Data Sheet DS/266CRX/JRX-EN Rev. A

Model 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Measurement made easy

2600T series pressure transmitters

Engineered solutions for all applications

Base accuracy
- 0.075 % of calibrated span (266CRH, 266JRH)
- 0.04 % of calibrated span (266CRT, 266JRT)

266CRH/CRT mass flow measurement with compensation, fill level measurement with compensation for gases, steam, and liquids
- Dynamic compensation of pressure and temperature changes

266JRH/JRT 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 60:1

Comprehensive range of functions
- Integrated counting function
- Binary output as pulse / frequency output or limit monitor

Flexible configuration options
- Local configuration via keys on LCD indicator

New TTG (through-the-glass) key 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 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Introduction

266CRH / 266CRT

Thanks to their multisensor technology, these transmitters are capable of measuring three separate process variables at the same time and offer the option of dynamic calculation of 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 measurement of liquid fill levels with density compensation

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.

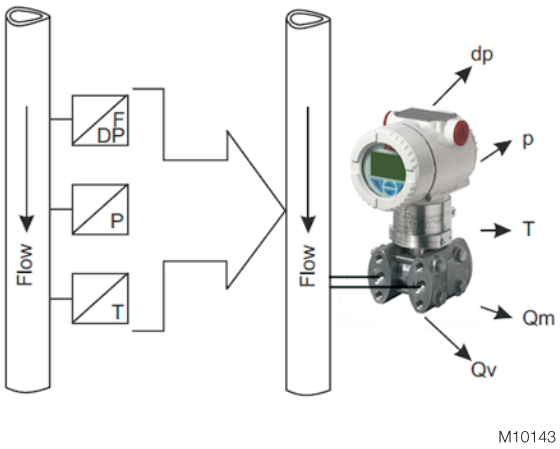

Fig. 1: Flow measurement - past and present

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

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

Qm = 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 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

Model 266CRH/CRT Multivariable
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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 measuring with pressure and temperature compensation:

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

All of the functions, including all the data required for the compensated mass flow or for level measurement, are 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.

266JRH / 266JRT

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.

General description

The diaphragm seal models described in this data sheet are combined with transmitters 266CRX and 266JRX. One or two diaphragm seals can be connected to the transmitter via a capillary tube. The following models, which have different order codes, are available:
a) Models 266CRH and 266CRT for compensated mass flow measurement are designed with two remote seals of the same type and size. In the case of compensated fill level measurement, they are designed with one or two remote seals depending on the application.
b) Models 266JRH and 266JRT for differential pressure, absolute pressure, and process temperature may be designed with either two remote seals of the same type and size or with one remote seal (on the high pressure (H) or low pressure (L) side) plus a standard process flange with threaded connection. In this case, the threaded connection (1/4-18 NPT or 1/2-14 NPT using adapter) is for the liquid or dry leg on the side opposite to the remote seal.

The table below lists the standard types of remote seal that can be used together with transmitters 266CRX and 266JRX. For specifications and details of the remote seals, please refer to the corresponding remote seal data sheet DS/S26.
Differential pressure transmitters with two remote seals:
In all cases, the specifications below only apply to identical seal designs on both sides.

Diaphragm seal model	Diaphragm seal type	Seal diaphragm size (thickness)	Mnemonic symbol
S26WA S26WE	Wafer remote diaphragm seal (ASME and EN standards)	1.5 in. / DN 40	P1.5
		2 in. / DN 50	P2
		3 in. / DN 80	P3
		1.5 in. / DN 40 (thin)	F1.5
		2 in. / DN 50 (thin)	F2
		3 in. / DN 80 (thin)	F3
S26FA S26FE S26RA S26RE	Flanged diaphragm seal with flush diaphragm (ASME and EN standards; fixed and rotating flange)	2 in. / DN 50	P2
		3 in. / DN 80	P3
		4 in. / DN 100	P3
		2 in. / DN 50 (thin)	F2
		3 in. / DN 80 (thin)	F3
		4 in. / DN 100 (thin)	F3
	Extended diaphragm flanged seal (ASME and EN standards; rotating flange S26RA and S26RE only)	2 in. / DN 50	E2
		3 in. / DN 80	E3
		4 in. / DN 100	P3
S26RJ	Flush diaphragm flanged seal (JIS standards; rotating flange only)	A 50	P2
		A 80	P3
		A 100	P3
S26RR	Flush diaphragm flanged seal (ring joint in acc. with ASME standards; rotating flange)	1.5 in.	P1.5
		2 in.	P2
		3 in.	P3
S26CN	Flanged diaphragm seal, "chemical tee"	3 in.	P3

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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 266CRH/CRT	Models 266JRH/JRT	Models 266CRH/CRT	Models 266JRH/JRT
C	6 kPa 60 mbar 24 in H_2O	0	-6 kPa -60 mbar -24 in H_2O	0.6 kPa 6 mbar 2.41 in H_2O	0.6 kPa 6 mbar 2.41 in H_2O
F	40 kPa 400 mbar 160 in H_2O	0	-40 kPa -400 mbar -160 in H_2O	0.67 kPa 6.7 mbar 2.67 in H_2O	0.67 kPa 6.7 mbar 2.67 in H_2O
L	250 kPa 2500 mbar 1000 in H_2O	0	-250 kPa -2500 mbar -1000 in H_2O	4.17 kPa 41.7 mbar 16.7 in H_2O	4.17 kPa 41.7 mbar 16.7 in H_2O
N	2000 kPa 20 bar 290 psi	0	-2000 kPa -20 bar -290 psi	33.3 kPa 333 mbar 4.83 psi	33.3 kPa 333 mbar 4.83 psi
R	10000 kPa 100 bar 1450 psi	-	-10000 kPa -100 bar -1450 psi	-	167 kPa 1.67 bar 24.2 psi

Absolute pressure sensor (second sensor)

Sensor code	Upper range limit (URL)	Lower range limit (LRL)	Minimum measuring span
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

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

IMPORTANT (NOTE)
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 upper measuring range 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:
— set span ≥ lowest 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 MΩ at 500 V DC (between terminals and ground)

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Operating limits

SEE ALSO DATA SHEET DS/S26 FOR INFORMATION ON OTHER POSSIBLE RESTRICTIONS BASED ON DIAPHRAGM SEAL VERSIONS.

