

Rosemount™ 3051 Pressure Transmitter



WirelessHART

With the Rosemount 3051 Pressure Transmitter, you'll gain more control over your plant. You'll be able to reduce product variation and complexity as well as your total cost of ownership by leveraging one device across a number of pressure, level and flow applications. You'll have access to information you can use to diagnose, correct and even prevent issues. And with unparalleled reliability and experience, the Rosemount 3051 is the industry standard that will help you perform at higher levels of efficiency and safety so you can remain globally competitive.

Setting the standard for pressure measurement



Proven best-in-class performance, reliability and safety

- Over seven million installed
- Reference accuracy 0.04 percent of span
- Installed total performance of 0.14 percent of span
- 10-year stability of 0.2 percent of URL
- SIL2/3 certified (IEC 61508)

Maximize installation and application flexibility with the coplanar platform

- Improve reliability and performance with integrated DP Flowmeters, DP Level solutions and integral manifolds
- Easy installation with all solutions fully assembled, leak-tested and calibrated
- Meet your application needs with an unsurpassed offering

Advanced functionality

Power advisory diagnostics

- Detect on-scale failures caused by electrical loop issues before they impact your process operation
- This capability is safety certified for your most critical applications

Local operator interface (LOI)

- Straightforward menus and built-in configuration buttons allow you commission the device in less than a minute
- Configure in hazardous-area locations without removing the transmitter cover using external buttons



Contents

Rosemount 3051C Coplanar™ Pressure Transmitter . . . 4	Rosemount 3051L Level Transmitter 37
Rosemount 3051T In-Line Pressure Transmitter 11	Specifications 44
Rosemount 3051CF Flowmeter selection guide 17	Product Certifications 55
Rosemount 3051CFA Annubar Flowmeter 18	Pipe I.D. range codes 63
Rosemount 3051CFC Compact Flowmeter 26	Dimensional drawings 65
Rosemount 3051CFP Integral Orifice Flowmeter 31	Options 78



Industry leading capabilities extended to IEC 62591 (WirelessHART®)

- 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



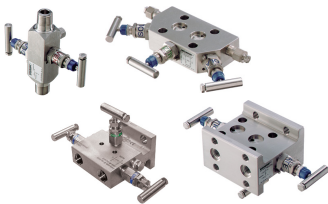
Innovative, integrated DP Flowmeters

- Fully assembled, configured, 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 1.65 percent volumetric flow accuracy at 8:1 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
- Operate at higher temperature and in vacuum applications
- Optimize level measurement with cost efficient Rosemount 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

Rosemount 3051C Coplanar™ Pressure Transmitter



Rosemount 3051C Coplanar Pressure Transmitters are the industry standard for differential, gage, and absolute pressure measurement. The coplanar platform enables seamless integration with manifolds, flow and level solutions. Capabilities include:

- Power advisory can proactively detect degraded electrical loop integrity issues (option code DA0)
- LOI with straightforward menus and built-in configuration buttons (option code M4)
- Safety Certification (option code QT)

Additional information:

Specifications: [page 44](#)

Certifications: [page 55](#)

Dimensional drawings: [page 65](#)

See [Specifications](#) and options 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 [page 53](#) for more information on Material Selection.

Table 1. Rosemount 3051C Coplanar Pressure Transmitters Ordering Information

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.

Model ⁽¹⁾	Transmitter type			
3051C	Coplanar pressure transmitter			
Measurement type				
D	Differential			★
G	Gage			★
A ⁽²⁾	Absolute			
Pressure range				
	Differential (3051CD)	Gage (3051CG)	Absolute (3051CA)	
1	-25 to 25 inH ₂ O (-62,16 to 62,16 mbar)	-25 to 25 inH ₂ O (-62,16 to 62,16 mbar)	0 to 30 psia (0 to 2,06 bar)	★
2	-250 to 250 inH ₂ O (-621,60 to 621,60 mbar)	-250 to 250 inH ₂ O (-621,60 to 621,60 mbar)	0 to 150 psia (0 to 10,34 bar)	★
3	-1000 to 1000 inH ₂ O (-2,48 to 2,48 bar)	-393 to 1000 inH ₂ O (-0,97 to 2,48 bar)	0 to 800 psia (0 to 55,15 bar)	★
4	-300 to 300 psi (-20,68 to 20,68 bar)	-14.2 to 300 psi (-0,97 to 20,68 bar)	0 to 4000 psia (0 to 275,79 bar)	★
5	-2000 to 2000 psi (-137,89 to 137,89 bar)	-14.2 to 2000 psi (-0,97 to 137,89 bar)	N/A	★
0 ⁽³⁾	-3 to 3 inH ₂ O (-7,46 to 7,46 mbar)	N/A	N/A	
Transmitter output				
A ⁽⁴⁾	4–20 mA with Digital Signal Based on HART® Protocol			★
F	FOUNDATION™ Fieldbus Protocol			★
W ⁽⁵⁾	PROFIBUS® PA Protocol			★
X ⁽⁶⁾	Wireless (requires wireless options and engineered polymer housing)			★
M ⁽⁷⁾	Low-Power, 1–5 Vdc with Digital Signal Based on HART Protocol			

Table 1. Rosemount 3051C Coplanar Pressure Transmitters Ordering Information

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.

