

Rosemount 2051T In-line Pressure Transmitter



Rosemount 2051T In-line
Wireless Pressure Transmitter

Configuration	Transmitter output code
4–20 mA HART Rosemount 2051 Rosemount 2051 with Selectable HART ⁽¹⁾	A
Lower Power Rosemount 2051 Rosemount 2051 with Selectable HART ⁽¹⁾	M
FOUNDATION Fieldbus	F
PROFIBUS	W
Wireless	X

1. The 4–20mA with Selectable HART device can be ordered with transmitter output option code A plus any of the following options codes: M4, QT, DZ, CR, CS, CT, HR5, HR7.

Additional information

Specifications: [page 47](#)

Certifications: [page 59](#)

Dimensional Drawings: [page 69](#)

Specification and selection of product materials, options, or components must be made by the purchaser of the equipment. See [page 56](#) for more information on material selection.

Table 2. Rosemount 2051T In-line Pressure Transmitter Ordering Information

★ The Standard offering represents the most common options. The starred options (★) should be selected for best delivery. The Expanded offering is subject to additional delivery lead time.

Model	Transmitter type		
2051T	In-line Pressure Transmitter		★
Pressure type			
G	Gage		★
A ⁽¹⁾	Absolute		★
Pressure range			
	Rosemount 2051TG	Rosemount 2051TA	★
1	-14.7 to 30 psi (-1,0 to 2,1 bar)	0 to 30 psi (0 to 2,1 bar)	★
2	-14.7 to 150 psi (-1,0 to 10,3 bar)	0 to 150 psi (0 to 10,3 bar)	★
3	-14.7 to 800 psi (-1,0 to 55 bar)	0 to 800 psi (0 to 55 bar)	★
4	-14.7 to 4000 psi (-1,0 to 276 bar)	0 to 4000 psi (0 to 276 bar)	★
5	-14.7 to 10000 psi (-1,0 to 689 bar)	0 to 10000 psi (0 to 689 bar)	★

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Transmitter output		
A ⁽²⁾	4–20 mA with Digital Signal Based on HART Protocol	★
F	FOUNDATION Fieldbus Protocol	★
W	PROFIBUS PA Protocol	★
X	Wireless	★
M	Low-Power, 1–5 Vdc with Digital Signal Based on HART Protocol	
Process connection style		
2B	1/2–14 NPT female	★
2C ⁽³⁾	G1/2 A DIN 16288 male	★
2F ⁽⁴⁾	Coned and threaded, compatible with autoclave type F-250-C (Range 5 only)	
Isolating diaphragm		Process connection wetted parts material
2 ⁽⁵⁾	316L SST	316L SST
3 ⁽⁵⁾	Alloy C-276	Alloy C-276
3 ⁽⁵⁾	Alloy C-276	Alloy C-276
Sensor fill fluid		
1	Silicone	★
2 ⁽⁴⁾	Inert	★
Housing material		Conduit entry size
A	Aluminum	1/2–14 NPT
B	Aluminum	M20 x 1.5
J	SST	1/2–14 NPT
K ⁽⁶⁾	SST	M20 x 1.5
P ⁽⁷⁾	Engineered polymer	No conduit entries
D	Aluminum	G1/2
M ⁽⁶⁾	SST	G1/2

Wireless options (requires wireless output code X and engineered polymer housing code P)

Wireless transmit rate, operating frequency and protocol		
WA3	User configurable transmit rate, 2.4 GHz WirelessHART	★
Antenna and SmartPower		
WP5	Internal antenna, compatible with green power module (I.S. power module sold separately)	★

Options (include with selected model number)

