Product Data Sheet
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Rosemount™ 2051 Pressure Transmitter

- Rosemount™ Coplanar™ platform enables integration of primary elements, manifolds, and remote seal solutions
- Best-in-class performance with up to 0.05 percent high accuracy option
- IEC 62591 (*Wireless*HART®) enables cost effective installations
- Local Operator Interface (LOI) offers easy to use configuration capabilities at the transmitter
- Protocols available include 4–20 mA HART®, FOUNDATION™ Fieldbus, PROFIBUS® PA, and HART 1–5 Vdc Low Power
- Selectable HART Revision prepares your plant for the latest HART capabilities while ensuring seamless integration with today's systems
- SIL2/3 safety certification to IEC 61508 is available with the full 4–20 mA HART offering to simplify compliance

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Rosemount 2051 Pressure Transmitter product offering

Foundation of reliable measurement

- Differential, gage, and absolute pressure measurement
- Select from an extensive offering of DP flow meters, liquid level, manifolds, and flanges
- Available with variety of protocols and materials

Best-in-class capabilities extended to IEC 62591 (*Wireless*HART Protocol)

- Cost effectively implement wireless on the industry's most proven platform
- Optimize safety with the industry's only intrinsically safe power module
- Eliminate wiring design and construction complexities to lower costs by 40–60 percent
- Quickly deploy new pressure, level, and flow measurements in 70 percent less time

Innovative, integrated DP flow meters

- Fully assembled and leak tested for out-of-the-box installation
- Reduce straight pipe requirements, lower permanent pressure loss, and achieve accurate measurement in small line sizes
- Up to two percent volumetric flow accuracy at 5:1 turndown

Proven, reliable, and innovative DP level technologies

- Connect to virtually any process with a comprehensive offering of process connections, fill fluids, direct mount or capillary connections, and materials.
- Quantify and optimize total system performance with QZ option.
- Optimize level measurement with cost efficient Tuned-System™ Assemblies

Instrument manifolds — quality, convenient, and easy

- Designed and engineered for optimal performance with Rosemount transmitters
- Save installation time and money with factory assembly
- Offers a variety of styles, materials, and configurations

Access information when you need it with asset tags

Newly shipped devices include a unique QR code asset tag that enables you to access serialized information directly from the device. With this capability, you can:

- Access device drawings, diagrams, technical documentation, and troubleshooting information in your MyEmerson account
- Improve mean time to repair and maintain efficiency
- Ensure confidence that you have located the correct device
- Eliminate the time-consuming process of locating and transcribing nameplates to view asset information

Rosemount 2051C Coplanar Pressure Transmitter ordering information

Rosemount 2051C Coplanar Pressure Transmitter

- Performance up to 0.05% of span accuracy
- Patented coplanar technology allows direct mounting to pressure, flow or level solutions for installation flexibility
- Delivered fully assembled to manifolds, diaphragm seals or primary flow elements for straightforward installation
- Local Operator Interface offers easy-to-use menus and built-in configuration buttons for streamline commissioning
- SIL 2/3 certified to IEC 61508 (via 3rd party) and prior-use certificate of FMEDA data for safety installations

CONFIGURE > VIEW PRODUCT >

Online product configurator

Many products are configurable online using our Product Configurator. Select the **Configure** button or visit our website to start. With this tool's built-in logic and continuous validation, you can configure your products more quickly and accurately.

Specifications and options

See the Specifications and options section for more details on each configuration. Specification and selection of product materials, options, or components must be made by the purchaser of the equipment. See the Material selection section for more information.

Model codes

Model codes contain the details related to each product. Exact model codes will vary; an example of a typical model code is shown in Figure 1.

Figure 1: Model Code Example

3051C D 2 X 2 2 M5 B4

1 2

1. Required model components (choices available on most)
2. Additional options (variety of features and functions that may be added to products)

Optimizing lead time

The starred offerings (★) represent the most common options and should be selected for best delivery. The non-starred offerings are subject to additional delivery lead time.

