Data Sheet DS/266MST/RST-EN Rev. B

Model 266MST Differential
Model 266RST Absolute

2600T Series Pressure Transmitters

Engineered solutions for all applications

Base accuracy
— 0.04 % of calibrated span, (Option 0.025 %)

Reliable sensing system coupled with very latest digital technologies
— provides large turn down ratio up to 100:1

Comprehensive sensor choice
— optimize in-use total performance and stability

10–year stability
— 0.15 % of URL

Flexible configuration facilities
— provided locally via local LCD keypad

New TTG (Through-The-Glass) keypad technology
— allows quick and easy local configuration without opening the cover, even in explosion proof environments

IEC 61508 certification
— for SIL2 (1oo1) and SIL3 (1oo2) applications

Full compliance with PED Category III

Power and productivity
for a better world™

Model 266MST Differential
Model 266RST Absolute

Functional Specifications

Range and span limits

Sensor Code	Upper Range Limit (URL)	Lower Range Limit (LRL)		Minimum span	
		Model 266MST differential	Model 266RST absolute	Model 266MST differential	Model 266RST absolute
A	1 kPa 10 mbar 4 inH_2O	-1 kPa -10 mbar -4 inH_2O	–	0.05 kPa 0.5 mbar 0.2 inH_2O	–
C	6 kPa 60 mbar 24 inH_2O	-6 kPa -60 mbar -24 inH_2O	–	0.2 kPa 2 mbar 0.8 inH_2O	–
F	40 kPa 400 mbar 160 inH_2O	-40 kPa -400 mbar -160 inH_2O	0 abs	0.4 kPa 4 mbar 1.6 inH_2O	2 kPa 20 mbar 15 mmHg
L	250 kPa 2500 mbar 1000 inH_2O	-250 kPa -2500 mbar -1000 inH_2O	0 abs	2.5 kPa 25 mbar 10 inH_2O	12.5 kPa 125 mbar 93.76 mmHg
N	2000 kPa 20 bar 290 psi	-2000 kPa -20 bar -290 psi	0 abs	20 kPa 0.2 bar 2.9 psi	100 kPa 1 bar 14.5 psi
R	10000 kPa 100 bar 1450 psi	-10000 kPa -100 bar -1450 psi	–	100 kPa 1 bar 14.5 psi	–

Second sensor of 266MST differential pressure transmitter for absolute pressure measurement

Measuring range: 41 MPa, 410 bar, 5945 psi
(2 MPa, 20 bar, 290 psi for sensor code A)

Span limits

Maximum span = URL
(can be further adjusted up to ± URL (TD = 0.5) for differential models, within the range limits)

Important

It is recommended to select the transmitter sensor code providing the turndown value as lowest as possible to optimize performance characteristics.

Recommendation for square root function

At least 10 % of upper range limit (URL)

Zero suppression and elevation

Zero and span can be adjusted to any value within the range limits detailed in the table as long as:
— calibrated span ≥ minimum span

Damping

Selectable time constant between 0 and 60 s
This is in addition to sensor response time

Turn on time

Operation within specification in less than 10 s with minimum damping.

Insulation resistance

> 100 MΩ at 500 V DC (terminals to earth)

Operative limits

Pressure limits

Overpressure limits

Transmitters for differential pressure model 266MST operate without damage between the following limits:

Sensors	Fill fluid	Overpressure limits
Sensor A	Silicone oil	0.5 kPa abs., 5 mbar abs., 0.07 psia and 2 MPa, 20 bar, 290 psi
Sensor A	Inert (Galden)	40 kPa abs., 400 mbar abs., 5.8 psia and 2 MPa, 20 bar, 290 psi
Sensor C to R	Silicone oil	0.5 kPa abs., 5 mbar abs., 0.07 psia and 16 MPa, 160 bar, 2320 psi, or 25 MPa, 250 bar, 3625 psi, or 41 MPa, 410 bar, 5945 psi depending on code variant selected[1]
Sensor C to R	Inert (Galden)	40 kPa abs., 400 mbar abs., 5.8 psia and 16 MPa, 160 bar, 2320 psi, or 25 MPa, 250 bar, 3625 psi, or 41 MPa, 410 bar, 5945 psi depending on code variant selected[1]

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

Transmitters for absolute pressure model 266RST operate without damage between the following limits:

Sensors	Fill fluid	Over pressure limits
Sensor F to N	Silicone oil	0 abs. and 16 MPa, 160 bar, 2320 psi, or 25 MPa, 250 bar, 3625 psi, or 41 MPa, 410 bar, 5945 psi

Static pressure limits

Transmitters for differential pressure model 266MST operate within specifications between the following limits:

Sensors	Fill fluid	Static pressure limits
Sensor A	Silicone oil	3.5 kPa abs., 35 mbar abs., 0.5 psia and 2 MPa, 20 bar, 290 psi
Sensor A	Inert (Galden)	40 kPa abs., 400 mbar abs., 5.8 psia and 2 MPa, 20 bar, 290 psi
Sensor C to R	Silicone oil	3.5 kPa abs., 35 mbar abs., 0.5 psia and 16 MPa, 160 bar, 2320 psi, or 25 MPa, 250 bar, 3625 psi, or 41 MPa, 410 bar, 5945 psi depending on code variant selected[1]
Sensor C to R	Inert (Galden)	40 kPa abs., 400 mbar abs., 5.8 psia and 16 MPa, 160 bar, 2320 psi, or 25 MPa, 250 bar, 3625 psi, or 41 MPa, 410 bar, 5945 psi depending on code variant selected[1]

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

Transmitters for absolute pressure model 266RST operate within specifications between the following limits:

Sensors	Fill fluid	Static pressure limits
Sensor F to N	Silicone oil	0 abs. and 16 MPa, 160 bar, 2320 psi, or 25 MPa, 250 bar, 3625 psi, or 41 MPa, 410 bar, 5945 psi

Proof pressure

The transmitters can be exposed without leaking to line pressure:
266MST, up to 1.5 times the nominal pressure simultaneously on both sides
266RST, up to 1 time the normal pressure
Meet ANSI/ISA–S 82.03 hydrostatic test requirements.

Model 266MST Differential
Model 266RST Absolute

Temperature limits °C (°F)

Ambient

Is the operating temperature.

Model 266MST – 266RST	Ambient temperature limits
Silicone oil	-40 and 85 °C (-40 and 185 °F)
Inert (Galden)	-40 and 85 °C (-40 and 185 °F)

Important

For Hazardous Atmosphere applications see the temperature range specified on the certificate / approval relevant to the aimed type of protection.

Model 266MST – 266RST	Ambient temperature limits
LCD integral display	-40 and 85 °C (-40 and 185 °F)
Viton gasket	-20 and 85 °C (-4 and 185 °F)
PTFE gaskets	-20 and 85 °C (-4 and 185 °F)

LCD display may not be clearly readable below –20 °C (–4 °F) or above 70 °C (158 °F).

Process

Model 266MST	Process temperature limits
Silicone oil	-40 and 121 °C (-40 and 250 °F)[1]
Inert (Galden)	-40 and 121 °C (-40 and 250 °F)[2]
Viton gaskets	-20 and 121 °C (-4 and 250 °F)
PTFE gaskets	-20 and 85 °C (-4 and 185 °F)

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

Model 266RST	Process temperature limits
Silicone oil	-40 and 121 °C (-40 and 250 °F)[1]
Viton gaskets	-20 and 121 °C (-4 and 250 °F)
PTFE gaskets	-20 and 85 °C (-4 and 185 °F)

1 85 °C (185 °F) for application below 10 kPa, 100 mbar abs, 1.45 psia

Storage

Model 266MST – 266RST	Storage temperature limits
Storage limits	-50 and 85 °C (-58 and 185 °F)
LCD integral display	-40 and 85 °C (-40 and 185 °F)

	Humidity during storage
Relative humidity	Up to 75 %

Environmental limits

Electromagnetic compatibility (EMC)

Comply with EN 61326 and Namur NE-21 Surge immunity level (with surge protector): 4 kV (according to IEC 1000-4-5 EN 61000-4-5)

Pressure equipment directive (PED)

Instruments with a maximum operating pressure of 25 MPa, 250 bar, 3625 psi, or 41 MPa, 410 bar, 5945 psi, comply with Directive 97/23/EC Category III, module H.