Materials of construction				
	Process flange type	Flange material	Drain/vent	
2	Coplanar	SST	SST	★
3 ⁽⁸⁾	Coplanar	Cast C-276	Alloy C-276	★
4	Coplanar	Alloy 400	Alloy 400/K-500	★
5	Coplanar	Plated CS	SST	★
7 ⁽⁸⁾	Coplanar	SST	Alloy C-276	★
8 ⁽⁸⁾	Coplanar	Plated CS	Alloy C-276	★
0	Alternate process connection			★
Isolating diaphragm				
2 ⁽⁸⁾	316L SST			★
3 ⁽⁸⁾	Alloy C-276			★
4 ⁽⁹⁾	Alloy 400			
5 ⁽⁹⁾	Tantalum (available on Rosemount 3051CD and CG, ranges 2–5 only; not available on Rosemount 3051CA)			
6 ⁽⁹⁾	Gold-plated alloy 400 (use in combination with O-ring option code B)			
7 ⁽⁹⁾	Gold-plated 316 SST			
O-ring				
A	Glass-filled PTFE			★
B	Graphite-filled PTFE			★
Sensor fill fluid				
1	Silicone			★
2 ⁽⁹⁾	Inert (differential and gage only)			★
Housing material		Conduit entry size		
A	Aluminum	1/2–14 NPT		★
B	Aluminum	M20 × 1.5		★
J	SST	1/2–14 NPT		★
K	SST	M20 × 1.5		★
P ⁽¹⁰⁾	Engineered polymer	No conduit entries		★
D ⁽¹¹⁾	Aluminum	G1/2		
M ⁽¹¹⁾	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, 2.4GHz WirelessHART		★
Antenna and SmartPower™			
WP5	Internal antenna, compatible with Green Power Module (I.S. Power Module sold separately)		★

Table 1. Rosemount 3051C Coplanar Pressure Transmitters Ordering Information

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.

Options (include with selected model number)

Extended product warranty		
WR3	3-year limited warranty	★
WR5	5-year limited warranty	★
PlantWeb™ control functionality⁽¹²⁾		
A01	FOUNDATION Fieldbus control function block suite	★
PlantWeb diagnostic functionality		
DA0 ⁽¹³⁾	Power Advisory HART Diagnostic	★
D01 ⁽¹²⁾	FOUNDATION Fieldbus Diagnostics Suite	★
Alternate flange⁽¹⁴⁾		
H2	Traditional flange, 316 SST, SST drain/vent	★
H3 ⁽⁸⁾	Traditional flange, alloy C, alloy C-276 drain/vent	★
H4	Traditional flange, cast alloy 400, alloy 400/K-500 drain/vent	★
H7 ⁽⁸⁾	Traditional flange, 316 SST, alloy C-276 drain/vent	★
HJ	DIN-compliant traditional flange, SST, 7/16-in. adapter/manifold bolting	★
FA	Level flange, SST, 2-in., ANSI class 150, vertical mount 316 SST drain/vent	★
FB	Level flange, SST, 2-in., ANSI Class 300, vertical mount 316 SST drain/vent	★
FC	Level flange, SST, 3-in., ANSI Class 150, vertical mount 316 SST drain/vent	★
FD	Level flange, SST, 3-in., ANSI Class 300, vertical mount 316 SST drain/vent	★
FP	DIN level flange, SST, DN 50, PN 40, vertical mount 316 SST drain/vent	★
FQ	DIN level flange, SST, DN 80, PN 40, vertical mount 316 SST drain/vent	★
HK ⁽¹⁵⁾	DIN compliant traditional flange, SST, 10 mm adapter/manifold bolting 316 SST	
HL	DIN compliant traditional flange, SST, 12 mm adapter/manifold bolting 316 SST	
Manifold assembly⁽¹⁶⁾		
S5	Assemble to Rosemount 305 Integral Manifold	★
S6	Assemble to Rosemount 304 Manifold or Connection System	★
Integral mount primary element⁽¹⁵⁾⁽¹⁶⁾		
S3	Assemble to Rosemount 405 Compact Orifice Plate	★
S4 ⁽¹⁷⁾	Assemble to Rosemount Annubar™ or Rosemount 1195 Integral Orifice	★
Seal assemblies⁽¹⁶⁾		
S1 ⁽¹⁸⁾	Assemble to one Rosemount 1199 seal	★
S2 ⁽¹⁹⁾	Assemble to two Rosemount 1199 seals	★
Mounting bracket⁽²⁰⁾		
B4	Coplanar flange bracket, all SST, 2-in. pipe and panel	★
B1	Traditional flange bracket, CS, 2-in. pipe	★
B2	Traditional flange bracket, CS, panel	★
B3	Traditional flange flat bracket, CS, 2-in. pipe	★
B7	Traditional flange bracket, B1 with SST bolts	★
B8	Traditional flange bracket, B2 with SST bolts	★
B9	Traditional flange bracket, B3 with SST bolts	★