Pressure limits

Overpressure limits

The transmitter models 266CRX/JRX can operate without damage within the following overpressure limits:

Sensors	Filling fluid	Overpressure limits
C to R	Silicone oil	0.07 kPa abs., 0.7 mbar abs., 0.5 mmHg and 2 MPa, 20 bar, 290 psi or 10 MPa, 100 bar, 1450 psi or 41 MPa, 410 bar, 5945 psi depending on code variant selected
C to R	Fluorocarbon (Galden)	17.5 kPa abs., 175 mbar abs., 131 mmHg and 2 MPa, 20 bar, 290 psi or 10 MPa, 100 bar, 1450 psi or 41 MPa, 410 bar, 5945 psi depending on code variant selected

Static pressure limits

The transmitter models 266CRX/JRX can operate within the specifications with the following overpressure limits:

Sensors	Filling fluid	Static pressure limits
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, 5945 psi depending on code variant selected
C to R	Carbon fluoride (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, 5945 psi depending on code variant selected

The overpressure limits and upper static pressure limits can be lowered by means of the nominal pressure rating of the diaphragm seal flange; see remote seal data sheet DS/S26 seal.

Test pressure

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

Model	Test pressure
266CRX / JRX	1.5 x nominal pressure (static pressure limit) applied to both sides simultaneously[1)]

1) Or double the value of the diaphragm seal flange pressure rating, whichever value is lower. Meets hydrostatic test requirements of ANSI/ISA-S 82.03.

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 LCD display[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) Below -20 °C (-4 °F) and above 70 °C (158 °F), it may no longer be possible to read the LCD display clearly.

IMPORTANT (NOTE)

For applications in potentially explosive environments, the temperature specified on the certificate / approval applies dependent upon the degree of protection sought.

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

The table below contains the specifications for diaphragm seal filling fluids when used in transmitters with (a) diaphragm seal(s).

Filling fluid (application)	Process temperature and pressure limits			
	Tmax °C (°F) @ Pabs > than	Pmin mbar abs (mm Hg)	Tmax °C (°F) @ Pmin	Tmin °C (°F)
Silicone oil DC 200 10 cSt	250 (480) @ 385 mbar	0.7 (0.5)	130 (266)	-40 (-40)
Silicone oil Baysilone PD5 5 cSt	250 (480) @ 900 mbar	0.7 (0.5)	45 (123)	-85 (-121)
Fluorocarbon Galden G5 (oxygen applications)	160 (320) @ 1 bar	2.1 (1.52)	60 (140)	-20 (-4)
Fluorocarbon Halocarbon 4.2 (oxygen applications)	180 (356) @ 425 mbar	4 (3)	70 (158)	-20 (-4)
Silicone polymer Syltherm XLT (low-temperature applications)	110 (230) @ 118 mbar	2.1 (1.52)	20 (68)	-100 (-148)
Silicone oil DC 704 (high-temperature applications)	375 (707) @ 1 bar	0.7 (0.5)	220 (328)	-10 (14)
Vegetable oil Neobee M-20 (food and beverage, sanitary applications) with FDA approval	200 (390) @ 1 bar	10 (7.2)	20 (68)	-18 (0)
Mineral oil Esso Marcol 122 (food and beverage, sanitary applications) with FDA approval	250 (480) @ 630 mbar	0.7 (0.5)	110 (230)	-6 (21)
Glycerin water 70 % (food and beverage, sanitary applications) with FDA approval	93 (200) @ 1 bar	1000 (760)	93 (200)	-7 (-20)

Flushing ring gasket material	Process limits		
	Pressure (max.)	Temperature	P x T
Garlock	6.9 MPa, 69 bar, 1000 psi	-73 and 204 °C (-100 and 400 °F)	250000 (°F x psi)
Graphite	2.5 MPa, 25 bar, 362 psi	-100 and 380 °C (-148 and 716 °F)	
PTFE	6 MPa, 60 bar, 870 psi	-100 and 250 °C (-148 and 482 °F)	

Storage

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

	Humidity during storage
Relative humidity	Up to 75 %

Environmental limits

Electromagnetic compatibility (EMC)
Meets requirements of EN 61326
Overvoltage strength (with surge protection): 4 kV
(in acc. 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 97/23/EC category III, module H.

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

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

Shock resistance
Acceleration: 50 g
Duration: 11 ms
(according to IEC 60068-2-27).

Humid and dusty atmospheres (degree of protection)
The transmitter is dust and sand-proof and protected against immersion effects as defined by EN 60529 (1989) to IP 67 (IP 68 on request), by NEMA to 4X, or by JIS C0920.

Hazardous atmospheres
With or without integrated digital display

"Intrinsic Safety" type of protection: 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.
"Flameproof Enclosure" type of protection: 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 ≤ Ta ≤ 75 °C); IP67. NEPSI China (Code EZ) Ex d IIC T6, DIP A21T_A, T6.
"nL" type of protection: 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): — Explosionproof (US): Class I, Div. 1, Groups A, B, C, D — Explosionproof (Canada): Class I, Div. 1, Groups B, C, D — Dust ignitionproof : Class II, Div. 1, Groups E, F, G — Suitable for: Class II, Div. 2, Groups F, G; Class III, Div.1, 2 — Nonincendive: Class I, Div. 2, Groups A, B, C, D — Intrinsically safe: Class I, II, III, Div. 1, Groups A, B, C, D, E, F, G 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)
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

At ambient temperatures of -40 … 85 °C (-40 … 185 °F), the specifications relating to the temperature classes on the relevant certificates must be observed.
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.

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.
Minimum operating voltage with "surge protection" option: 12.3 V DC

Ripple

Max. 20 mV over a 250 Ω load as per HART specifications.

Load limitations

Total measurement circuit resistance at 4 … 20 mA and HART:

$$R\,(k\Omega) = \frac{\text{Voltage supply} - \text{Minimum operating voltage (V DC)}}{22\ \text{mA}}$$

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

Displays (optional)

Integrated LCD display (code L1)

Widescreen LCD display, 128 x 64 pixels,
52.5 x 27.2 mm (2.06 x 1.07 in.) dot matrix. Multilanguage.
Four keys for device configuration and management.
Easy setup for quick commissioning.
Customized visualizations which the user can select.
Totalized 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.