Humidity

Relative humidity: up to 100 %
Condensing, icing: admissible

Vibration resistance

Accelerations up to 2 g at frequency up to 1000 Hz (according to IEC 60068-2-6)

Shock resistance

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

Wet and dust-laden atmospheres

The transmitter is dust and sand tight and protected against immersion effects as defined by EN 60529 (1989) to IP 67 (IP 68 on request) or by NEMA to 4X or by JIS to C0920. IP 65 with Harting Han connector.

Hazardous atmospheres

With or without integral display

INTRINSIC SAFETY:
ATEX Europe (code E1) and IEC Ex (code E8) approval
II 1 G Ex ia IIC T6 and
II 1/2 G Ex ia IIC T6 (–40 °C ≤ Ta ≤+40 °C);
II 1 D Ex iaD 20 T 95° C and
II 1/2D Ex iaD 21 T95° C

EXPLOSION PROOF:
ATEX Europe (code E2) and IEC Ex (code E9) approval
II 1/2 G Ex d IIC T6 and
II 1/2 D Ex tD A21 IP67 T85° C

TYPE “N”:
ATEX Europe (code E3) and IEC Ex (code ER)
type examination
II 3 G Ex nL IIC T6 and
II 3 D Ex tD A22 IP67 T85° C

FM Approvals US (code E6) and
FM Approvals 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
  Class II, Div. 2, Groups F,
  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)

COMBINED ATEX (code EW = E1 + E2 + E3)

COMBINED ATEX and FM Approvals (code EN = EW + E4 + E6)

COMBINED FM Approvals US and Canada
- Intrinsically safe (code EA)
- Explosionproof (code EB)
- Nonincendive (code EC)
- GOST (Russia), GOST (Kazakhstan), Inmetro (Brazil) based on ATEX

Model 266MST Differential
Model 266RST Absolute

Electrical Characteristics and Options

HART digital communication and 4 to 20 mA output

Power supply

The transmitter operates from 10.5 to 42 V DC with no load and is protected against reverse polarity connection (additional load allows operations over 42 V DC).
For Ex ia and other intrinsically safe approval power supply must not exceed 30 V DC.
Minimum operating voltage increase to 12.3 V DC with optional surge protector

Ripple

20 mV max on a 250 Ω load as per HART specifications.

Load limitations

4 to 20 mA and HART total loop resistance:

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

A minimum of 250 Ω is required for HART communication.

Optional indicators

Integral display (code L1)

Wide screen LCD, 128 x 64 pixel,
52.5 x 27.2 mm (2.06 x 1.07 in.) dot matrix. Multilanguage.
Four keys for configuration and management of device.
Easy setup for quick commissioning.
User selectable application-specific visualizations.
Totalized and instantaneous flow indication.
Display may also indicate static pressure, sensor temperature and diagnostic messages and provides configuration facilities.

Through-the-glass (TTG) controlled display (code L5)

As above integral display but equipped with the innovative TTG keypad allowing the activation of the configuration and management menus of the device without the need of removing the transmitter housing cover.
TTG keypad is protected against accidental activations.

Optional surge protection

Up to 4 kV
— voltage: 1.2 µs rise time / 50 µs delay time to half value
— current: 8 µs rise time / 20 µs delay time to half value

Output signal

Two-wire 4 to 20 mA, user-selectable for linear or square root output, power of 3/2 or 5/2, square root for bidirectional flow, 22 points linearization table (i.e. for horizontal or spherical tank level measurement).
HART communication provides digital process variable superimposed on 4 to 20 mA signal, with protocol based on Bell 202 FSK standard.

Output current limits (to NAMUR standard)

Overload condition
— Lower limit: 3.8 mA (configurable from 3.8 to 4 mA)
— Upper limit: 20.5 mA (configurable from 20 to 21 mA)

Alarm current

— Lower limit: 3.6 mA (configurable from 3.6 to 4 mA)
— Upper limit: 21 mA (configurable from 20 to 22 mA)
Factory setting: high 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".

FOUNDATION Fieldbus output

Device type

LINK MASTER DEVICE
Link Active Scheduler (LAS) capability implemented.
Manufacturer code: 000320 (hex)
Device type code: 0007 (hex)

Power supply

The transmitter operates from 9 to 32 V DC, polarity independent, with or without surge protector.
For EEx ia approval power supply must not exceed 24 V DC (entity certification) or 17.5 V DC (FISCO certification), according to FF-816.

Current consumption

Operating (quiescent): 15 mA
Fault current limiting: 20 mA max.

Output signal

Physical layer in compliance to IEC 1158 2 / EN 61158 2 with transmission to Manchester II modulation, at 31.25 kbit/s

Function blocks / execution period

3 enhanced Analog Input blocks / 25 ms max (each)
1 enhanced PID block / 40 ms max.
1 standard Arithmetic block / 25 ms
1 standard Input Selector block / 25 ms
1 standard Control Selector block / 25 ms
1 standard Signal Characterization block / 25 ms
1 standard Integrator / Totalizer block / 25 ms

Additional blocks

1 enhanced Resource block
1 custom Pressure with calibration transducer block
1 custom Advanced Diagnostics transducer block including Plugged Input Line Detection
1 custom Local Display transducer block

Number of link objects

35

Number of VCRs

35

Output interface

FOUNDATION Fieldbus digital communication protocol to standard H1, compliant to specification V. 1.7; FF registration in progress.

Integral display

Wide screen LCD, 128 x 64 pixel,
52.5 x 27.2 mm (2.06 x 1.07 in.) dot matrix. Multilanguage.
Four keys for configuration and management of device.
Easy setup for quick commissioning.
User selectable application-specific visualizations.
Totalized and instantaneous flow indication.
Display may also indicate static pressure, sensor temperature and diagnostic messages and provides configuration facilities.

Transmitter failure mode

The output signal is "frozen" to the last valid value on gross transmitter failure condition, detected by self-diagnostics which also indicate a BAD conditions.
If electronic failure or short circuit occur the transmitter consumption is electronically limited at a defined value (20 mA approx), for safety of the network.

Model 266MST Differential
Model 266RST Absolute

PROFIBUS PA output

Device type
Pressure transmitter compliant to Profiles 3.0.1
Identification number: 3450 (hex)

Power supply
The transmitter operates from 9 to 32 V DC, polarity independent, with or without surge protector.
For EEx ia approval power supply must not exceed 17.5 V DC.
Intrinsic safety installation according to FISCO model.

Current consumption
Operating (quiescent): 15 mA
Fault current limiting: 20 mA max.

Output signal
Physical layer in compliance to IEC 1158-2 / EN 61158-2 with transmission to Manchester II modulation, at 31.25 kbit/s

Output interface
PROFIBUS PA communication according to PROFIBUS DP 50170 part 2 / DIN 19245 part 1-3.

Output update time
25 ms

Function blocks
3 analog input
3 transducer
1 physical

Integral display
Wide screen LCD, 128 x 64 pixel,
52.5 x 27.2 mm (2.06 x 1.07 in.) dot matrix. Multilanguage.
Four keys for configuration and management of device.
Easy setup for quick commissioning.
User selectable application-specific visualizations.
Instantaneous flow indication.
Display may also indicate static pressure, sensor temperature and diagnostic messages and provides configuration facilities.

Transmitter failure mode
On gross transmitter failure condition, detected by self-diagnostics, the output signal can be driven to defined conditions, selectable by the user as safe, last valid or calculated value.
If electronic failure or short circuit occur the transmitter consumption is electronically limited at a defined value (20 mA approx), for safety of the network.