Table 1. Rosemount 3051C Coplanar Pressure Transmitters Ordering Information

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.

BA	Traditional flange bracket, B1, all SST	★
BC	Traditional flange bracket, B3, all SST	★
Product certifications		
E8	ATEX Flameproof and Dust Certification	★
I1 ⁽²¹⁾	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 ⁽²²⁾	TIIS Flame-proof	★
E5	FM Explosion-proof, Dust Ignition-Proof	★
I5 ⁽²³⁾	FM Intrinsically Safe, Nonincendive	★
IE	FM FISCO Intrinsically Safe; for FOUNDATION Fieldbus or PROFIBUS PA protocol only	★
K5	FM Explosion-proof, Dust Ignition-Proof, Intrinsically Safe, and Division 2	★
C6	CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, and Division 2	★
I6 ⁽¹⁰⁾	CSA Intrinsic Safety	★
K6	CSA 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)	★
E2	INMETRO Flameproof	★
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	FM and CSA Explosion-proof, Dust Ignition Proof, Intrinsically Safe, and Division 2 (combination of K5 and C6)	★
KD	FM, CSA, and ATEX Explosion-proof, Intrinsically Safe (combination of K5, C6, I1, and E8)	★
Drinking water approval⁽²⁴⁾		
DW	NSF drinking water approval	★
Shipboard approvals⁽⁹⁾		
SBS	American Bureau of Shipping	★
SBV ⁽²⁵⁾	Bureau Veritas (BV)	★
SDN	Det Norske Veritas	★
SLL ⁽²⁵⁾	Lloyds Register (LR)	★
Custody transfer⁽¹³⁾		
C5	Measurement Canada Accuracy Approval (limited availability depending on transmitter type and range; contact an Emerson representative)	★

Table 1. Rosemount 3051C Coplanar Pressure Transmitters Ordering Information

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.

Bolting material		
L4	Austenitic 316 SST bolts	★
L5	ASTM A 193, grade B7M bolts	★
L6	Alloy K-500 bolts	★
Display and interface options		
M4 ⁽²⁶⁾	LCD display with LOI	★
M5	LCD display	★
Calibration certificate		
Q4	Calibration Certificate	★
QG ⁽²⁷⁾	Calibration Certificate and GOST Verification Certificate	★
QP	Calibration certification and tamper evident seal	★
Material traceability certification		
Q8	Material Traceability Certification per EN 10204 3.1	★
Quality certification for safety⁽¹³⁾		
QS	Prior-use certificate of FMEDA data	★
QT	Safety certified to IEC 61508 with certificate of FMEDA	★
Configuration buttons		
D4 ⁽¹³⁾	Analog zero and span	★
DZ ⁽²⁸⁾	Digital zero trim	★
Transient protection⁽⁹⁾⁽²⁹⁾		
T1	Transient protection terminal block	★
Software configuration⁽²⁸⁾		
C1	Custom Software Configuration (For wired, see the Rosemount 3051 Configuration Data Sheet . For wireless, see the Rosemount 3051 Wireless Configuration Data Sheet .)	★
Low power output		
C2	0.8–3.2 Vdc output with Digital Signal Based on HART Protocol (available with output code M only)	★
Gage pressure calibration		
C3	Gage calibration (Rosemount 3051ca4 only)	★
Alarm levels⁽¹³⁾		
C4	Analog output levels compliant with NAMUR recommendation NE 43, alarm high	★
CN	Analog output levels compliant with NAMUR recommendation NE 43, alarm low	★
CR	Custom alarm and saturation signal levels, high alarm (requires C1 and Rosemount 3051 Configuration Data Sheet)	★
CS	Custom alarm and saturation signal levels, low alarm (requires C1 and Rosemount 3051 Configuration Data Sheet)	★
CT	Rosemount standard low alarm	★
Pressure testing		
P1	Hydrostatic testing with certificate	

Table 1. Rosemount 3051C Coplanar Pressure Transmitters Ordering Information

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.