M10142

Fig. 2: Integrated LCD display with TTG operation

Surge protection (optional)

Up to 4 kV
— Voltage: 1.2 µs rise time / 50 µs delay time at half value
— Current: 8 µs rise time / 20 µs delay time at half value

Output signal

Two-wire output, 266CXX:
4 … 20 mA related to 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

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 according to 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 µA

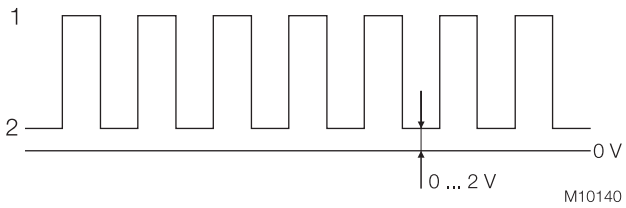

Fig. 3: High and low level (pulse output)
1 High level | 2 Low level

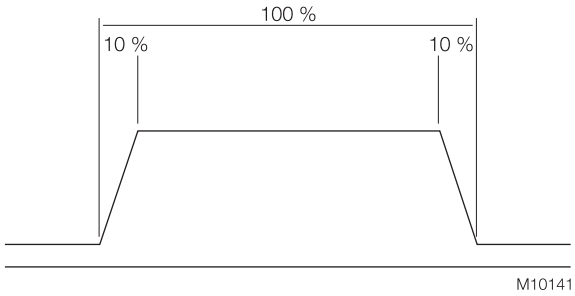

Fig. 4: Edge steepness

Pulse output

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

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

Binary output

The output is set to a static high or low signal when configured thresholds are exceeded.

Output function, model 266CXX

The 4 … 20 mA output signal is not linear; instead, it corresponds to the compensated flow or 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 (according to 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)

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

Process diagnostics (PILD)

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

Measuring accuracy

Stated at reference condition to IEC 60770 ambient temperature of 20 °C (68 °F), relative humidity of 65 %, atmospheric pressure of 1013 hPa (1013 mbar), mounting position with vertical diaphragm and zero based range for transmitter with isolating diaphragms in AISI 316 L ss or Hastelloy and silicone oil fill and HART digital trim values equal to 4 and to 20 mA span end points.
Unless otherwise specified, errors are quoted as % of span. Some performance referring to the Upper Range Limit are affected by the actual turndown (TD) as ratio between Upper Range Limit (URL) and calibrated span.
IT IS RECOMMENDED TO SELECT THE TRANSMITTER SENSOR CODE PROVIDING THE TURNDOWN VALUE AS LOWEST AS POSSIBLE TO OPTIMIZE PERFORMANCE CHARACTERISTICS.

Dynamic behavior (according to 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: Reaction time for all sensors	70 ms
266JXX: Reaction time for all sensors	40 ms

Step response time (total) = reaction 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
266CRH, 266JRH with DF Mnemonic P3, F3, E3, F2	C	From 1:1 to 5:1	± 0.075 %
	C	From 5:1 to 10:1	± (0.015 x TD) %
	F to R[1)]	From 1:1 to 10:1	± 0.075 %
	F to R[1)]	From 10:1 to 60:1	± (0.075 + 0.005 x TD – 0.05) %
266CRH, 266JRH with DF Mnemonic different from above	C	From 1:1 to 5:1	± 0.10 %
	C	From 5:1 to 10:1	± (0.02 x TD) %
	F to R[1)]	From 1:1 to 10:1	± 0.10 %
	F to R[1)]	From 10:1 to 60:1	± (0.01 x TD) %

1) Sensor R not with model 266CRH

Model	DP sensor	For TD range	Measuring error
266CRT, 266JRT with DF Mnemonic P3, F3, E3, F2	C	From 1:1 to 5:1	± 0.04 %
	C	From 5:1 to 10:1	± (0.008 x TD) %
	F to R[1)]	From 1:1 to 10:1	± 0.04 %
	F to R[1)]	From 10:1 to 60:1	± (0.04 + 0.005 x TD – 0.05) %
266CRT, 266JRT with DF Mnemonic different from above	C	From 1:1 to 5:1	± 0.065 %
	C	From 5:1 to 10:1	± (0.013 x TD) %
	F to R[1)]	From 1:1 to 10:1	± 0.065 %
	F to R[1)]	From 10:1 to 60:1	± (0.0065 x TD) %

1) Sensor R not with model 266CRT

Model 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

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 component
266CXX 266JXX	-200 … 850 °C (-328 … 1,562 °F)	± 0.3 K (0.54 °F)

266CXX: The measuring 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 (discharge 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	
266CRH, 266JRH	C to R[1)]	10:1	± (0.04 % URL + 0.06 % measuring span)
266CRT, 266JRT	C to R[1)]	10:1	± (0.03 % URL + 0.045 % measuring span)

1) Sensor R not with model 266CRH/CRT

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 … 185 °F).

SEE DATA SHEET DS/S26 FOR ADDITIONAL TEMPERATURE EFFECTS ON THE DIAPHRAGM SEALS:
The total temperature effect can be defined as the combined influence of the factors referred to above on the transmitter plus the influence of the diaphragm seal, dependent upon the operating temperature.

Static pressure

Models 266CRX / 266JRX (zero signal errors may be calibrated out at operating pressure)

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

Power supply

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

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

Technical specification

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

Materials

266JRX models only – Low pressure (L) side without diaphragm seal

Process separation diaphragms[1)]
Stainless steel 1.4435 (AISI 316L);
Hastelloy C276; Monel 400; tantalum
A diaphragm seal with the required diaphragm material can be selected in this case too (as with the high pressure side).

Process flanges, adapters, screw plugs, and vent / drain valves[1)]
Stainless steel 1.4404 / 1.4408 (AISI 316L);
Hastelloy C276; Monel 400

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

Gaskets[1)]
Viton (FPM); Buna (NBR); EPDM; PTFE; graphite

Models 266JRH, 266JRT

Seal diaphragm material (high pressure side)[1)]
Stainless steel AISI 316 L; Hastelloy C-276;
Hastelloy C-2000; Inconel 625; tantalum;
stainless steel AISI 316 L or Hastelloy C-276 with non-stick coating;
stainless steel AISI 316 L with anti-corrosion coating;
stainless steel AISI 316 L, gold-plated;
super duplex stainless steel (UNS S32750 in acc. with ASTM SA479);
Diaflex (AISI with anti-abrasion treatment)

Diaphragm seal extension material[1)]
Stainless steel AISI 316 L (also for Diaflex-coated and gold-plated diaphragm); Hastelloy C-276;
stainless steel AISI 316 L or Hastelloy C-276 with the same coating as the diaphragm

Diaphragm seal filling fluid
Silicone oil DC200; silicone oil DC704; fluorocarbon (Galden); fluorocarbon Halocarbon 4.2; silicone polymer Syltherm XLT; low-viscosity silicone oil Baysilone PD5; glycerin water; vegetable oil Neobee M-20; mineral oil Esso Marcol 122

Sensor filling fluid
Silicone oil, fluorocarbon (Galden)

Sensor housing
Stainless steel 1.4404 (AISI 316L)

Electronics housing and cover
Aluminum alloy (copper content ≤ 0.3 %) with baked epoxy finish (color: RAL 9002);
stainless steel AISI 316L.