Performance specifications

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, in linear mode.
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 performance (according to IEC 61298-1 definition)

Sensors	Time constant (63.2 % of total step change)
Sensor F to R	150 ms
Sensor C	400 ms
Sensor A	1000 ms
Dead time for all sensors	40 ms

Response time (total) = dead time + time constant

Accuracy rating

% of calibrated span, including combined effects of terminal based linearity, hysteresis and repeatability.
For fieldbus versions SPAN refer to analog input function block outscale range

Model	Sensor	For TD up to	
266MST	A to R	from 1:1 to 10:1	± 0.04 %
	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	from 10:1 to 100:1	± (0.04 + 0.005 x TD – 0.05) %
266MST	F to N	from 1:1 to 10:1	± 0.025 % (Option)
266RST	F to N	from 1:1 to 10:1	± 0.04 %
	F to N	from 10:1 to 20:1	± (0.04 + 0.005 x TD – 0.05) %

Model	Pabs-Sensor (second sensor for 266MST) range 41 MPa, 410 bar, 5945 psi, (2 MPa, 20 bar, 290 psi for dp-Senosor Code A)		
266MST	C to R		80 kPa, 800 mbar, 321 inH_2O
	A		1.2 kPa, 12 mbar, 4.8 inH_2O

Ambient temperature

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

Model	Sensor	For TD up to	
266MST	A	10:1	± (0.06 % URL + 0.045 % span)
	C to R	10:1	± (0.03 % URL + 0.045 % span)
266RST	F to N	10:1	± (0.05 % URL + 0.08 % span)

for an ambient temperature change from –10 °C to 60 °C (14 to 140 °F):

Model	Sensor	For TD up to	
266MST	A	10:1	± (0.12 % URL + 0.05 % span)
	C to R	10:1	± (0.06 % URL + 0.05 % span)
266RST	F to N	10:1	± (0.1 % URL + 0.1 % span)

per 10 K change between the limits of –40 to –10 °C or 60 to 85 °C (per 18 °F change between the limits of –40 to 14 °F or 140° to 185 °F):

Model	Sensor	For TD up to	
266MST	A	10:1	± (0.05 % URL + 0.03 % span)
	C to R	10:1	± (0.025 % URL + 0.03 % span)
266RST	F to N	10:1	± (0.05 % URL + 0.05 % span)

Model 266MST Differential
Model 266RST Absolute

Model 266MST / Absolute pressure sensor

For the entire temperature range of 125 K, between the limits of –40 °C to 85 °C:

— **Zero signal**
For sensors C to R:
40 kPa, 400 mbar, 160 inH_2O
(absolute pressure sensor 41MPa, 410 bar, 5945 psi)
For sensor A:
0.6 kPa, 6 mbar, 2.4 inH_2O
(absolute pressure sensor 0.6 MPa, 6 bar, 87 psi)

— **Span**
For sensors C to R:
0.3 kPa, 3 bar, 43.5 psi
(absolute pressure sensor 41 MPa, 410 bar, 5945 psi)
For sensor A:
4.5 kPa, 45 mbar, 18 inH_2O
(absolute pressure sensor 0.6 MPa, 6 bar, 87 psi)

Static pressure

(zero errors can be calibrated out at line pressure)

Measuring range	Sensor A	Sensor C, F, L, N	Sensor R
Zero 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 % span	Up to 100 bar: 0.05 % span	Up to 100 bar: 0.1 % span
	> 2 bar: 0.05 % span/bar	> 100 bar: 0.05 % span/100 bar	> 100 bar: 0.1 % span/100 bar

Supply voltage

Within voltage / load specified limits the total effect is less than 0.005 % of URL per volt.

Load

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

Electromagnetic field

Meets all the requirements of EN 61326 and NAMUR NE-21.

Common mode interference

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

Mounting position

No effect for rotation on diaphragm plane. A tilt up to 90° from vertical causes a zero shifts up to 0.35 kPa, 3.5 mbar or 1.4 inH_2O, which can be corrected with zero adjustment. No span effect.

Stability

Sensor C to R:
± 0.15 % of URL over ten years period (± 0.05 % URL/year)
Sensor A:
± 0.3 % of URL over ten years period (± 0.2 % URL/year)

Total performance

similar to DIN 16086
Temperature change in the range from -10 to 60 °C (14 to 140 °F),
266MST only: up to 10 MPa, 100 bar, 1450 psi static pressure

Model	Sensor	For TD up to	Total performance (measurement deviation 0.04 %)
266MST	C to R	1:1	± 0.137 % of calibrated span
266RST	F to N	1:1	± 0.2 % of calibrated span

The indication of Total performance includes the measurement deviation non-linearity including hysteresis and non-reproducibility, the thermal change in the ambient temperature on the zero signal and span, as well as (only 266MST) the effect of the static pressure on the zero signal and span.

$$E_{perf} = \sqrt{(E_{\Delta\vartheta 1} + E_{\Delta\vartheta 2})^2 + E_{Pstat1}{}^2 + E_{Pstat2}{}^2 + E_{lin}{}^2}$$

E_{perf} = Total Performance
$E_{\Delta\vartheta 1}$ = Effect of the ambient temperature on zero signal
$E_{\Delta\vartheta 2}$ = Effect of the ambient temperature on span
E_{Pstat1} = Effect of the static pressure on zero signal (266MST only)
E_{Pstat2} = Effect of the static pressure on the span (266MST only)
E_{lin} = Accuracy rating (for terminal-based linearity 0.04 %)

Physical specification

(Refer to ordering information sheets for variant availability related to specific model or versions code)

Materials

Process isolating diaphragms[1]

AISI 316L ss (1.4435);
Hastelloy C276;
Monel 400; Monel 400 gold plated; Tantalum

Process flanges, adapters, plugs and drain/vent valves[1]

AISI 316L ss (1.4404 / 1.4408);
Hastelloy C276;
Monel 400; Kynar (PVDF insert in AISI 316L ss flange)

Blind flange (reference side of 266RST)

AISI 316L ss (1.4404)

Sensor fill fluid

Silicone oil, Inert fill (Galden)

Mounting bracket[2]

Zinc plated carbon steel with chrome passivation;
AISI 316 L ss.

Gaskets[1]

Viton (FPM); Perbunan (NBR); EPDM; PTFE or FEP-coated Viton (only for PVDF-Kynar process connection or sensor A); Graphite

Sensor housing

AISI 316L ss (1.4404)

Bolts and nuts

AISI 316 ss bolts and nuts, Class A4-70 per UNI 7323 (ISO 3506), in compliance with NACE MR0175 Class II.

Electronic housing and covers

Aluminium alloy (copper content ≤ 0.3 %) with baked epoxy finish (colour RAL9002); AISI 316L ss.

Covers O-ring

Buna N (perbunan)

Local adjustments (zero, span and write protect)

Glass filled polyphenylene oxyde (removable)

Plates

AISI 316 ss for transmitter nameplate, certification plate, optional tag / calibration plate attached to the electronics housing and optional wired-on customer data plate. All printing by laser.

1 Wetted parts of the transmitter.
2 U-bolt material: AISI 400 ss; screws material: high-strength alloy steel or AISI 316 ss.

Calibration

Standard:
— At maximum span, zero based range, ambient temperature and pressure
Optional:
— At specified range and ambient conditions

Optional extras

Mounting brackets

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

LCD display

4-position (at 90°) user orientable

Optional plates

Code I2: for tag (up to 31 characters) and calibration details (up to 31 characters: lower and upper values plus unit) fixed onto transmitter housing
Code I1: for customer data (32 character x 4 lines) wired-on transmitter housing

Surge protection

Cleaning procedure for oxygen service

Test certificates (test, design, calibration, material traceability)

Tag and manual language

Communication connectors

Model 266MST Differential
Model 266RST Absolute

Process connections
On flanges: 1/4–18 NPT on process axis
On adapters: 1/2–14 NPT on process axis
Centre distance (266MST):
54 mm (2.13 in.) on flanges; 51 mm, 54 mm or 57 mm (2.01 in., 2.13 in. or 2.24 in.) as per adapters fittings
Fixing threads:
7/16–20 UNF at 41.3 mm centre distance or for DIN 19213 connection (Process Flanges code C):
M10 for operating pressures up to 16 MPa, 160 bar, 2320 psi resp.
M12 for higher operating pressures up to 41 MPa, 410 bar, 6000 psi

Electrical connections
Two 1/2-14 NPT or M20 x 1.5 threaded conduit entries, direct on housing.
Special communication connector (on request)
— HART: straight or angle Harting Han 8D connector and one plug
— FOUNDATION Fieldbus, PROFIBUS PA: M12 x 1 or 7/8 in.

Terminal block
HART version: three terminals for signal / external meter wiring up to 2.5 mm^2 (14 AWG), also connection points for test and communication purposes
Fieldbus versions: two terminals for signal wiring (bus connection) up to 2.5 mm^2 (14 AWG)

Grounding
Internal and external 6 mm^2 (10 AWG) ground termination points are provided.

Monting position
Transmitter can be mounted in any position.
Electronics housing may be rotated to any position. A positive stop prevents over travel.

Mass
(without options)
3.7 kg approx. (8.2 lb); add 1.5 kg (3.3 lb) for AISI housing.
Add 650 g (1.5 lb) for packing

Packing
Carton 28 x 23 x 24 cm, approx. (11 x 9 x 9 in.)

Configuration

Transmitter with HART communication and 4 to 20 mA

Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and configured as follows:

Engineering Unit	kPa
4 mA	Zero
20 mA	Upper Range Limit (URL)
Output	Linear
Damping	1 s
Transmitter failure mode	Upscale
Software tag (8 characters max)	Blank
Optional LCD display	PV in kPa; output in mA and in percentage on bargraph

Any or all the above configurable parameters, including Lower range-value and Upper range-value which must be the same unit of measure, can be easily changed using the HART hand-held communicator or by a PC running the configuration software with DTM for 266 models. The transmitter database is customized with specified flange type and material, O-ring and drain / vent materials and meter code option.

