic ordering information model 266JSH Multivariable transmitter, for differential pressure, absolute pressure and temperature measurement

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 – 1 st to 6 th characters				266JSH	X	X	X	X	X	X	X
Multivariable transmitter, for differential pressure, absolute pressure and temperature measurement, base accuracy 0.075 %											
Sensor Span Limits – 7th character											continued see next page
0.05 and 1 kPa	(0.5 and 10 mbar	0.2 and 4 in. H ₂ O)	(Note: 1)	A							
0.2 and 6 kPa	(2 and 60 mbar	0.8 and 24 in. H ₂ O)		C							
0.4 and 40 kPa	(4 and 400 mbar	1.6 and 160 in. H ₂ O)		F							
2.5 and 250 kPa	(25 and 2500 mbar	10 and 1000 in. H ₂ O)		L							
20 and 2000 kPa	(0.2 and 20 bar	2.9 and 290 psi)		N							
100 and 10000 kPa	(1 and 100 bar	14.5 and 1450 psi)		R							
Maximum Working Pressure – 8th character											
0 and 0.6 MPa	0 and 6 bar	0 and 87 psi	(only with Sensor Span Limits code A)	1							
0 and 2 MPa	0 and 20 bar	0 and 290 psi	(not with Sensor Span Limits code R)	2							
0 and 10 MPa	0 and 100 bar	0 and 1450 psi	(not with Sensor Span Limits code A)	3							
0 and 41 MPa	0 and 410 bar	0 and 5945 psi	(not with Sensor Span Limits code A)	4							
Diaphragm Material / Fill Fluid – 9th character											
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 - Galden (Suitable for oxygen applications)		(NACE)	(Note 2)	A							
Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)		(NACE)	(Note 2)	F							
Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)		(NACE)	(Note 2)	C							
Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)		(NACE)	(Note 2)	Y							
Tantalum / Inert fluid - Galden (Suitable for oxygen applications)		(NACE)	(Note 2)	D							
Process Flanges and Adapters Material / Connection – 10th character											
AISI 316L SST (1.4404 / 1.4408)	1/4-18 NPT female direct	(horizontal connection)	(NACE)	A							
AISI 316L SST (1.4404 / 1.4408)	1/2-14 NPT female through adapter	(horizontal connection)	(NACE)	B							
AISI 316L SST (1.4404 / 1.4408)	1/4-18 NPT female direct (DIN 19213)	(horizontal connection)	(NACE)	C							
Hastelloy C-276	1/4-18 NPT female direct	(horizontal connection)	(NACE)	D							
Hastelloy C-276	1/2-14 NPT female through adapter	(horizontal connection)	(NACE)	E							
Monel 400	1/4-18 NPT female direct	(horizontal connection)	(NACE)	G							
Monel 400	1/2-14 NPT female through adapter	(horizontal connection)	(NACE)	H							
Kynar (PVDF)	1/4-18 NPT female direct (MWP = 1 MPa)	(insert on side of flange)		P							
AISI 316L SST (1.4404 / 1.4408)	1/4-18 NPT female direct	(vertical connection)	(NACE)	Q							

Basic ordering information model 266JSH Multivariable transmitter			X	X	X
Bolts Material / Gaskets Material – 11 th character					
AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)	(Note 2)		3		
AISI 316L SST (NACE - non exposed) / PTFE (Max. 25 MPa / 250 bar / 3625 psi)			4		
AISI 316L SST (NACE - non exposed) / EPDM			5		
AISI 316L SST (NACE - non exposed) / Perbunan			6		
AISI 316L SST (NACE - non exposed) / Graphite			7		
AISI 316L SST (NACE - non exposed) / FEP (only available with Kynar [PVDF] process connection)			T		
Housing Material / Electrical Connection – 12 th character					
Aluminium alloy (Barrel type)	1/2-14 NPT			A	
Aluminium alloy (Barrel type)	M20 x 1.5			B	
AISI 316L SST (Barrel type)	1/2-14 NPT			S	
AISI 316L SST (Barrel type)	M20 x 1.5			T	
Aluminium alloy (DIN type)	M20 x 1.5			J	
Output – 13 th character					
HART digital communication and 4 ... 20 mA		(No additional options)			H
HART digital communication and 4 ... 20 mA		(Options requested by "Additional ordering code")			1

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Additional ordering information for model 266JSH