O-ring cover
Buna N (Perbunan)

Mounting bracket[2)]
Galvanized C steel with chromium passivation; stainless steel AISI 316, AISI 316L

Local zero position, 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.

1) Transmitter parts that come into contact with fluid
2) U-bolt material: stainless steel AISI 400;
screw material: high-strength alloy steel or stainless steel AISI 316

Model 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

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

Certificates (test, design, characteristics, material traceability)

Name plate and operating instruction language

Process connections
Flanges: 1/4-18 NPT on the process axis
Adapters: 1/2-14 NPT on the process axis
Fastening screw threads:
7/16–20 UNF with 41.3 mm center distance
Process connection via diaphragm seal: see data sheet DS/S26

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 mm^2 (14 AWG) and connection points for testing and communication purposes.

Grounding
Internal and external ground terminals are provided for 6 mm^2 (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 or diaphragm seal)
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

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

Mounting dimensions

(not design data) - dimensions in mm (inch)
Transmitter with barrel housing

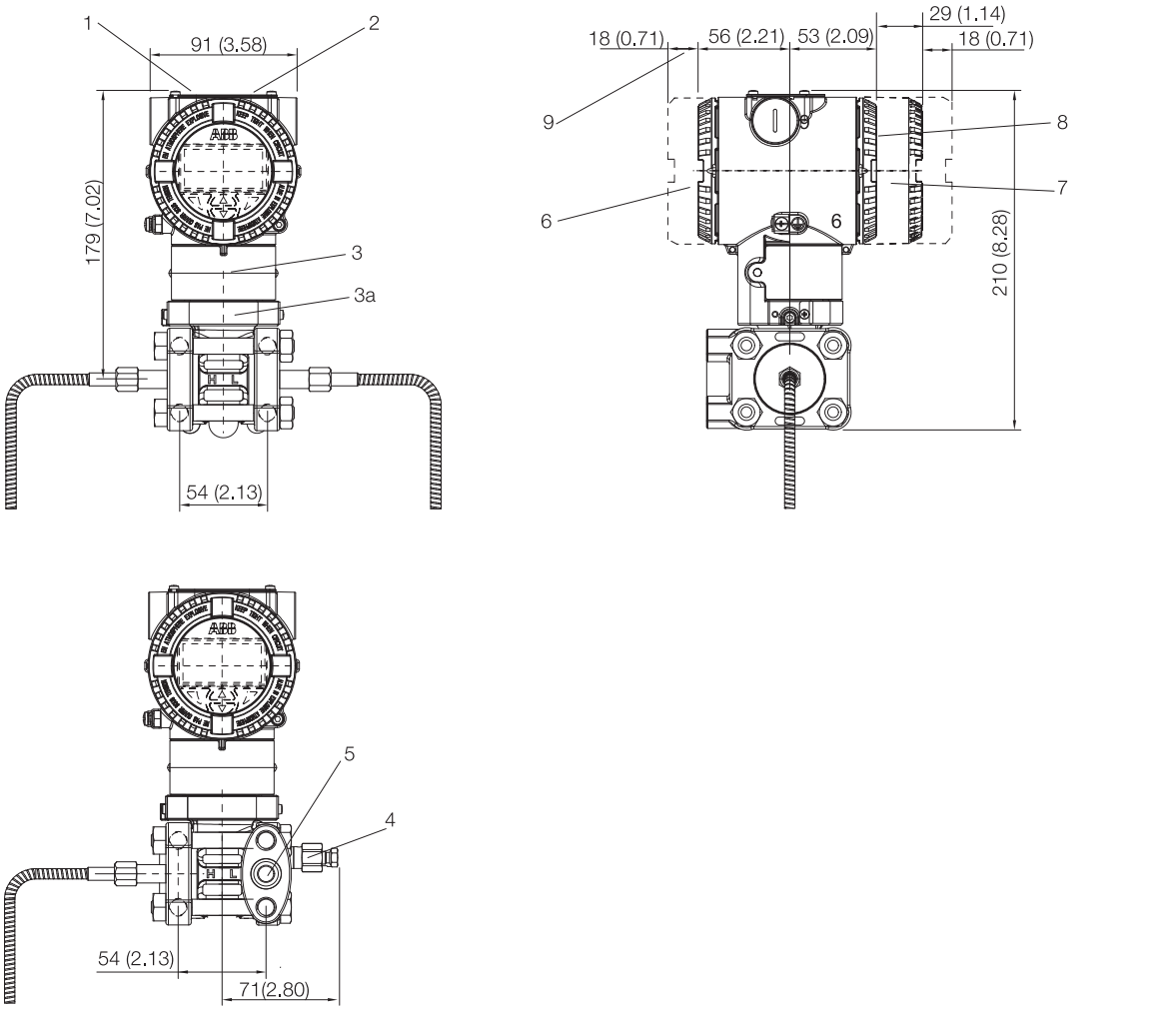

Fig. 5: Barrel housing
1 Settings | 2 Name plate | 3 Certification plate | 3a Optional plate (code I2) | 4 Vent / drain valve | 5 Process connection | 6 Terminal side | 7 LCD display housing cover | 8 Electronics side | 9 Space for removing the cover

Note

In the case of models with just one remote seal, the threaded connection (1/4 – 18 NPT directly or 1/2 – 14 NPT using adapter) of the standard process flange, the gasket groove, and the gasket comply with IEC 61518.
The screw-on thread for attaching the adapter flange to the process flange is 7/16 -20 UNF.