Custom configuration (option)

The following data may be specified in addition to the standard configuration parameters:

Descriptor	16 alphanumeric characters
Message	32 alphanumeric characters
Date	Day, month, year

For HART protocol available engineering units of pressure measure are :
Pa, kPa, MPa
inH_2O @ 4 °C, mmH_2O @ 4 °C, psi
inH_2O @ 20 °C, ftH_2O @ 20 °C, mmH_2O @ 20 °C
inHg, mmHg, Torr
g/cm^2, kg/cm^2, atm
mbar, bar
These and others are available for PROFIBUS and FOUNDATION Fieldbus.

Transmitter with PROFIBUS PA communication

Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and configured as follows:

Measure Profile	Pressure
Engineering Unit	kPa
Output scale 0 %	Lower Range Limit (LRL)
Output scale 100 %	Upper Range Limit (URL)
Output	Linear
Hi-Hi Limit	Upper Range Limit (URL)
Hi Limit	Upper Range Limit (URL)
Low Limit	Lower Range Limit (LRL)
Low-Low Limit	Lower Range Limit (LRL)
Limits hysteresis	0.5 % of output scale
PV filter	0 s
Address (set by local key)	126
Tag	32 alphanumeric characters
Optional LCD display	PV in kPa; output in percentage on bargraph

Any or all the above configurable parameters, including the range values which must be the same unit of measure, can be easily changed by a PC running the configuration software with DTM for 266 models. The transmitter database is customized with specified flange type and material, O-ring and drain / vent materials and meter code option.

Custom configuration (option)

The following data may be specified in addition to the standard configuration parameters:

Descriptor	32 alphanumeric characters
Message	32 alphanumeric characters
Date	Day, month, year

Transmitter with FOUNDATION Fieldbus communication

Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and the analog input function block FB1 is configured as follows:

Measure Profile	Pressure
Engineering Unit	kPa
Output scale 0 %	Lower Range Limit (LRL)
Output scale 100 %	Upper Range Limit (URL)
Output	Linear
Hi-Hi Limit	Upper Range Limit (URL)
Hi Limit	Upper Range Limit (URL)
Low Limit	Lower Range Limit (LRL)
Low-Low Limit	Lower Range Limit (LRL)
Limits hysteresis	0.5 % of output scale
PV filter time	0 s
Tag	32 alphanumeric characters
Optional LCD display	PV in kPa; output in percentage on bargraph

The analog input function blocks FB2 and FB3 are configured respectively for the sensor temperature measured in °C and for the static pressure measured in MPa. Any or all the above configurable parameters, including the range values, can be changed using any host compliant to FOUNDATION Fieldbus. The transmitter database is customized with specified flange type and material, O–ring and drain / vent materials and meter code option.

Mounting Dimensions

(not for construction unless certified) – dimensions in mm (inch)

Transmitter with barrel housing - horizontal flanges

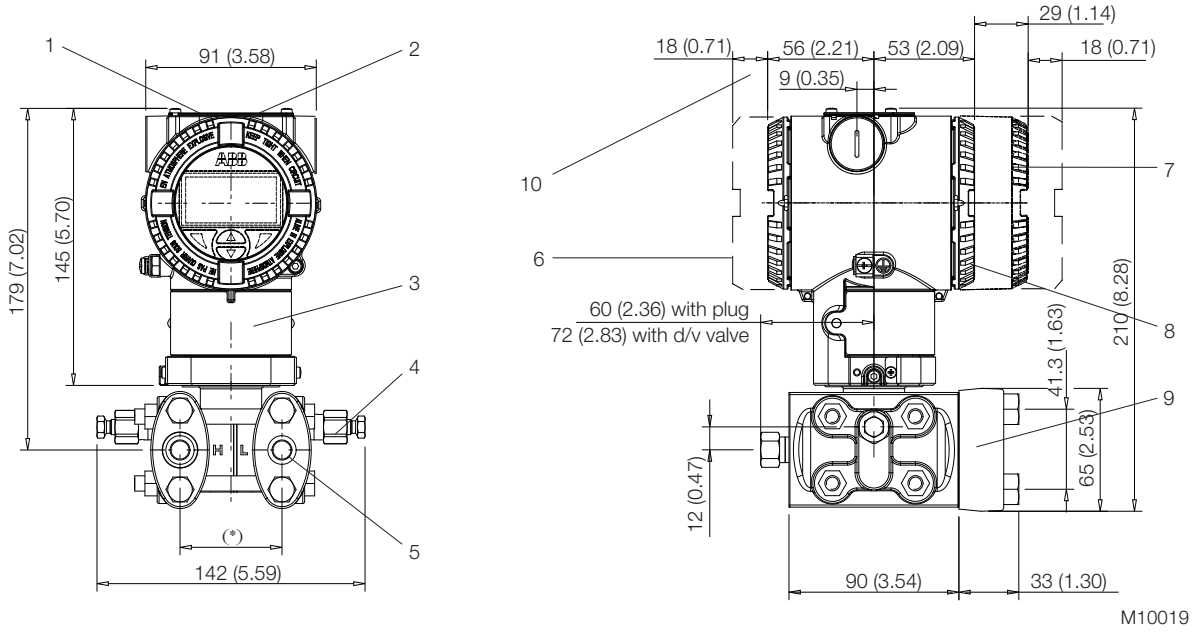

Fig. 1: Dimensions – Barrel housing
1 Adjustments | 2 Identification plate | 3 Certification plate | 4 Drain / vent valve | 5 Process connection | 6 Terminal side | 7 Integral display housing | 8 Electronic side | 9 Adapter | 10 Space for cover removal

* 54 (2.13) mm (in.) on ¼ - 18 NPT process flange
51 (2.01), 54 (2.13) or 57 (2.24) mm (in) according to ¼ - 14 NPT adapters fitting;
Note: Bolting threads for fixing adapter or other devices (i.e. manifold etc.) on process flange is 7/16 – 20 UNF.

Note

Process connection, gasket groove and gaskets are in accordance with IEC 61518. Bolting threads for fixing adapter or other devices (i.e. manifold etc.) on process flange is 7/16 - 20 UNF.