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

			XX	XX
Vent and Drain Valve Material / Position				
AISI 316L SST (1.4404)	On process axis	(NACE)	V1	
AISI 316L SST (1.4404)	On flanges side top	(NACE)	V2	
AISI 316L SST (1.4404)	On flanges side bottom	(NACE)	V3	
Hastelloy C-276	On process axis	(NACE)	V4	
Hastelloy C-276	On flanges side top	(NACE)	V5	
Hastelloy C-276	On flanges side bottom	(NACE)	V6	
Monel 400	On process axis	(NACE)	V7	
Monel 400	On flanges side top	(NACE)	V8	
Monel 400	On flanges side bottom	(NACE)	V9	
Explosion Protection Certification				
ATEX Group II Category 1 GD - Intrinsic Safety Ex ia				E1
ATEX Group II Category 1/2 GD - Flameproof Ex d			(Note: 3)	E2
ATEX Group II Category 3 GD - Type of protection "N" Ex nL design compliance				E3
FM approval (Canada, CSA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI) (only available with 1/2-14 NPT or M20 electrical connections)			(Note: 3)	E4
FM approval (USA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI) (only available with 1/2-14 NPT or M20 electrical connections)			(Note: 3)	E6
Combined ATEX Ex ia and Ex d			(Note: 3)	E7
Combined ATEX - Intrinsic Safety, Flameproof and Type "N"			(Note: 3)	EW
FM approvals (USA and Canada) Intrinsic Safety				EA
FM approvals (USA and Canada) Explosion-proof			(Note: 3)	EB
FM approvals (USA and Canada) Non-incendive				EC
Combined ATEX, FM and CSA (only available with 1/2-14 NPT or M20 electrical connections)			(Note: 3)	EN
IEC Approval Group II Category 1 GD - Intrinsic Safety Ex ia				E8
IEC Approval Group II Category 1/2 GD - Flameproof Ex d			(Note: 3)	E9
IEC Approval Group II Category 3 GD - Type of protection "N" Ex nL design compliance				ER
Combined IEC Approval Ex ia and Ex d			(Note: 3)	EH
Combined IEC Approval Ex ia, Ex d and Ex nL			(Note: 3)	EI
NEPSI IIC Ex ia				EY
NEPSI IIC Ex d			(Note: 3)	EZ
NEPSI IIC Ex nL				ES
Combined NEPSI Ex ia and Ex d			(Note: 3)	EP
Combined NEPSI Ex ia, Ex d and Ex nL			(Note: 3)	EQ

Additional ordering information for model 266JSH	XX	XX	XX	XX	XX	XX
Integral LCD						
With integral LCD display	L1					
TTG (Through The Glass) integral digital LCD display	L5					
Mounting Bracket Shape / Material						
For pipe mounting / Carbon steel (not suitable for AISI housing)	B1					
For pipe mounting / AISI 316 SST (1.4401) (not suitable for AISI housing)	B2					
For wall mounting / Carbon steel (not suitable for AISI housing)	B3					
For wall mounting / AISI 316 SST (1.4401) (not suitable for AISI housing)	B4					
Flat type bracket / AISI 316 SST (1.4401) (suitable for AISI housing)	B5					
Operating Instruction Language						
German				M1		
English				M5		
Label and Tag Language						
German					T1	
Italian					T2	
Spanish					T3	
French					T4	
Additional Tag Plate						
Supplemental wired-on stainless steel plate (4 lines, 32 characters each)						I1
Laser printing of tag on stainless steel plate						I2
Stainless steel tag, certification and wire-on plates						I3
Configuration						
Standard pressure = in. H2O / psi at 68 °F						N2
Standard pressure = in. H2O / psi at 39.2 °F						N3
Standard pressure = in. H2O / psi at 20 °C						N4
Standard pressure = in. H2O / psi at 4 °C						N5
Custom						N6