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

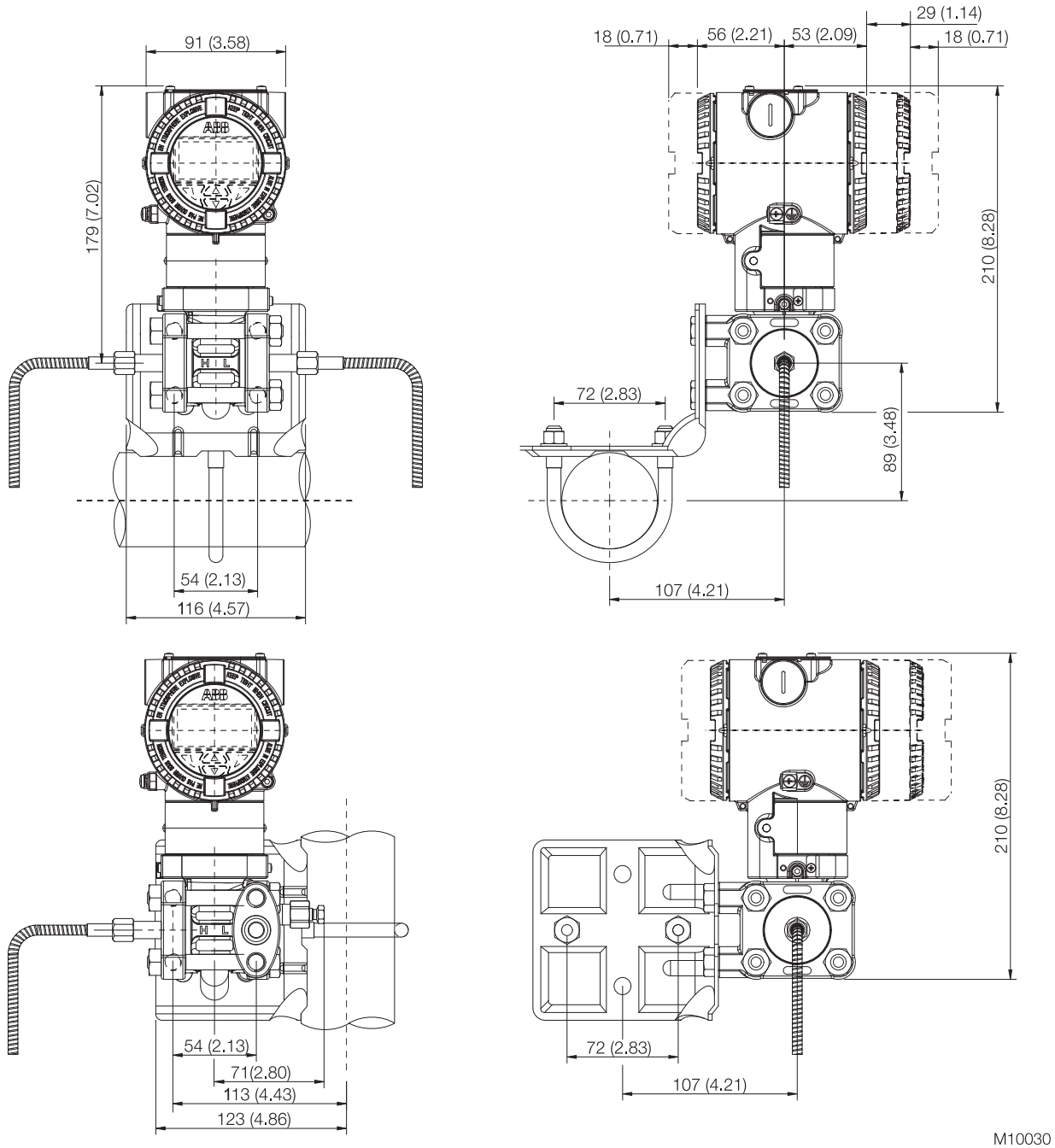

Fig. 6: Pipe mounting - Barrel housing

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

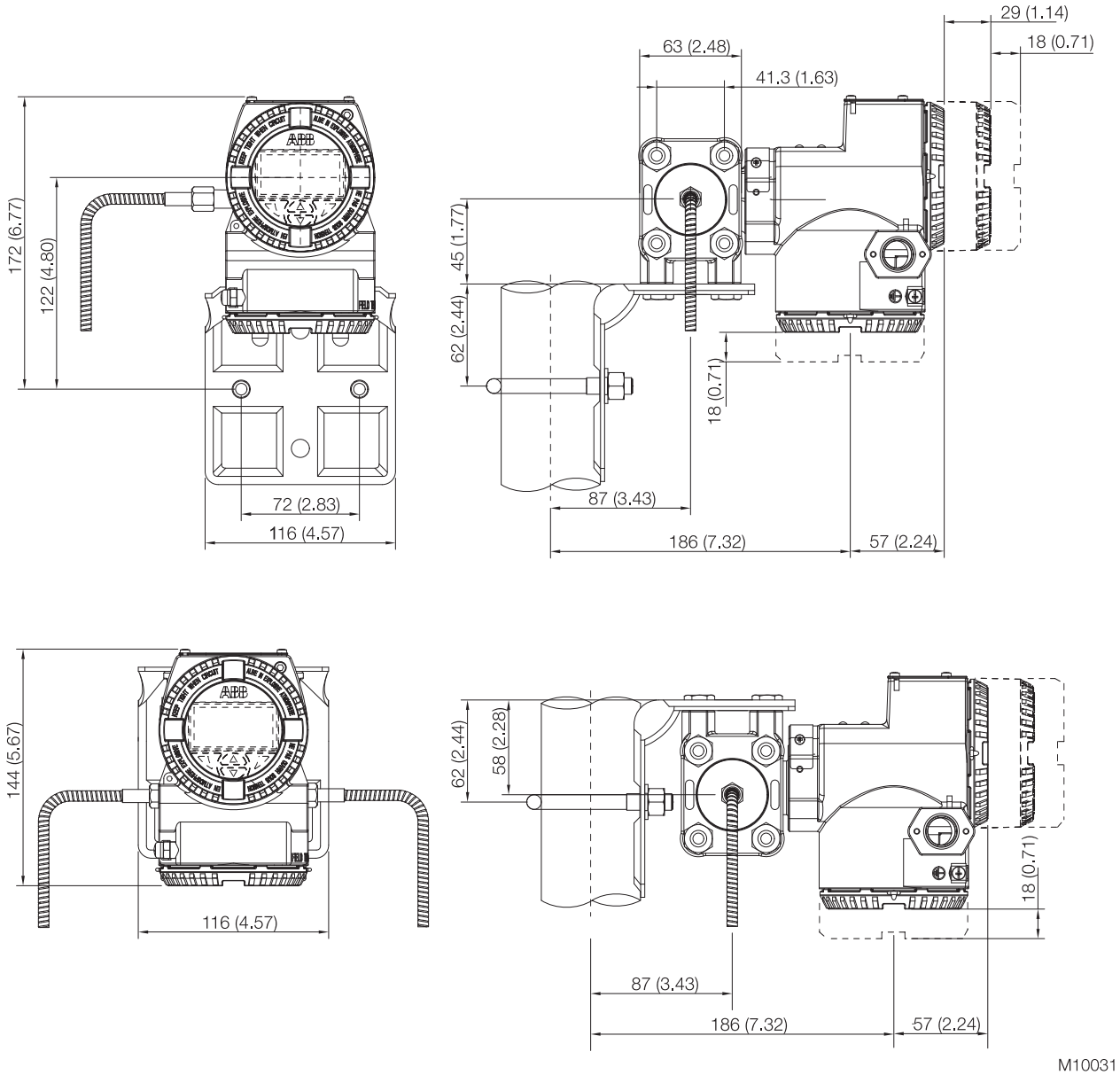

Fig. 7: Pipe mounting - DIN housing

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

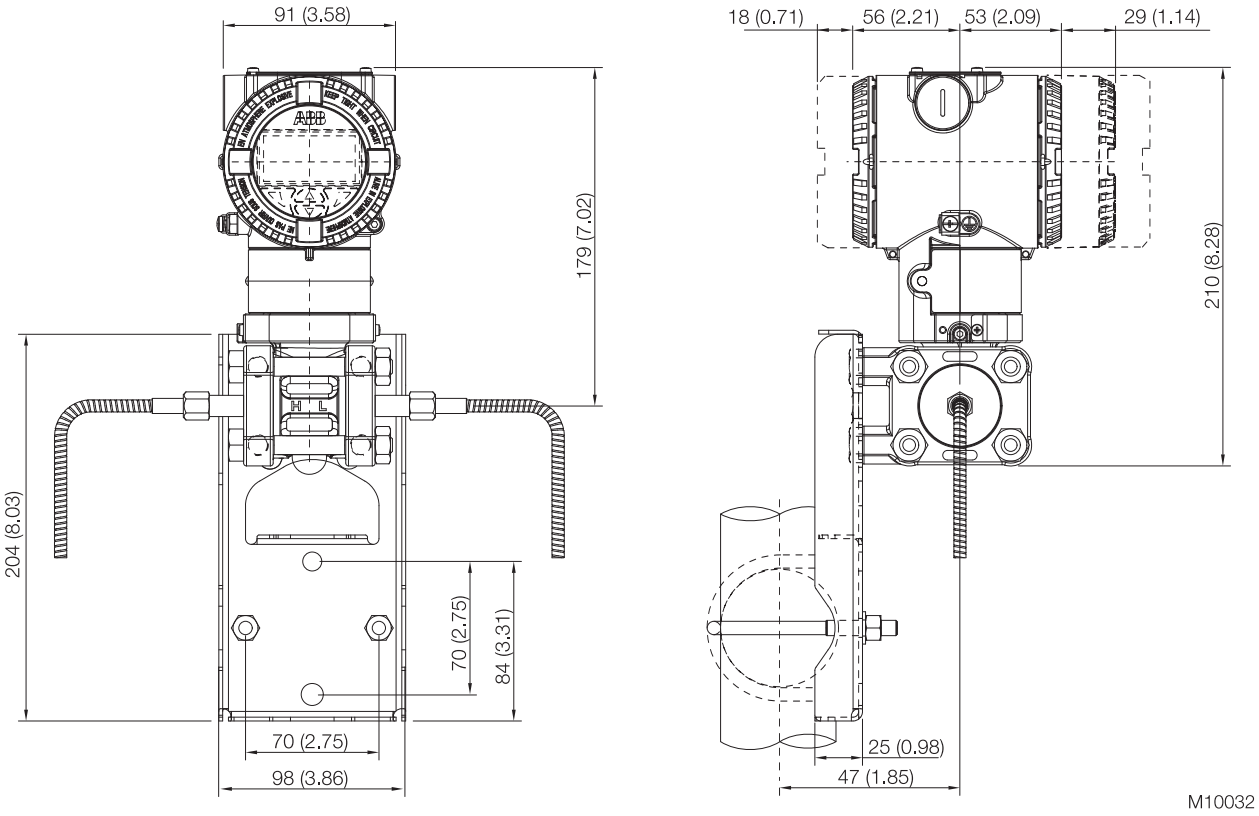

Fig. 8: Flat bracket for pipe mounting - Barrel housing

Electrical connections

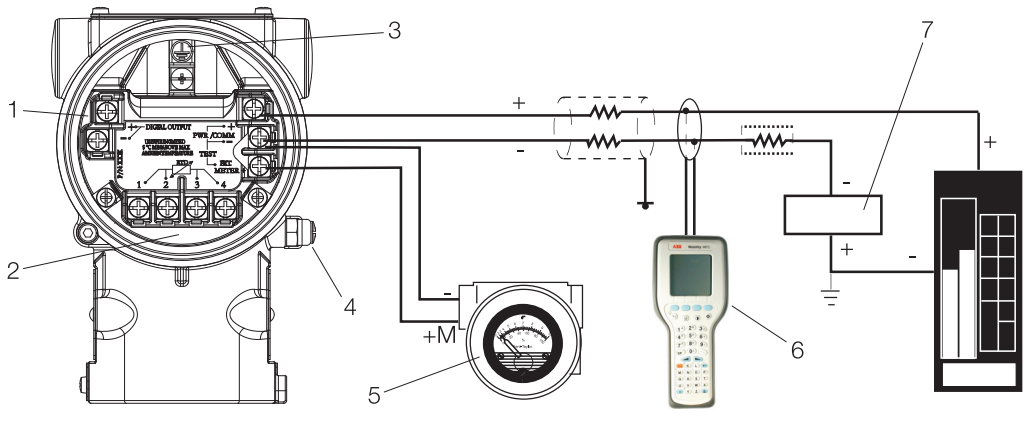

Fig. 9: Electrical connections
1 Digital output | 2 Connection for Pt100 resistance thermometer | 3 Internal ground connection | 4 External ground connection | 5 Remote display | 6 Handheld communicator | 7 Power supply

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

Ordering information

Basic ordering information model 266CRH Multivariable transmitter with remote seal(s), 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 – 1st to 6th characters						266CRH	X	X	X	X	X	X	X	
Multivariable transmitter with remote seal(s), for mass flow and level, base accuracy 0.075 %														
Sensor Span Limits – 7th character														continued
0.6 and 6 kPa	(6 and 60 mbar	2.41 and 24 in. H2O)					C							see next page
0.67 and 40 kPa	(6.7 and 400 mbar	2.67 and 160 in. H2O)					F							
4.17 and 250 kPa	(41.7 and 2500 mbar	16.7 and 1000 in. H2O)					L							
33.3 and 2000 kPa	(0.333 and 20 bar	4.83 and 290 psi)					N							
Maximum Working Pressure – 8th character														
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 1)				A					
Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)		(Note 1)				F					
Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)		(Note 1)				C					
Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)		(Note 1)				Y					
Tantalum / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)		(Note 1)				D					
Diaphragm seal / Silicone oil			(Seal to be quoted separately)						R					
Diaphragm seal / Inert fluid - Galden			(Seal to be quoted separately)						2					
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				
AISI 316L SST (1.4404 / 1.4408)	For two seals construction				(NACE)					R				