Required model components

Model

Code	Description	
2051C	Coplanar Pressure Transmitter	★

Measurement type

Code	Description	
D	Differential	★
G	Gage	★

Pressure range

Code	Differential (Rosemount 2051CD)	Gage (Rosemount 2051CG)	
1	–25 to 25 inH_2O (–62.2 to 62.2 mbar)	–25 to 25 inH_2O (–62.2 to 62.2 mbar)	★
2	–250 to 250 inH_2O (–623 to 623 mbar)	–250 to 250 inH_2O (–623 to 623 mbar)	★
3	–1000 to 1000 inH_2O (–2.5 to 2.5 bar)	–393 to 1000 inH_2O (–0.98 to 2.5 bar)	★
4	–300 to 300 psi (–20.7 to 20.7 bar)	–14.2 to 300 psi (–0.98 to 20.7 bar)	★
5	–2000 to 2000 psi (–137.9 to 137.9 bar)	–14.2 to 2000 psi (–0.98 to 137.9 bar)	★

Transmitter output

Code	Description	
A(1)	4–20 mA with digital signal based on HART® Protocol	★
F	FOUNDATION™ Fieldbus Protocol	★
W (2)	PROFIBUS® PA Protocol	★
X(3)	Wireless	★
M(4)	Low-power, 1–5 Vdc with digital signal based on HART Protocol	

(1) *HART Revision 5 is the default HART output. The Rosemount 2051 with Selectable HART can be factory or field configured to HART Revision 7. To order HART Revision 7 factory configured, add option code HR7.*
(2) *For local addressing and configuration, M4 (LOI) is required. Not available with product certification codes E4, EM, EP, I6, IM, KD, KL, KM, KP, KS, N3*
(3) *Only available with intrinsically safe approvals.*
(4) *Only available with Housing Codes A and J and with C6, E2,E5, I5, K5, EM, EP, KB, and E8 product certifications.*

Transmitter flange type, material, drain/vent

Code	Description	Flange material	Drain/vent	
2	Coplanar	SST	SST	★
3(1)		Cast C-276	Alloy C-276	
5		Plated CS	SST	★
7(1)		SST	Alloy C-276	★
8(1)		Plated CS	Alloy C-276	★
0	Alternate process connection			★

(1) *Materials of construction comply with recommendations per NACE® MR0175/ISO 15156 for sour oil field production environments. Environmental limits apply to certain materials. Consult latest standard for details. Selected materials also conform to NACE MR0103 for sour refining environments. Order with Q15 or Q25 to receive a NACE certificate.*

Isolating diaphragm

Code	Description	
2	316L SST	★
3	Alloy C-276	★
5(1)(2)	Tantalum	

(1) *Available in ranges 2–5 only.*
(2) *Not available with output code X.*

O-ring

Code	Description	
A	Glass-filled PTFE	★
B	Graphite-filled PTFE	★

Sensor fill fluid

Code	Description	
1	Silicone	★
2(1)	Inert (differential and gage only)	★

(1) *Not available with wireless output (code X).*

Housing material

Code	Description	Conduit entry size	
A	Aluminum	½–14 NPT	★
B	Aluminum	M20 x 1.5	★
E	Aluminum, ultra low copper	½–14 NPT	★
F	Aluminum, ultra low copper	M20 x 1.5	★
J	SST	½–14 NPT	★
K	SST	M20 x 1.5	★
P(1)	Engineered polymer	No conduit entries	★

D[2]	Aluminum	G½	★
M[2]	SST	G½	

(1) *Only available with output code X.*
(2) *Transmitter conduit entry will be ½ NPT and a ½ NPT to G½ thread adapter will be provided. This option is only available with product certifications options I1, I2, I3, I7, IA, IB, IM, KA, N1, N3, N7. Housing code D is also available with E4, and IG.*

Wireless options

Requires wireless output code X and engineered polymer housing code P.