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

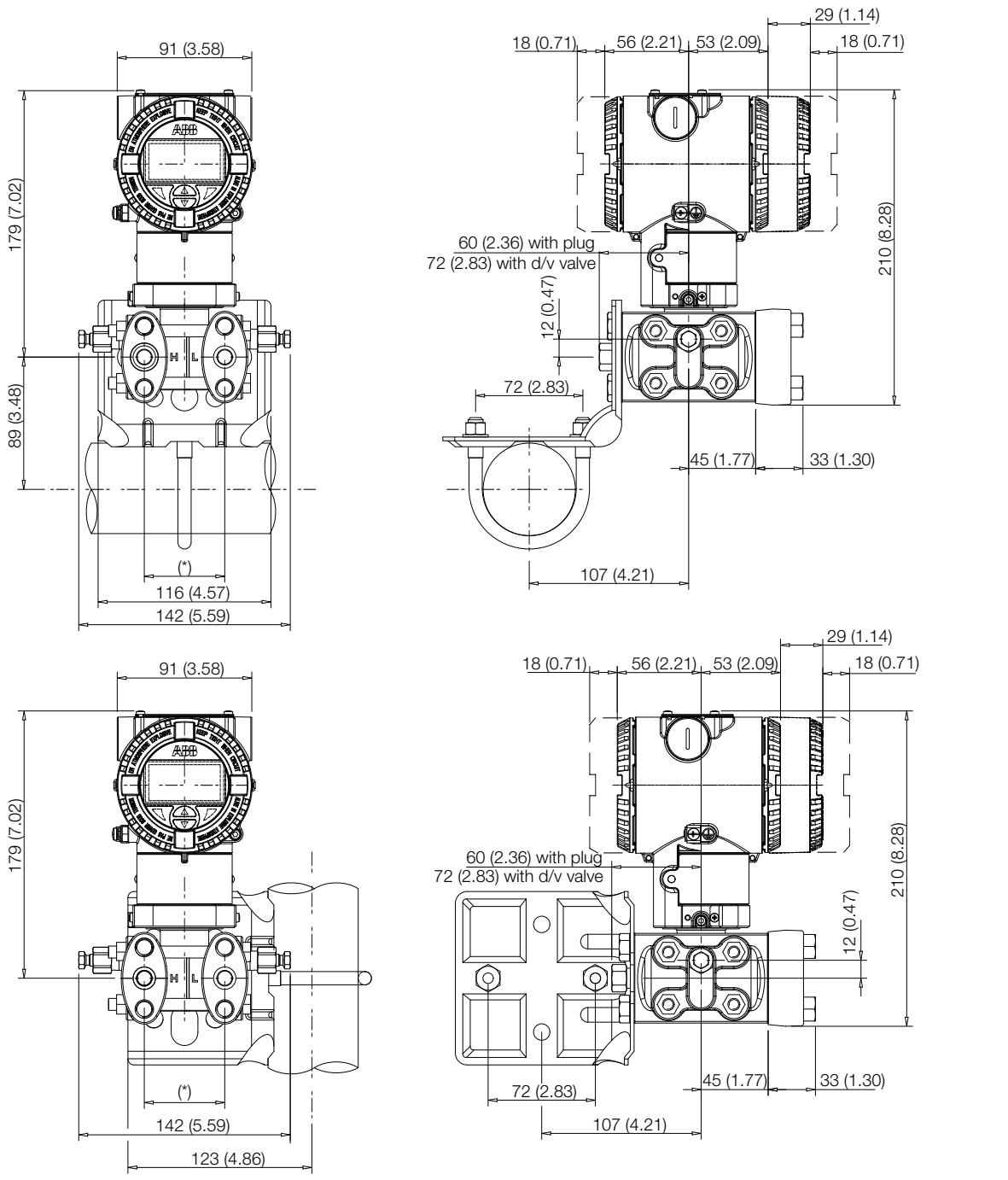

Fig. 2: Pipe mounting – Barrel housing

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

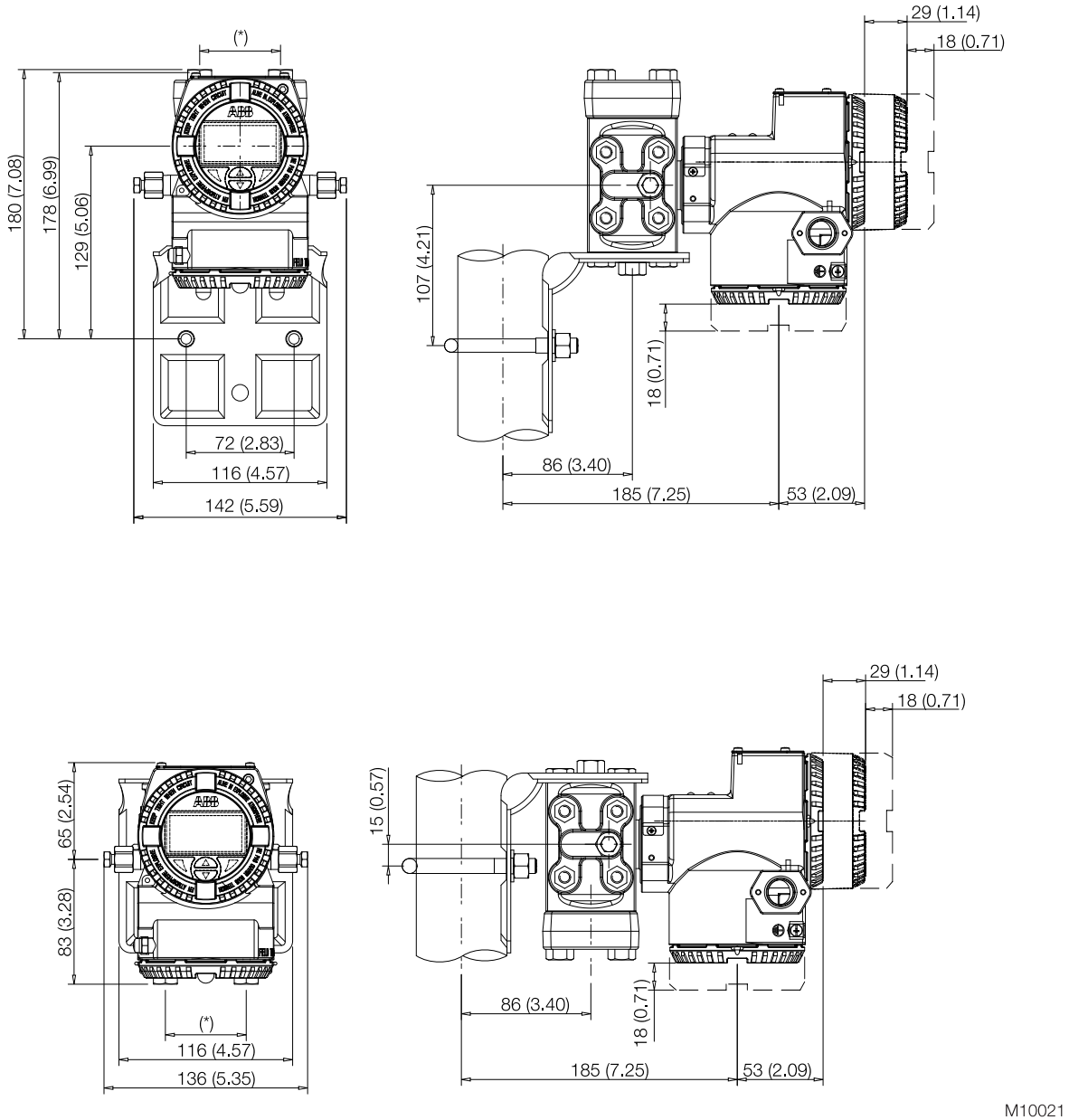

Fig. 3: Pipe mounting – DIN housing

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

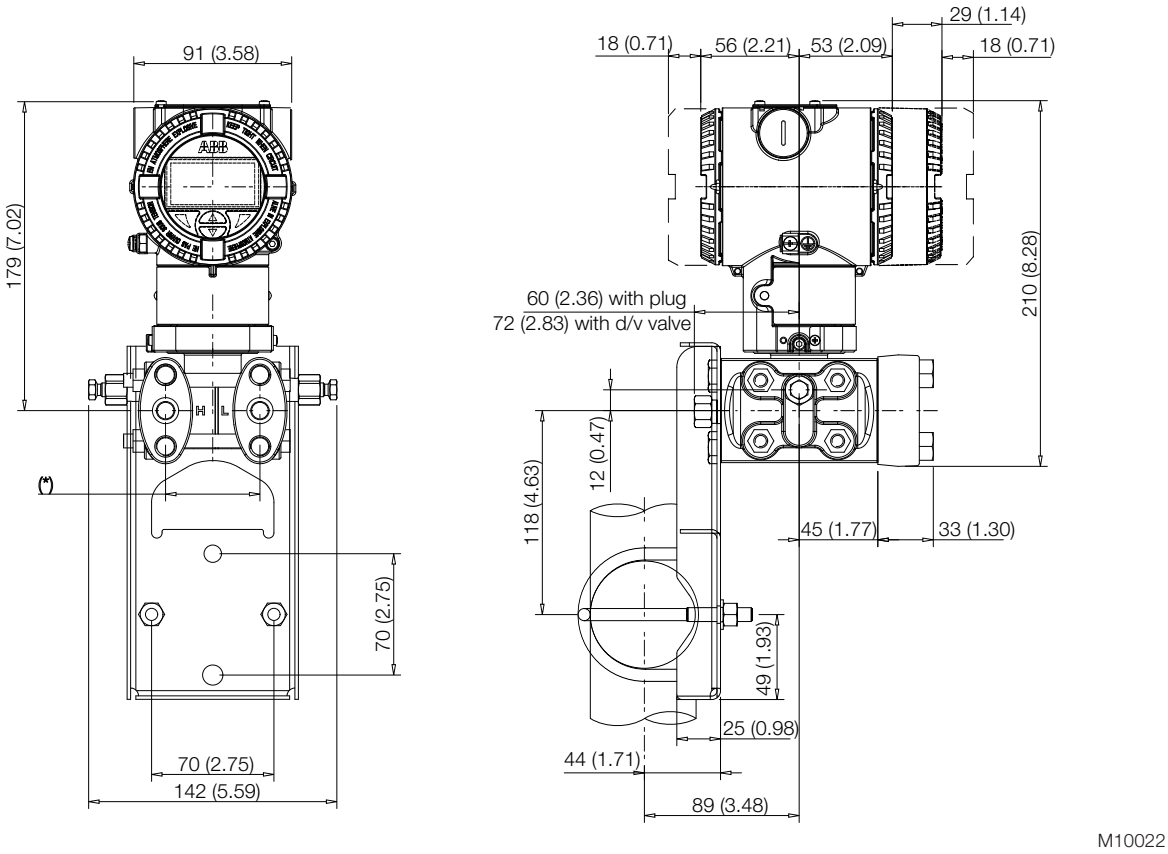

Fig. 4: Flat bracket for pipe mounting – Barrel housing

Electrical connections

HART Version

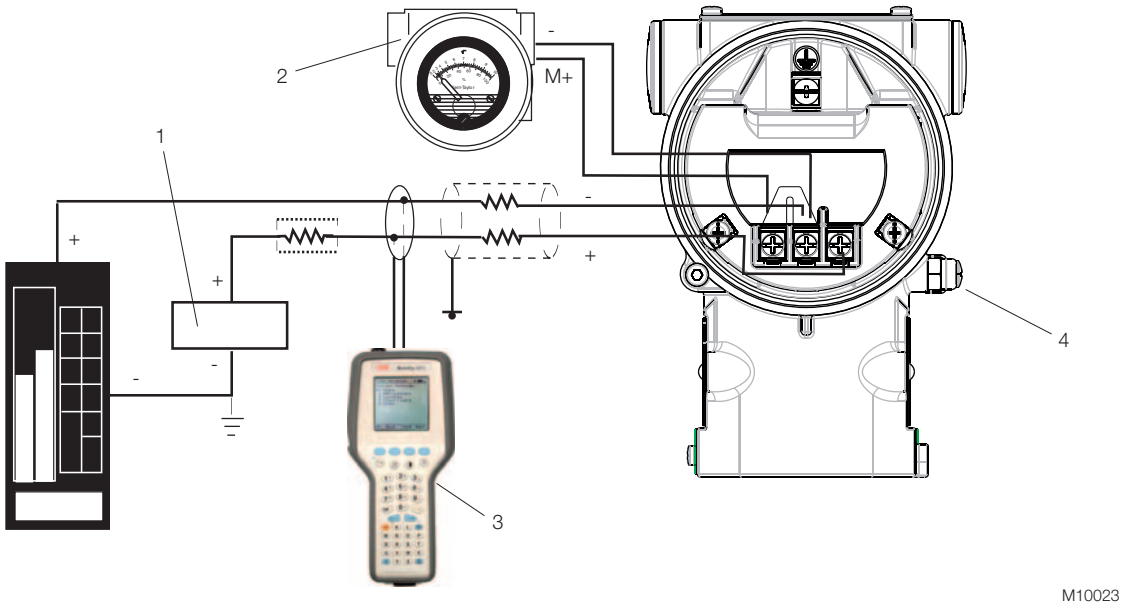

Fig. 5: Electrical connections – HART version
1 Power source | 2 Remote indicator | 3 Hand-held communicator | 4 External ground termination point

HART hand-held communicator may be connected at any wiring termination point in the loop, providing the minimum resistance is 250 Ω. If this is less than 250 Ω, additional resistance should be added to allow communications.

Fieldbus Versions

Fig. 6: Connector – Fieldbus versions

PIN (male) IDENTIFICATION		
Pin number	FOUNDATION Fieldbus	PROFIBUS PA
1	DATA –	DATA +
2	DATA +	GROUND
3	SHIELD	DATA –
4	GROUND	SHIELD