Model 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Basic ordering information model 266CRH Multivariable transmitter			X	X	X
Bolts Material / Gaskets Material – 11th character					
AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)		(Note 1)	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) / Without gaskets (For two seals construction)			R		
Housing Material / Electrical Connection – 12th 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 – 13th 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 266CRH

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: 2)		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: 2)		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: 2)		E6
Combined ATEX Ex ia and Ex d		(Note: 2)		E7
Combined ATEX - Intrinsic Safety, Flameproof and Type "N"		(Note: 2)		EW
FM approvals (USA and Canada) Intrinsic Safety				EA
FM approvals (USA and Canada) Explosion-proof		(Note: 2)		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: 2)		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: 2)		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: 2)		EH
Combined IEC Approval Ex ia, Ex d and Ex nL		(Note: 2)		EI
NEPSI IIC Ex ia				EY
NEPSI IIC Ex d		(Note: 2)		EZ
NEPSI IIC Ex nL				ES
Combined NEPSI Ex ia and Ex d		(Note: 2)		EP
Combined NEPSI Ex ia, Ex d and Ex nL		(Note: 2)		EQ

Model 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Additional ordering information for model 266CRH		XX	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					
Surge / Transient Protector								
With integral surge / transient protector				S2				
Operating Instruction Language								
German					M1			
Italian					M2			
Spanish					M3			
French					M4			
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, certifikation 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 266CRH		XX	XX	XX	XX
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 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 3)		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					
Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA	(Note 4)				A4
Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA	(Note 4)				A6
Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA	(Note 4)				A5
Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA	(Note 4)				A7

Note 1: Suitable for Oxygen service
Note 2: Not available with Housing Material / Electrical Connection code J
Note 3: Minor Parts with Factory Certificate acc. to EN 10204
Note 4: Only available with Housing Material / Electrical Connection code J (DIN housing)

Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plug for horizontal connection flange on the process axis (if no remote seal is selected); no vent / drain valve
- 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 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Basic ordering information model 266CRT Multivariable transmitter with remote seal, 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 – 1st to 6th characters						266CRT	X	X	X	X	X	X	X	
Multivariable transmitter with remote seal, for mass flow and level, base accuracy 0.04 %														
Sensor Span Limits – 7th character														continued
0.6 and 6 kPa	(6 and 60 mbar	2.41 and 24 in. H2O)					C							see next page
0.67 and 40 kPa	(6.7 and 400 mbar	2.67 and 160 in. H2O)					F							
4.17 and 250 kPa	(41.7 and 2500 mbar	16.7 and 1000 in. H2O)					L							
33.3 and 2000 kPa	(0.333 and 20 bar	4.83 and 290 psi)					N							
Maximum Working Pressure – 8th character														
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 1)					A					
Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)					F					
Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)					C					
Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)					Y					
Tantalum / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)					D					
Diaphragm seal / Silicone oil			(Seal to be quoted separately)						R					
Diaphragm seal / Inert fluid - Galden			(Seal to be quoted separately)						2					
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		(horizontal connection)	(NACE)						G				
Monel 400	1/2-14 NPT female through adapter		(horizontal connection)	(NACE)						H				
AISI 316L SST (1.4404 / 1.4408)	For two seals construction			(NACE)						R				

Basic ordering information model 266CRT Multivariable transmitter			X	X	X
Bolts Material / Gaskets Material – 11th character					
AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)		(Note 1)	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) / Without gaskets (For two seals construction)			R		
Housing Material / Electrical Connection – 12th 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	
Ausgang – 13th 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 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Additional ordering information for model 266CRT

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: 2)		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: 2)		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: 2)		E6
Combined ATEX Ex ia and Ex d		(Note: 2)		E7
Combined ATEX - Intrinsic Safety, Flameproof and Type "N"		(Note: 2)		EW
FM approvals (USA and Canada) Intrinsic Safety				EA
FM approvals (USA and Canada) Explosion-proof		(Note: 2)		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: 2)		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: 2)		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: 2)		EH
Combined IEC Approval Ex ia, Ex d and Ex nL		(Note: 2)		EI
NEPSI IIC Ex ia				EY
NEPSI IIC Ex d		(Note: 2)		EZ
NEPSI IIC Ex nL				ES
Combined NEPSI Ex ia and Ex d		(Note: 2)		EP
Combined NEPSI Ex ia, Ex d and Ex nL		(Note: 2)		EQ

Additional ordering information for model 266CRT	XX	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					
Surge / Transient Protector							
With integral surge / transient protector			S2				
Operating Instruction Language							
German				M1			
Italian				M2			
Spanish				M3			
French				M4			
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, certifikation 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 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Additional ordering information for model 266CRT		XX	XX	XX	XX
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 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 3)		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					
Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA	(Note 4)				A4
Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA	(Note 4)				A6
Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA	(Note 4)				A5
Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA	(Note 4)				A7

Note 1: Suitable for Oxygen service
Note 2: Not available with Housing Material / Electrical Connection code J
Note 3: Minor Parts with Factory Certificate acc. to EN 10204
Note 4: Only available with Housing Material / Electrical Connection code J (DIN housing)

Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plug for horizontal connection flange on the process axis (if no remote seal is selected); no vent / drain valve
- 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 266JRH Multivariable transmitter with remote seal(s) 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 – 1st to 6th characters						**266JRH**	X	X	X	X	X	X	X	
Multivariable transmitter with remote seal(s) for differential pressure, absolute pressure and temperature measurement, base accuracy 0.075 %														
Sensor Span Limits – 7th character														
0.6 and 6 kPa	(6 and 60 mbar	2.41 and 24 in. H2O)					C							
0.67 and 40 kPa	(6.7 and 400 mbar	2.67 and 160 in. H2O)					F							
4.17 and 250 kPa	(41.7 and 2500 mbar	16.7 and 1000 in. H2O)					L							
33.3 and 2000 kPa	(0.333 and 20 bar	4.83 and 290 psi)					N							
167 and 10000 kPa	(1.67 and 100 bar	24.2 and 1450 psi)					R							
Maximum Working Pressure – 8th character														
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 1)					A					
Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)					F					
Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)					C					
Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)					Y					
Tantalum / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)					D					
Diaphragm seal / Silicone oil			(Seal to be quoted separately)						R					
Diaphragm seal / Inert fluid - Galden			(Seal to be quoted separately)						2					
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				
AISI 316L SST (1.4404 / 1.4408)	For two seals construction			(NACE)						R				

continued
see next page

Model 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Basic ordering information model 266JRH Multivariable transmitter			X	X	X
Bolts Material / Gaskets Material – 11th character					
AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)		(Note 1)	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) / Without gaskets (For two seals construction)			R		
Housing Material / Electrical Connection – 12th 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 – 13th 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 266JRH