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Additional ordering information for model 266JSH		XX	XX	XX	XX	XX
Preparation Procedure						
Oxygen service cleaning, Pmax = 12 MPa (120 bar, 1740 psi) or maximum working pressure (lower value), Tmax = 60 °C / 140 °F (only available with inert fill and Viton gasket)	P1					
Hydrogen service preparation (Fluid film)	P2					
Certificates						
Inspection certificate 3.1 acc. EN 10204 of calibration		C1				
Inspection certificate 3.1 acc. EN 10204 of cleanliness stage		C3				
Inspection certificate 3.1 acc. EN 10204 of helium leakage test of the sensor module		C4				
Inspection certificate 3.1 acc. EN 10204 of pressure test		C5				
Declaration of compliance with the order 2.1 acc. EN 10204 for instrument design		C6				
Separate calibration record		CC				
Printed record of configured data of transmitter		CG				
PMI test on wetted parts		CT				
Material Traceability						
Certificate of compliance with the order 2.1 acc. EN 10204 for process wetted parts					H1	
Inspection certificate 3.1 acc. EN 10204 of pressure-bearing and process wetted parts with analysis certificates as material verification (Note 4)					H3	
Material certificate 2.2 acc. EN 10204 of the pressure bearing and process wetted parts					H4	
Connector						
With cable gland M20 x 1.5						U8
Housing Accessories						
Integral mount manifold (price adder just for assembling, not for manifold)						A1
Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA (Note 5)						A4
Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA (Note 5)						A6
Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA (Note 5)						A5
Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA (Note 5)						A7
Plug upside welded						A8
Plug bottom welded						A9

- Note 1: Not available with Diaphragm Material code M, V, T, C, Y, D
 Note 2: Suitable for Oxygen service
 Note 3: Not available with Housing Material / Electrical Connection code J
 Note 4: Minor Parts with Factory Certificate acc. to EN 10204
 Note 5: Only available with Housing Material / Electrical Connection code J (DIN housing)

Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plugs for horizontal connection flanges on the process axis; not for PVDF Kynar insert or for vertical connection flanges (no vent / drain valves)
- For standard applications (without explosion protection)
- No display, no mounting bracket, no surge protector
- Multilanguage short operating instruction and English labeling
- Configuration with kPa and °C units
- No test, inspection, or material certificates

Basic ordering information model 266JST Multivariable transmitter, for differential pressure, absolute pressure and temperature measurement

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 – 1 st to 6 th characters				266JST	X	X	X	X	X	X	X
Multivariable transmitter, for differential pressure, absolute pressure and temperature measurement, base accuracy 0.04 %											
Sensor Span Limits – 7th character											continued see next page
0.05 and 1 kPa	(0.5 and 10 mbar	0.2 and 4 in. H2O)	(Note: 1)	A							
0.2 and 6 kPa	(2 and 60 mbar	0.8 and 24 in. H2O)		C							
0.4 and 40 kPa	(4 and 400 mbar	1.6 and 160 in. H2O)		F							
2.5 and 250 kPa	(25 and 2500 mbar	10 and 1000 in. H2O)		L							
20 and 2000 kPa	(0.2 and 20 bar	2.9 and 290 psi)		N							
100 and 10000 kPa	(1 and 100 bar	14.5 and 1450 psi)		R							
Maximum Working Pressure – 8th character											
0 and 0.6 MPa	0 and 6 bar	0 and 87 psi	(only with Sensor Span Limits code A)	1							
0 and 2 MPa	0 and 20 bar	0 and 290 psi	(not with Sensor Span Limits code R)	2							
0 and 10 MPa	0 and 100 bar	0 and 1450 psi	(not with Sensor Span Limits code A)	3							
0 and 41 MPa	0 and 410 bar	0 and 5945 psi	(not with Sensor Span Limits code A)	4							
Diaphragm Material / Fill Fluid – 9th character											
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 - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)							A
Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)							F
Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)							C
Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)							Y
Tantalum / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 2)							D
Process Flanges and Adapters Material / Connection – 10th character											
AISI 316L SST (1.4404 / 1.4408)	1/4-18 NPT female direct	(horizontal connection)	(NACE)								A
AISI 316L SST (1.4404 / 1.4408)	1/2-14 NPT female through adapter	(horizontal connection)	(NACE)								B
AISI 316L SST (1.4404 / 1.4408)	1/4-18 NPT female direct (DIN 19213)	(horizontal connection)	(NACE)								C
Hastelloy C-276	1/4-18 NPT female direct	(horizontal connection)	(NACE)								D
Hastelloy C-276	1/2-14 NPT female through adapter	(horizontal connection)	(NACE)								E
Monel 400	1/4-18 NPT female direct	(horizontal connection)	(NACE)								G
Monel 400	1/2-14 NPT female through adapter	(horizontal connection)	(NACE)								H
Kynar (PVDF)	1/4-18 NPT female direct (MWP = 1 MPa)	(insert on side of flange)									P
AISI 316L SST (1.4404 / 1.4408)	1/4-18 NPT female direct	(vertical connection)	(NACE)								Q