Connector is supplied loose without mating female plug

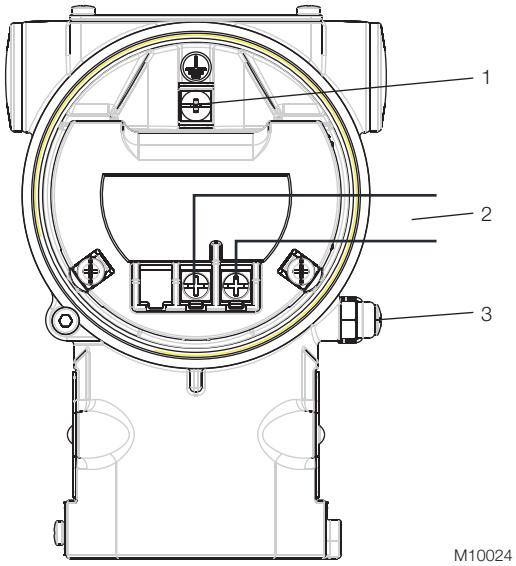

Fig. 7: Standard terminal strip

1 Internal ground termination point | 2 Fieldbus line (polarity independent) | 3 External ground termination point

HART Version

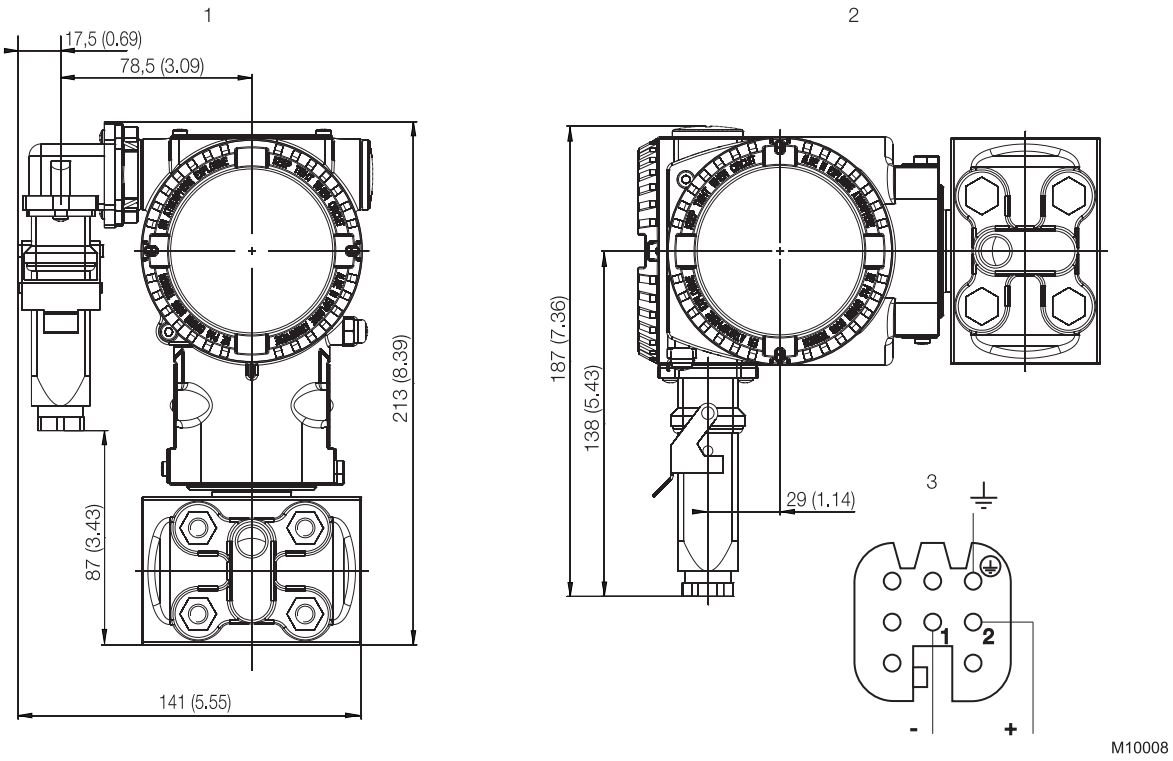

Fig. 8: Harting Han connector – HART version

1 Barrel housing | 2 DIN housing | 3 Harting Han 8D (8U) socket insert for mating plug supplied (view of sockets)

Model 266MST Differential
Model 266RST Absolute

Ordering information

Basic ordering information model 266MST Differential Pressure Transmitter

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					266MST	X	X	X	X	X	X	X
Differential pressure transmitter, 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												
1 MPa	10 bar	145 psi	(Only available with Process Flanges code P)				Y					
2 MPa	20 bar	290 psi	(Only available with Sensor Span Limits code A)				W					
16 MPa	160 bar	2320 psi	(Not available with Sensor Span Limits code A)				C					
25 MPa	250 bar	3625 psi	(Not available with Sensor Span Limits code A)				Z					
41 MPa	410 bar	5945 psi	(Not available with Sensor Span Limits code A)				T					
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			A				
Hastelloy C-276	Inert fluid – Galden		(Suitable for oxygen applications)		NACE			F				
Monel 400	Inert fluid – Galden		(Suitable for oxygen applications)		NACE			C				
Monel 400 gold-plated	Inert fluid – Galden		(Suitable for oxygen applications)		NACE			Y				
Tantalum	Inert fluid – Galden		(Suitable for oxygen applications)		NACE			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 266MST Differential Pressure Transmitter					X	X	X
Bolts Material / Gaskets Material – 11th character							
AISI 316L SST	Viton	(Suitable for oxygen applications)		NACE	3		
AISI 316L SST	PTFE (Max. 25 MPa / 250 bar / 3625 psi)			NACE	4		
AISI 316L SST	EPDM			NACE	5		
AISI 316L SST	Perbunan			NACE	6		
AISI 316L SST	Graphite			NACE	7		
AISI 316L SST	FEP (Only available with Kynar (PVDF) process connection			NACE	T		
Housing Material / Electrical Connection – 12th character							
Aluminium alloy (Barrel type)	1/2-14 NPT					A	
Aluminium alloy (Barrel type)	M20 x 1.5					B	
Aluminium alloy (Barrel type)	Harting Han connector	(General purpose only)	(Note 2)			E	
Aluminium alloy (Barrel type)	Fieldbus connector	(General purpose only)	(Note 2)			G	
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	
Aluminium alloy (DIN type)	Harting Han connector	(General purpose only)	(Note 2)			K	
Aluminium alloy (DIN type)	Fieldbus connector	(General purpose only)	(Note 2)			W	
AISI 316L SST (Barrel type)	Fieldbus connector	(General purpose only)	(Note 2)			Z	
Output – 13th character							
HART digital communication and 4 to 20 mA (No additional options)							H
HART digital communication and 4 to 20 mA (Options requested by “Additional ordering code”)							1
PROFIBUS PA (No additional options)							P
PROFIBUS PA (Options requested by “Additional ordering code”)							2
FOUNDATION Fieldbus (No additional options)							F
FOUNDATION Fieldbus (Options requested by “Additional ordering code”)							3
HART digital communication and 4 to 20 mA with SIL2 declaration of conformity (No additional options)							T
HART digital communication and 4 to 20 mA with SIL2 declaration of conformity (Options requested by “Additional ordering code”)							8

Model 266MST Differential
Model 266RST Absolute

Additional ordering information for model 266MST

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

			XX	XX	XX
Accuracy					
Base accuracy 0.025 %		(Note 3)	D1		
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					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)					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)					E6
FM approvals (USA and Canada) Intrinsic Safety					EA
FM approvals (USA and Canada) Explosion Proof					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)					EN
Combined ATEX - Intrinsic Safety, Flameproof and Type „N“					EW
IEC Approval Group II Category 1 GD - Intrinsic Safety Ex ia					E8
IEC Approval Group II Category 1/2 GD - Flameproof Ex d					E9
IEC Approval Group II Category 3 GD - Type of protection "N" Ex nL design compliance					ER

Additional ordering information for model 266MST		XX	XX	XX	XX	XX	XX
Other hazardous area certifications							
GOST (Russia) Ex ia		W1					
GOST (Russia) Ex d		W2					
GOST (Kazakhstan) Ex ia		W3					
GOST (Kazakhstan) Ex d		W4					
Inmetro (Brazil) Ex ia		W5					
Inmetro (Brazil) Ex d		W6					
Inmetro (Brazil) Ex nL		W7					
Integral LCD							
With integral LCD display			L1				
TTG (Through The Glass) integral digital LCD display			L5				
Mounting bracket (shape and material)							
For pipe mounting / Carbon steel	(Not suitable for AISI housing)			B1			
For pipe mounting / AISI 316 ss	(Not suitable for AISI housing)			B2			
For wall mounting / Carbon steel	(Not suitable for AISI housing)			B3			
For wall mounting / AISI 316 ss	(Not suitable for AISI housing)			B4			
Flat type / AISI 316L ss, for AISI housing				B5			
Surge / Transient Protector							
With integral surge / transient protector					S2		
Language of Documentation							
German						M1	
Italian						M2	
Spanish						M3	
French						M4	
English						M5	
Label and Tag Language							
German							T1
Italian							T2
Spanish							T3
French							T4

Model 266MST Differential
Model 266RST Absolute

Additional ordering information for model 266MST	XX	XX	XX	XX	XX
Additional Tag Plate					
Supplemental wired-on stainless steel plate (4 lines, 32 characters each)	I1				
Laser printing of tag on stainless steel plate	I2				
Configuration					
Standard pressure = inH2O / psi at 68 °F		N2			
Standard pressure = inH2O / psi at 39.2 °F		N3			
Standard pressure = inH2O / psi at 20 °C		N4			
Standard pressure = inH2O / psi at 4 °C		N5			
Custom		N6			
Preparation Procedure					
Oxygen service cleaning, Pmax = 12 MPa (120 bar, 1740 psi) or maximum working pressure (lower value), Tmax = 60 °C / 140 °F (only with inert fill / viton gasket)			P1		
Hydrogen service preparation			P2		
Certificates					
Inspection certificate EN 10204-3.1 of calibration				C1	
Inspection certificate EN 10204-3.1 of the cleanliness stage				C3	
Inspection certificate EN 10204-3.1 of helium leakage test of the sensor module				C4	
Inspection certificate EN 10204-3.1 of the pressure test				C5	
Certificate of compliance with the order EN 10204-2.1 of instrument design				C6	
Overfill protection				C9	
Separate calibration record				CC	
PMI test of wetted parts				CT	
Approvals					
GOST (Russia) without Ex					Y1
GOST (Kazakhstan) without Ex					Y2
GOST (Ukraine) without Ex					Y3
GOST (Belarus) without Ex					Y4
DNV approval					YA
Lloyd approval					YB
Approval for Custody Transfer					YC
Bureau Veritas approval					YD

Additional ordering information for model 266MST		XX	XX	XX
Material Traceability				
Certificate of compliance with the order EN 10204-2.1 of process wetted parts		H1		
Inspection certificate EN 10204-3.1 of pressure-bearing and process wetted parts with analysis certificates as material verification	(Note 5)	H3		
Material certificate EN 10204-2.2 of the pressure bearing and process wetted parts		H4		
Connector				
Fieldbus 7/8 in. (recommended for FOUNDATION Fieldbus) (supplied loose without female plug)			U1	
Fieldbus M12 x 1 (recommended for PROFIBUS PA) (supplied loose without female plug)			U2	
Harting Han 8D (8U) - straight entry			U3	
Harting Han 8D (8U) - angle entry			U4	
Harting Han 7D			U5	
Housing Accessories				
Integral mount manifold				A1
With mounted integral orifice				A2
Valve manifold + integral orifice				A3
Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA	(Note 6)			A4
Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA	(Note 6)			A6
Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA	(Note 6)			A5
Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA	(Note 6)			A7
Plug upside welded				A8
Plug bottom welded				A9

Note 1: Not with Diaphragm Material code M, V, T, C, Y, D
Note 2: Suitable for oxygen applications
Note 3: Select connector with additional ordering code
Note 4: Only with sensor Code F, L, N
Note 5: Minor parts with factory certificate acc. to EN 10204
Note 6: Only with Housing Material / Electrical Connection code J (DIN housing)

Standard delivery items (can be differently specified by additional ordering code)

— Adapters supplied loose
— Plug on axis of connection flange; nothing for PVDF Kynar insert and for vertical connection blind flange (no drain / vent valves)
— General purpose (no electrical certification)
— No display, no mounting bracket, no surge protection
— English manual and labels
— Configuration with kPa and deg. C units
— No test, inspection or material traceability certificates

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 CONFORMITY IS ACCORDING TO RECOMMENDATIONS PER MR0175.AISI 316 AND HASTELLOY C-276 ALSO COMPLY WITH MR0103 IF ALREADY WITH MR0175.