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: 2)		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: 2)		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: 2)		E6
Combined ATEX Ex ia and Ex d		(Note: 2)		E7
Combined ATEX - Intrinsic Safety, Flameproof and Type "N"		(Note: 2)		EW
FM approvals (USA and Canada) Intrinsic Safety				EA
FM approvals (USA and Canada) Explosion-proof		(Note: 2)		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: 2)		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: 2)		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: 2)		EH
Combined IEC Approval Ex ia, Ex d and Ex nL		(Note: 2)		EI
NEPSI IIC Ex ia				EY
NEPSI IIC Ex d		(Note: 2)		EZ
NEPSI IIC Ex nL				ES
Combined NEPSI Ex ia and Ex d		(Note: 2)		EP
Combined NEPSI Ex ia, Ex d and Ex nL		(Note: 2)		EQ

Model 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Additional ordering information for model 266JRH	XX	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					
Surge / Transient Protector							
With integral surge / transient protector			S2				
Operating Instruction Language							
German				M1			
Italian				M2			
Spanish				M3			
French				M4			
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, certifikation 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 266JRH		XX	XX	XX	XX
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 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 3)		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					
Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA	(Note 4)				A4
Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA	(Note 4)				A6
Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA	(Note 4)				A5
Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA	(Note 4)				A7

Note 1: Suitable for Oxygen service
Note 2: Not available with Housing Material / Electrical Connection code J
Note 3: Minor Parts with Factory Certificate acc. to EN 10204
Note 4: Only available with Housing Material / Electrical Connection code J (DIN housing)

Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plug for horizontal connection flange on the process axis (if no remote seal is selected); no vent / drain valve
- 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 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Basic ordering information model 266JRT Multivariable transmitter with remote seal(s) 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 – 1st to 6th characters Multivariable transmitter with remote seal(s) for differential pressure, absolute pressure and temperature measurement, base accuracy 0.04 %							**266JRT**	X	X	X	X	X	X	X
Sensor Span Limits – 7th character														
0.6 and 6 kPa	(6 and 60 mbar	2.41 and 24 in. H2O)						C						
0.67 and 40 kPa	(6.7 and 400 mbar	2.67 and 160 in. H2O)						F						
4.17 and 250 kPa	(41.7 and 2500 mbar	16.7 and 1000 in. H2O)						L						
33.3 and 2000 kPa	(0.333 and 20 bar	4.83 and 290 psi)						N						
167 and 10000 kPa	(1.67 and 100 bar	24.2 and 1450 psi)						R						
Maximum Working Pressure – 8th character														
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 1)						A				
Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)						F				
Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)						C				
Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)						Y				
Tantalum / Inert fluid - Galden (Suitable for oxygen applications)			(NACE)	(Note 1)						D				
Diaphragm seal / Silicone oil			(Seal to be quoted separately)							R				
Diaphragm seal / Inert fluid - Galden			(Seal to be quoted separately)							2				
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			
AISI 316L SST (1.4404 / 1.4408)	For two seals construction				(NACE)						R			

continued
see next page

Basic ordering information model 266JRT Multivariable transmitter			X	X	X
Bolts Material / Gaskets Material – 11th character					
AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)		(Note 1)	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) / Without gaskets (For two seals construction)			R		
Housing Material / Electrical Connection – 12th 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 – 13th 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 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Additional ordering information for model 266JRT

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: 2)		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: 2)		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: 2)		E6
Combined ATEX Ex ia and Ex d		(Note: 2)		E7
Combined ATEX - Intrinsic Safety, Flameproof and Type "N"		(Note: 2)		EW
FM approvals (USA and Canada) Intrinsic Safety				EA
FM approvals (USA and Canada) Explosion-proof		(Note: 2)		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: 2)		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: 2)		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: 2)		EH
Combined IEC Approval Ex ia, Ex d and Ex nL		(Note: 2)		EI
NEPSI IIC Ex ia				EY
NEPSI IIC Ex d		(Note: 2)		EZ
NEPSI IIC Ex nL				ES
Combined NEPSI Ex ia and Ex d		(Note: 2)		EP
Combined NEPSI Ex ia, Ex d and Ex nL		(Note: 2)		EQ

Additional ordering information for model 266JRT	XX	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					
Surge / Transient Protector							
With integral surge / transient protector			S2				
Operating Instruction Language							
German				M1			
Italian				M2			
Spanish				M3			
French				M4			
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, certifikation 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 266CRH/CRT Multivariable
Model 266JRH/JRT Multivariable

Additional ordering information for model 266JRT		XX	XX	XX	XX
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 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 3)		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					
Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA	(Note 4)				A4
Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA	(Note 4)				A6
Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA	(Note 4)				A5
Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA	(Note 4)				A7

Note 1: Suitable for Oxygen service
Note 2: Not available with Housing Material / Electrical Connection code J
Note 3: Minor Parts with Factory Certificate acc. to EN 10204
Note 4: Only available with Housing Material / Electrical Connection code J (DIN housing)

Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plug for horizontal connection flange on the process axis (if no remote seal is selected); no vent / drain valve
- 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

Important remark for all models

The selection of suitable wetted parts and filling fluid for compatibility with the process media is a customers 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.

266CRH, 266CRT, 266JRH, 266JRT 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
™ Hastelloy C-2000 is a Haynes International trademark
™ Monel is an International Nickel Co. trademark
™ Viton is a DuPont de Nemours trademark
™ DC200 is a Dow Corning Corporation trademark
™ DC704 is a Dow Corning Corporation trademark
™ Galden is a Montefluos trademark
™ Halocarbon is a Halocarbon Products Co. trademark
™ Neobee M 20 is a Stepan Company trademark
™ Esso Marcol 122 is an Esso Italiana trademark
™ Syltherm is a Dow Chemical Company trademark

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