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Basic ordering information model 266JST Multivariable transmitter			X	X	X
Bolts Material / Gaskets Material – 11 th character					
AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)	(Note 2)		3		
AISI 316L SST (NACE - non exposed) / PTFE (Max. 25 MPa / 250 bar / 3625 psi)			4		
AISI 316L SST (NACE - non exposed) / EPDM			5		
AISI 316L SST (NACE - non exposed) / Perbunan			6		
AISI 316L SST (NACE - non exposed) / Graphite			7		
AISI 316L SST (NACE - non exposed) / FEP (only available with Kynar [PVDF] process connection)			T		
Housing Material / Electrical Connection – 12 th character					
Aluminium alloy (Barrel type)	1/2-14 NPT			A	
Aluminium alloy (Barrel type)	M20 x 1.5			B	
AISI 316L SST (Barrel type)	1/2-14 NPT			S	
AISI 316L SST (Barrel type)	M20 x 1.5			T	
Aluminium alloy (DIN type)	M20 x 1.5			J	
Output – 13 th character					
HART digital communication and 4 ... 20 mA	(No additional options)				H
HART digital communication and 4 ... 20 mA	(Options requested by "Additional ordering code")				1

Additional ordering information for model 266JST

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

	XX	XX
Vent and Drain Valve Material / Position		
AISI 316L SST (1.4404) On process axis (NACE)	V1	
AISI 316L SST (1.4404) On flanges side top (NACE)	V2	
AISI 316L SST (1.4404) On flanges side bottom (NACE)	V3	
Hastelloy C-276 On process axis (NACE)	V4	
Hastelloy C-276 On flanges side top (NACE)	V5	
Hastelloy C-276 On flanges side bottom (NACE)	V6	
Monel 400 On process axis (NACE)	V7	
Monel 400 On flanges side top (NACE)	V8	
Monel 400 On flanges side bottom (NACE)	V9	
Explosion Protection Certification		
ATEX Group II Category 1 GD - Intrinsic Safety Ex ia		E1
ATEX Group II Category 1/2 GD - Flameproof Ex d (Note: 3)		E2
ATEX Group II Category 3 GD - Type of protection "N" Ex nL design compliance		E3
FM approval (Canada, CSA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI) (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)		E4
FM approval (USA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI) (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)		E6
Combined ATEX Ex ia and Ex d (Note: 3)		E7
Combined ATEX - Intrinsic Safety, Flameproof and Type "N" (Note: 3)		EW
FM approvals (USA and Canada) Intrinsic Safety		EA
FM approvals (USA and Canada) Explosion-proof (Note: 3)		EB
FM approvals (USA and Canada) Non-incendive		EC
Combined ATEX, FM and CSA (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)		EN
IEC Approval Group II Category 1 GD - Intrinsic Safety Ex ia		E8
IEC Approval Group II Category 1/2 GD - Flameproof Ex d (Note: 3)		E9
IEC Approval Group II Category 3 GD - Type of protection "N" Ex nL design compliance		ER
Combined IEC Approval Ex ia and Ex d (Note: 3)		EH
Combined IEC Approval Ex ia, Ex d and Ex nL (Note: 3)		EI
NEPSI IIC Ex ia		EY
NEPSI IIC Ex d (Note: 3)		EZ
NEPSI IIC Ex nL		ES
Combined NEPSI Ex ia and Ex d (Note: 3)		EP
Combined NEPSI Ex ia, Ex d and Ex nL (Note: 3)		EQ