Model 266MST Differential
Model 266RST Absolute

Basic ordering information model 266RST Absolute Pressure Transmitter

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 Differential pressure transmitter, base accuracy 0.04 %					266RST	X	X	X	X	X	X	X	
Sensor - Span Limits – 7th character												continued	
2 and 40 kPa	20 and 400 mbar	15 and 300 mmHg				F						see next	
12.5 and 250 kPa	125 and 2500 mbar	95 and 1875 mmHg				L						page	
100 and 2000 kPa	1 and 20 bar	15 and 290 psi				N							
Maximum Working Pressure – 8th character													
16 MPa	160 bar	2320 psi	(not with Sensor Span Limits code A)				C						
25 MPa	250 bar	3625 psi	(not with Sensor Span Limits code A)				Z						
41 MPa	410 bar	5945 psi	(not with Sensor Span Limits code A)				T						
Diaphragm Material / Fill Fluid – 9th character													
Hastelloy C-276 / Silicone oil (NACE)								K					
Process Flanges and Adapters Material / Connection – 10th character													
AISI 316L ss	1/4-18 NPT-f direct		(horizontal connection)		NACE				A				
AISI 316L ss	1/2-14 NPT-f through adapter		(horizontal connection)		NACE				B				
AISI 316L ss	1/4-18 NPT-f direct (DIN 19213)		(horizontal connection)						Q				
Bolts Material / Gaskets Material – 11th character													
Stainless steel	Viton		NACE		(Note 1)					3			
Stainless steel	PTFE (max. 25 MPa / 250 bar / 3626 psi)		NACE							4			
Stainless steel	EPDM		NACE							5			
Stainless steel	Perbunan		NACE							6			
Stainless steel	Graphite		NACE							7			

BASIC ORDERING INFORMATION model 266RST Absolute Pressure Transmitter				X	X
Housing Material / Electrical Connection – 12th character					
Aluminium alloy (barrel version)	1/2-14 NPT			A	
Aluminium alloy (barrel version)	M20 x 1.5			B	
Aluminium alloy (barrel version)	Harting Han connector	(general purpose only)	(Note 2)	E	
Aluminium alloy (barrel version)	Fieldbus connector	(general purpose only)	(Note 2)	G	
AISI 316L ss (barrel version)	1/2-14 NPT			S	
AISI 316L ss (barrel version)	M20 x 1.5			T	
Aluminium alloy (DIN version)	M20 x 1.5			J	
Aluminium alloy (DIN version)	Harting Han connector		(Note 2)	K	
Aluminium alloy (DIN version)	Fieldbus connector		(Note 2)	W	
AISI 316L ss (barrel version)	Fieldbus connector	(general purpose only)	(Note 2)	Z	
Output – 13th character					
HART digital communication and 4 to 20 mA			No additional options		H
HART digital communication and 4 to 20 mA			Options requested by “Additional ordering code”		1
PROFIBUS PA			No additional options		P
PROFIBUS PA			Options requested by “Additional ordering code”		2
FOUNDATION Fieldbus			No additional options		F
FOUNDATION Fieldbus			Options requested by “Additional ordering code”		3
HART digital communication and 4 to 20 mA with SIL2 declaration of conformity			No additional options		T
HART digital communication and 4 to 20 mA with SIL2 declaration of conformity			Options requested by “Additional ordering code”		8

Model 266MST Differential
Model 266RST Absolute

ADDITIONAL ORDERING INFORMATION for model 266RST

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

			XX	XX	XX
Drain or Vent Valve Material / Position					
AISI 316L ss	On process axis	NACE	V1		
AISI 316L ss	On flanges side top	NACE	V2		
AISI 316L ss	On flanges side bottom	NACE	V3		
Hazardous area certifications					
ATEX Intrinsic Safety II 1 G and II 1/2 G Ex ia IIC T6; II 1 D Ex iaD 20 T 95° C and II 1/2D Ex iaD 21 T95° C				E1	
ATEX Explosion Proof Group II Category 1/2 G Ex d IIC T6 and Group II Category 1/2 D Ex tD A21 IP67 T85° C				E2	
ATEX Type „N“ Group II Category 3 G Ex nL IIC T6 and Group II Category 3 D Ex tD A22 IP67 T85° C				E3	
ATEX Intrinsic Safety Ex ia, Explosion Proof Ex d, Type "N" Ex nL				EW	
Combined ATEX, FM approval (USA) and FM approval (Canada)				EN	
FM approval (Canada)				E4	
FM approval (USA)				E6	
FM approvals (USA and Canada) Intrinsic Safety				EA	
FM approvals (USA and Canada) Explosion Proof				EB	
FM approvals (USA and Canada) Non Incendive				EC	
IEC Intrinsic Safety II 1 G and II 1/2 G Ex ia IIC T6; II 1 D Ex iaD 20 T 95° C and II 1/2D Ex iaD 21 T95° C				E8	
IEC Explosion Proof Group II Category 1/2 G Ex d IIC T6 and Group II Category 1/2 D Ex tD A21 IP67 T85° C				E9	
IEC Group II Category 3 G Ex nL IIC T6 and Group II Category 3 D Ex tD A22 IP67 T85° C				ER	
Other hazardous area certifications					
GOST (Russia) Ex ia					W1
GOST (Russia) Ex d					W2
GOST (Kazakhstan) Ex ia					W3
GOST (Kazakhstan) Ex d					W4
Inmetro (Brazil) Ex ia					W5
Inmetro (Brazil) Ex d					W6
Inmetro (Brazil) Ex nL					W7

Additional ordering information for model 266RST		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 ss	(Not suitable for AISI housing)		B2				
For wall mounting / Carbon steel	(Not suitable for AISI housing)		B3				
For wall mounting / AISI 316 ss	(Not suitable for AISI housing)		B4				
Flat type / AISI 316L ss	For AISI housing		B5				
Surge / Transient Protector							
With integral surge / transient protector				S2			
Language of Documentation							
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

Model 266MST Differential
Model 266RST Absolute

Additional ordering information for model 266RST	XX	XX	XX	XX	XX
Configuration					
Standard pressure = inH2O / psi at 68 °F	N2				
Standard pressure = inH2O / psi at 39.2 °F	N3				
Standard pressure = inH2O / psi at 20 °C	N4				
Standard pressure = inH2O / psi at 4 °C	N5				
Custom	N6				
Preparation Procedure					
Hydrogen service preparation		P2			
Certificates					
Inspection certificate EN 10204-3.1 of calibration			C1		
Inspection certificate EN 10204-3.1 of the cleanliness stage			C3		
Inspection certificate EN 10204-3.1 of helium leakage test of the sensor module			C4		
Inspection certificate EN 10204-3.1 of the pressure test			C5		
Certificate of compliance with the order EN 10204-2.1 of instrument design			C6		
Separate calibration record			CC		
PMI test of wetted parts			CT		
Approvals					
GOST (Russia) without Ex				Y1	
GOST (Kazakhstan) without Ex				Y2	
GOST (Ukraine) without Ex				Y3	
GOST (Belarus) without Ex				Y4	
DNV approval				YA	
Lloyd approval				YB	
Approval for Custody Transfer				YC	
Bureau Veritas approval				YD	
Material Traceability					
Certificate of compliance with the order EN 10204-2.1 of process wetted parts					H1
Inspection certificate EN 10204-3.1 of pressure-bearing and process wetted parts with analysis certificates as material verification (Note 3)					H3
Material certificate EN 10204-2.2 of the pressure bearing and process wetted parts					H4

Additional ordering information for model 266RST		XX	XX
Connector			
Fieldbus 7/8 in. (recommended for FOUNDATION Fieldbus) (supplied loose without female plug)		U1	
Fieldbus M12 x 1 (recommended for PROFIBUS PA) (supplied loose without female plug)		U2	
Harting Han 8D (8U) - straight entry		U3	
Harting Han 8D (8U) - angle entry		U4	
Harting Han 7D		U5	
Housing Accessories			
Integral mount manifold			A1
Four-wire add-on unit: Power supply 24 V UC / output signal 0 to 20 mA	(Note 4)		A4
Four-wire add-on unit: Power supply 24 V UC / output signal 4 to 20 mA	(Note 4)		A6
Four-wire add-on unit: Power supply 230 V AC / output signal 0 to 20 mA	(Note 4)		A5
Four-wire add-on unit: Power supply 230 V AC / output signal 4 to 20 mA	(Note 4)		A7
Plug upside welded			A8
Plug bottom welded			A9

Note 1: Suitable for oxygen applications
Note 2: Select connector with additional ordering code
Note 3: Minor parts with factory certificate acc. to EN 10204
Note 4: Only with Housing Material / Electrical Connection code J (DIN housing)

Standard delivery items (can be differently specified by additional ordering code)

— Adapters supplied loose
— Plug on axis of connection flange; nothing for PVDF Kynar insert and for vertical connection blind flange (no drain/vent valves)
— General purpose (no electrical certification)
— No display, no mounting bracket, no surge protection
— English manual and labels
— Configuration with kPa and deg. C units
— No test, inspection or material traceability certificates

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 CONFORMITY IS ACCORDING TO RECOMMENDATIONS PER MR0175.AISI 316 AND HASTELLOY C-276 ALSO COMPLY WITH MR0103 IF ALREADY WITH MR0175.

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