Wireless transmit rate, operating frequency, and protocol

Code	Description	
WA3	User configurable transmit rate, 2.4 GHz *Wireless*HART®	★

Antenna and SmartPower™

Code	Description	
WP5	Internal antenna, compatible with Green Power Module (I.S. Power Module sold separately)	★

Additional options

Extended product warranty

Code	Description	
WR3	3-year limited warranty	★
WR5	5-year limited warranty	★

Plantweb™ control functionality

Code	Description	
A01	FOUNDATION™ Fieldbus advance control function block suite	★

Alternate flange

The alternate flange option code requires the 0 code in materials of construction for alternate process connection.

Code	Description	
H2	Traditional flange, 316 SST, SST drain/vent	★
H3[1]	Traditional flange, alloy C, alloy C-276 drain/vent	★
H7[1]	Traditional flange, 316 SST, alloy C-276 drain/vent	★
HJ	DIN-compliant traditional flange, SST, 7/16-in. (10 mm) adapter/manifold bolting	★
FA	Level flange, SST, 2-in. (51 mm), ANSI Class 150, vertical mount	★
FB	Level flange, SST, 2-in. (51 mm), ANSI Class 300, vertical mount	★
FC	Level flange, SST, 3-in. (76 mm), ANSI Class 150, vertical mount	★
FD	Level flange, SST, 3-in. (76 mm), ANSI Class 300, vertical mount	★

FP	DIN level flange, SST, DN 50, PN 40, vertical mount	★
FQ	DIN level flange, SST, DN 80, PN 40, vertical mount	★
HK(2)	DIN compliant traditional flange, SST, 10 mm adapter/manifold bolting	
HL	DIN compliant traditional flange, SST, 12 mm adapter/manifold bolting	

(1) *Materials of construction comply with recommendations per NACE MR0175/ISO 15156 for sour oil field production environments. Environmental limits apply to certain materials. Consult latest standard for details. Selected materials also conform to NACE MR0103 for sour refining environments. Order with Q15 or Q25 to receive a NACE certificate.*
(2) *Not valid with optional code P9 for 4500 psi static pressure.*

Manifold assembly

"Assemble-to" items are specified separately and require a completed model number.

Code	Description	
S5	Assemble to Rosemount 305 Integral Manifold	★
S6	Assemble to Rosemount 304 Manifold or Connection System	★

Integral mount primary element

Not valid with option code P9 for 4500 static pressure. "Assemble-to" items are specified separately and require a completed model number.

Code	Description	
S3	Assemble to Rosemount 405 Compact Orifice Plate	★
S4(1)	Assemble to Rosemount Annubar™ or Rosemount 1195 Integral Orifice	★

(1) *Transmitter flange limited to coplanar (option codes 2, 3, 5, 7, or 8) or traditional (option codes H2, H3, or H7).*

Seal assemblies

"Assemble-to" items are specified separately and require a completed model number.

Code	Description	
S1(1)	Assemble to one Rosemount 1199 seal	★
S2(2)	Assemble to two Rosemount 1199 seals	★

(1) *Not valid with option code D9 for RC1/2 adapters.*
(2) *Not valid for option codes DF and D9 for adapters.*

Mounting brackets

Code	Description	
B1	Traditional flange bracket for 2-in. pipe mounting, CS bolts	★
B2	Traditional flange bracket for panel mounting, CS bolts	★
B3	Traditional flange flat bracket for 2-in. pipe mounting, CS bolts	★
B4	Coplanar flange bracket for 2-in. pipe or panel mounting, all SST	★
B7	B1 bracket with Series 300 SST bolts	★
B8	B2 bracket with Series 300 SST bolts	★
B9	B3 bracket with Series 300 SST bolts	★
BA	SST B1 bracket with Series 300 SST bolts	★