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Additional ordering information for model 266JST	XX	XX	XX	XX	XX	XX
Integral LCD						
With integral LCD display	L1					
TTG (Through The Glass) integral digital LCD display	L5					
Mounting Bracket Shape / Material						
For pipe mounting / Carbon steel (not suitable for AISI housing)		B1				
For pipe mounting / AISI 316 SST (1.4401) (not suitable for AISI housing)		B2				
For wall mounting / Carbon steel (not suitable for AISI housing)		B3				
For wall mounting / AISI 316 SST (1.4401) (not suitable for AISI housing)		B4				
Flat type bracket / AISI 316 SST (1.4401) (suitable for AISI housing)		B5				
Operating Instruction Language						
German			M1			
English			M5			
Label and Tag Language						
German				T1		
Italian				T2		
Spanish				T3		
French				T4		
Additional Tag Plate						
Supplemental wired-on stainless steel plate (4 lines, 32 characters each)					I1	
Laser printing of tag on stainless steel plate					I2	
Stainless steel tag, certification and wire-on plates					I3	
Configuration						
Standard pressure = in. H2O / psi at 68 °F						N2
Standard pressure = in. H2O / psi at 39.2 °F						N3
Standard pressure = in. H2O / psi at 20 °C						N4
Standard pressure = in. H2O / psi at 4 °C						N5
Custom						N6

Additional ordering information for model 266JST		XX	XX	XX	XX	XX
Preparation Procedure						
Oxygen service cleaning, Pmax = 12 MPa (120 bar, 1740 psi) or maximum working pressure (lower value), Tmax = 60 °C / 140 °F (only available with inert fill and Viton gasket)	P1					
Hydrogen service preparation (Fluid film)	P2					
Certificates						
Inspection certificate 3.1 acc. EN 10204 of calibration		C1				
Inspection certificate 3.1 acc. EN 10204 of cleanliness stage		C3				
Inspection certificate 3.1 acc. EN 10204 of helium leakage test of the sensor module		C4				
Inspection certificate 3.1 acc. EN 10204 of pressure test		C5				
Declaration of compliance with the order 2.1 acc. EN 10204 for instrument design		C6				
Separate calibration record		CC				
Printed record of configured data of transmitter		CG				
PMI test on wetted parts		CT				
Material Traceability						
Certificate of compliance with the order 2.1 acc. EN 10204 for process wetted parts					H1	
Inspection certificate 3.1 acc. EN 10204 of pressure-bearing and process wetted parts with analysis certificates as material verification	(Note 4)				H3	
Material certificate 2.2 acc. EN 10204 of the pressure bearing and process wetted parts					H4	
Connector						
With cable gland M20 x 1.5						U8
Housing Accessories						
Integral mount manifold (price adder just for assembling, not for manifold)						A1
Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA	(Note 5)					A4
Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA	(Note 5)					A6
Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA	(Note 5)					A5
Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA	(Note 5)					A7
Plug upside welded						A8
Plug bottom welded						A9

- Note 1: Not available with Diaphragm Material code M, V, T, C, Y, D
Note 2: Suitable for Oxygen service
Note 3: Not available with Housing Material / Electrical Connection code J
Note 4: Minor Parts with Factory Certificate acc. to EN 10204
Note 5: Only available with Housing Material / Electrical Connection code J (DIN housing)

Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plugs for horizontal connection flanges on the process axis; not for PVDF Kynar insert or for vertical connection flanges (no vent / drain valves)
- For standard applications (without explosion protection)
- No display, no mounting bracket, no surge protector
- Multilanguage short operating instruction and English labeling
- Configuration with kPa and °C units
- No test, inspection, or material certificates

Model 266CSH/CST Multivariable

Model 266JSH/JST Multivariable

Important remark for all models

The selection of suitable wetted parts and filling fluid for compatibility with the process media is a customer's responsibility, if not otherwise notified before manufacturing.

NACE compliance information

- 1 The materials of constructions comply with metallurgical recommendations of NACE MR0175/ISO 15156 for sour oil field production environments. As specific environmental limits may apply to certain materials, please consult latest standard for further details. Materials AISI 316 / AISI 316L, Hastelloy C-276, Monel 400 also conform to NACE MR0103 for sour refining environments.
- 2 NACE MR0175 addresses bolting requirements in two classes:
 - **Exposed bolts:** bolts directly exposed to the sour environment or buried, encapsulated or anyway not exposed to atmosphere
 - **Non exposed bolts:** the bolting must not be directly exposed to sour environments, and must be directly exposed to the atmosphere at all times.

266CSH, 266CST, 266JSH, 266JST bolting identified by "NACE" are in compliance to the requirements of NACE MR0175 when considered "non exposed bolting"

Trademarks

™ Hastelloy C-276 is a Cabot Corporation trademark

® Monel is a registered trademark of Special Metals Corporation

™ Viton is a DuPont de Nemours trademark

™ Galden is a Montefluos trademark

™ Kynar is an Elf Atochem North America Inc. trademark

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Sales



Service