Extended product warranty		
WR3	3-year limited warranty	★

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WR5	5-year limited warranty	★
HART revision configuration⁽¹⁸⁾		
HR5 ⁽⁸⁾	Configured for HART Revision 5	★
HR7 ⁽⁹⁾	Configured for HART Revision 7	★
PlantWeb control functionality		
A01	FOUNDATION Fieldbus advanced control function block suite	★
Manifold assemblies⁽¹⁰⁾		
S5	Assemble to Rosemount 306 Integral Manifold	★
Seal assemblies⁽¹⁰⁾		
S1 ⁽¹⁰⁾	Assemble to one Rosemount 1199 Diaphragm Seal	★
Mounting bracket		
B4	Bracket for 2-in. pipe or panel mounting, All SST	★
Product certifications		
E1 ⁽⁶⁾	ATEX Flameproof	★
E2 ⁽⁶⁾	INMETRO Flameproof	★
E3 ⁽⁶⁾	China Flameproof	★
E4 ⁽⁶⁾	TIIS Flameproof	★
E5	USA Explosion-proof, Dust Ignition-proof	★
E6	Canada Explosion-proof, Dust Ignition-proof, Division 2	★
E7 ⁽⁶⁾	IECEX Flameproof	★
EW ⁽⁶⁾	India (CCOE) Flameproof Approval	★
I1 ⁽⁶⁾	ATEX Intrinsic Safety	★
I2 ⁽⁶⁾	INMETRO Intrinsically Safe	★
I3 ⁽⁶⁾	China Intrinsic Safety	★
I4 ⁽⁶⁾⁽⁷⁾	TIIS Intrinsic Safety	★
I5	USA Intrinsically Safe, Division 2	★
I6	Canada Intrinsically Safe	★
I7 ⁽⁶⁾	IECEX Intrinsic Safety	★
IA ⁽¹³⁾	ATEX FISCO Intrinsic Safety	★
IE ⁽¹¹⁾	USA FISCO Intrinsically Safe	★
IF ⁽¹¹⁾	Canada FISCO Intrinsically Safe	★
IG ⁽¹¹⁾	IECEX FISCO Intrinsically Safe	★
IW ⁽⁶⁾	India (CCOE) Intrinsic Safety Approval	★
K1 ⁽⁶⁾	ATEX Flameproof, Intrinsic Safety, Type n, Dust	★

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K5	USA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2	★
K6	Canada Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2	★
K7 ⁽⁶⁾	IECEx Flameproof, Intrinsic Safety, Type n, Dust	★
KA ⁽⁶⁾	ATEX and Canada Flameproof, Intrinsically Safe, Division 2	★
KB	USA and Canada Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2	★
KC ⁽⁶⁾	USA and ATEX Explosion-proof, Intrinsically Safe, Division 2	★
KD ⁽⁶⁾	USA, Canada, and ATEX Explosion-proof, Intrinsically Safe	★
N1 ⁽⁶⁾	ATEX Type n	★
N7 ⁽⁶⁾	IECEx Type n	★
ND ⁽⁶⁾	ATEX Dust	★
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	★
Drinking water approval⁽¹²⁾		
DW	NSF drinking water approval	★
Shipboard approvals⁽⁴⁾		
SBS	American Bureau of Shipping (ABS) type approval	★
SBV	Bureau Veritas (BV) type approval	★
SDN	Det Norske Veritas (DNV) type approval	★
SLL	Lloyds Register (LR) type approval	★
Display and interface options		
M4 ⁽¹³⁾	LCD display with local operator interface	★
M5	LCD display	★
Hardware adjustments		
D4 ⁽¹⁴⁾	Zero and span configuration buttons	★
DZ ⁽¹⁵⁾	Digital zero trim	★
Wireless SST sensor module⁽⁷⁾		
WSM	Wireless SST sensor module	★
Conduit plug⁽⁴⁾⁽¹⁶⁾		
DO	316 SST conduit plug	★
Ground screw⁽⁴⁾⁽¹⁷⁾		
V5	External ground screw assembly	★
Performance⁽¹⁸⁾		
P8	High performance option	★