Code	Description	
BC	SST B3 bracket with Series 300 SST bolts	★

Product certifications

Code	Description	
E8	ATEX Flameproof and Dust Certification	★
I1[1]	ATEX Intrinsic Safety and Dust	★
IA	ATEX FISCO Intrinsic Safety; for FOUNDATION™ Fieldbus or PROFIBUS® PA Protocol only	★
N1	ATEX Type n Certification and Dust	★
K8	ATEX Flameproof, Intrinsic Safety, Type n, Dust (combination of E8, I1 and N1)	★
E4	TIIS Flame-proof	★
I4	TIIS Intrinsic Safety	★
E5	USA Explosion-proof, Dust Ignition-Proof	★
I5[2]	USA Intrinsically Safe, Nonincendive	★
C6	Canada Explosion-proof, Dust Ignition-proof, Intrinsically Safe, and Division 2	★
E6	Canada Explosion-proof, Dust Ignition-proof, Division 2	★
I6	Canada Intrinsic Safety	★
K6	Canada and ATEX Explosion-proof, Intrinsically Safe, and Division 2 (combination of C6, E8, and I1)	★
E7	IECEx Flameproof, Dust Ignition-proof	★
I7	IECEx Intrinsic Safety	★
N7	IECEx Type n Certification	★
K7	IECEx Flame-proof, Dust Ignition-proof, Intrinsic Safety, and Type n (combination of I7, N7, and E7)	★
IG	IECEx FISCO Intrinsically Safe; for FOUNDATION Fieldbus or PROFIBUS PA Protocols only	★
K5	USA Explosion-proof, Dust Ignition-Proof, Intrinsically Safe, and Division 2	★
E2	INMETRO Flameproof001	★
I2	INMETRO Intrinsic Safety	★
IB	INMETRO FISCO intrinsically safe; for FOUNDATION Fieldbus or PROFIBUS PA Protocols only	★
K2	INMETRO Flameproof, Intrinsic Safety	★
E3	China Flameproof	★
I3	China Intrinsic Safety	★
N3	China Type n	★
EM	Technical Regulations Customs Union (EAC) Flameproof	★
IM	Technical Regulations Customs Union (EAC) Intrinsic Safety	★
KM	Technical Regulations Customs Union (EAC) Flameproof and Intrinsic Safety	★
KB	USA and Canada Explosion-proof, Dust Ignition Proof, Intrinsically Safe, and Division 2 (combination of K5 and C6)	★
KD	USA, Canada, and ATEX Explosion-proof, Intrinsically Safe (combination of K5, C6, I1, and E8)	★

KL[3]	USA, Canada, IECEx, ATEX Intrinsic Safety Combination	★
KS	USA, Canada, IECEx, ATEX Explosion Proof, Intrinsically Safe, Dust, Non-Incendive, Type-N, Div. 2	★
EP	Republic of Korea Flameproof	★
IP	Republic of Korea Intrinsic Safety	★
KP	Republic of Korea Flameproof, Intrinsic Safety	★

(1) *Dust approval not applicable to output code X.*
(2) *Nonincendive certification not provided with output code (X).*
(3) *Only available with output code X.*

Drinking water approval

This approval is not available with Alloy C-276 isolator (code 3), tantalum isolator (code 5), all cast C-276 flanges, all plated carbon steel (CS) flanges, all DIN flanges, all level flanges, assemble-to manifolds (codes S5 and S6), assemble-to seals (codes S1 and S2), assemble-to primary elements (codes S3 and S4), surface finish certification (code Q16), and remote seal system report (code QZ).

Code	Description	
DW	NSF drinking water approval	★

Shipboard approvals

Shipboard approvals are not available with wireless output (code X).

Code	Description	
SBS	American Bureau of Shipping	★
SBV	Bureau Veritas (BV)	★
SDN	Det Norske Veritas	★
SLL	Lloyds Register (LR)	★

SST tagging

Code	Description	
Y2	316SST Nameplate, top tag, wire-on tag, and fasteners	

Bolting material

Code	Description	
L4	Austenitic 316 SST bolts	★
L5	ASTM A 193, grade B7M bolts	★
L6	Alloy K-500 bolts	★
L8	ASTM A 193 Class 2, Grade B8M bolts	★

Display and interface options

Code	Description	
M4[1]	LCD display with LOI	★