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Terminal blocks⁽⁴⁾⁽¹⁹⁾		
T1	Transient protection terminal block	★
Software configuration⁽¹⁵⁾		
C1	Custom Software Configuration (Completed Rosemount 2051 Configuration Data Sheet or Rosemount 3051 Configuration Data Sheet for Wireless required with order)	★
Alarm limits⁽¹⁴⁾		
C4 ⁽²⁰⁾	Analog output levels compliant with NAMUR recommendation NE 43, alarm high	★
CN ⁽²¹⁾	Analog output levels compliant with NAMUR recommendation NE 43, alarm low	★
CR	Custom alarm and saturation signal levels, high alarm (requires C1 and Configuration Data Sheet)	★
CS	Custom alarm and saturation signal levels, low alarm (requires C1 and Configuration Data Sheet)	★
CT	Low alarm (standard Rosemount alarm and saturation levels)	★
Pressure testing		
P1	Hydrostatic testing with certificate	
Cleaning process area⁽²²⁾		
P2	Cleaning for special service	
P3	Cleaning for <1 PPM Chlorine/Fluorine	
Calibration certification		
Q4	Calibration certificate	★
QG	Calibration certificate and GOST verification certificate	★
QP	Calibration certificate and tamper evident seal	★
Material traceability certification		
Q8	Material traceability certification per EN 10204 3.1	★
Quality certification for safety⁽²¹⁾		
QS	Prior-use certificate of FMEDA data	★
QT	Safety certified to IEC 61508 with certificate of FMEDA	★
Surface finish		
Q16	Surface finish certification for sanitary remote seals	★
Toolkit total system performance reports		
QZ	Remote seal system performance calculation report	★
Conduit electrical connector⁽⁴⁾		
GE	M12, 4-pin, male connector (eurofast)	★
GM	A size mini, 4-pin, male connector (minifast)	★

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NACE certificate⁽²³⁾		
Q15	Certificate of compliance to NACE MR0175/ISO 15156 for wetted materials	★
Q25	Certificate of compliance to NACE MR0103 for wetted materials	★
Typical model number:	2051T G 3 A 2B 2 1 A B4 M5	

1. Wireless output (code X) only available in absolute measurement type (code A) in range 1–5 with 1/2–14 NPT process connection (code 2B), and housing (code P).
2. 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.
3. Wireless output (code X) only available in G¹/₂ A DIN 16288 Male process connection (code 1), and housing (code P).
4. Not available with output code X.
5. 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.
6. Not available with low power output code M.
7. Only available with output code X.
8. Configures the HART output to HART Revision 5. The device can be field configured to HART Revision 7 if needed.
9. Configures the HART output to HART Revision 7. The device can be field configured to HART Revision 5 if needed.
10. “Assemble-to” items are specified separately and require a completed model number.
11. Only valid with FOUNDATION Fieldbus output code F.
12. Not available with coned and threaded connection (2F code), assemble-to manifold (S5 code), assemble-to seal (S1 code), surface finish certification (Q16 code), remote seal system report (QZ code).
13. Not available with FOUNDATION Fieldbus output code F or wireless output code X.
14. Only Available with HART (output codes A and M).
15. Only available with HART 4–20 mA output (code A) and wireless output (code X).
16. Transmitter is shipped with 316 SST conduit plug (uninstalled) in place of standard carbon steel conduit plug.
17. The V5 option is not needed with the T1 option; external ground screw assembly is included with the T1 option.
18. Available with 4–20 mA HART output code A, wireless output code X, FOUNDATION Fieldbus output code F, Rosemount 2051C Ranges 2–5 or Rosemount 2051T Ranges 1–4, SST and Alloy C 276 diaphragms and silicone fill fluid. High performance option includes 0.05% reference accuracy, and five year stability. See [Performance specifications](#) for details.
19. The T1 option is not needed with FISCO Product Certifications; transient protection is included in the FISCO product certification codes IA and IE.
20. NAMUR-Compliant operation is pre-set at the factory and cannot be changed to standard operation in the field.
21. Only available with HART 4–20 mA output (code A).
22. Not valid with alternate process connection S5.
23. NACE Compliant wetted materials are identified by [Footnote 5](#).