Cleaning process area		
P2	Cleaning for special service	
P3	Cleaning for <1 PPM chlorine/fluorine	
Flange adapters⁽³⁰⁾		
DF	1/2–14 NPT flange adapter(s)	★
Vent/drain valves		
D7	Coplanar flange without drain/vent ports	
Conduit plug⁽⁹⁾⁽³¹⁾		
DO	316 SST conduit plug	★
RC 1/4 RC 1/2 process connection⁽³²⁾		
D9	RC 1/4 flange with RC 1/2 flange adapter - SST	
Max static line pressure		
P9	4500 psig (310,26 bar) static pressure limit (Rosemount 3051CD Ranges 2–5 only)	★
Ground screw⁽⁹⁾⁽³³⁾		
V5	External ground screw assembly	★
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⁽⁹⁾		
GE	M12, 4-pin, male connector (eurofast®)	★
GM	A size Mini, 4-pin, male connector (minifast®)	★
NACE certificate⁽³⁴⁾		
Q15	Certificate of Compliance to NACE MR0175/ISO 15156 for wetted materials	★
Q25	Certificate of Compliance to NACE MR0103 for wetted materials	★
Cold temperature		
BR5	–58 °F (–50 °C) cold temperature	★
BR6	–76 °F (–60 °C) cold temperature	★
HART Revision configuration (requires HART protocol output code A)⁽⁴⁾		
HR5	Configured for HART Revision 5	★
HR7	Configured for HART Revision 7	★
Typical model number: 3051CD 2 A 2 2 A 1 A B4		

- Select configuration buttons (option code D4 or DZ) or LOI (option code M4) if local configuration buttons are required.
- If ordered with Wireless output code X, only range 1–4, 316L SST diaphragm material (code 2), silicone fill fluid (code 1) and wireless housing (code P) are available.
- Rosemount 3051CD0 is only available with output code A and X. For output code A, only process flange code 0 (Alternate flange H2, H7, HJ or HK), isolating diaphragm code 2, O ring code A and bolting option L4 are available. For output code X, only process flange code 0 (Alternate flange H2), isolating diaphragm code 2, O ring code A and bolting option L4 are available.

4. Option HR5 configures the HART output to HART Revision 5. Option HR7 configures the HART output to HART Revision 7. The device can be field configured to HART Revision 5 or 7 if desired. HART Revision 5 is the default HART output.
5. For local addressing and configuration, M4 (LOI) is required.
6. Available approvals are FM Intrinsically Safe, (option code I5), CSA Intrinsically Safe (option code I6), ATEX Intrinsic Safety (option code I1), IECEx Intrinsic Safety (option code I7) and EAC Intrinsic Safety (option code IM).
7. Only available with C6, E2, E5, I5, K5, KB and E8 product certifications. Not available with GE, GM, SBS, DA0, M4, D4, DZ, QT, HR5, HR7, CR, CS, CT.
8. 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.
9. Not available with wireless output (code X).
10. Only available with wireless output (code X).
11. Not available with Product certifications options E8, K8, E5, K5, C6, K6, E7, K7, E2, K2, E3, KB, KD.
12. Only valid with FOUNDATION Fieldbus output code F.
13. Only available with HART 4–20 mA output (code A).
14. Requires 0 code in materials of construction for alternate process connection.
15. Not valid with option code P9 for 4500 psi Static Pressure.
16. “Assemble-to” items are specified separately and require a completed model number.
17. Process flange limited to coplanar (option codes 2, 3, 5, 7, 8) or traditional (option codes H2, H3, H7).
18. Not valid with option code D9 for RC¹/2 adapters.
19. Not valid for option codes DF and D9 for adapters.
20. Panel mounting bolts are not supplied.
21. Dust approval not applicable to output code X. See “[IEC 62591 \(WirelessHART Protocol\)](#)” on page 61 for wireless approvals.
22. Only available with output codes A - 4–20mA HART, F - FOUNDATION Fieldbus, and W - PROFIBUS PA. Also only available with G¹/2 housing thread types.
23. Nonincendive certification not provided with Wireless output option code (X).
24. Not available with Alloy C-276 isolator (code 3), tantalum isolator (code 5), all cast C-276 flanges, all plated 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).
25. Only available with product certifications E7, E8, I1, I7, IA, K7, K8, KD, N1, N7
26. Not available with FOUNDATION Fieldbus (output code F), wireless (output code X), or low power (output code M).
27. Contact an Emerson representative for availability.
28. Only available with HART 4–20 mA Output (output code A) and Wireless Output (output code X)
29. The T1 option is not needed with FISCO Product Certifications; transient protection is included in the FISCO product certification codes IA, IB, and IE.
30. Not valid with Alternate Process Connection options S3, S4, S5, and S6.
31. Transmitter is shipped with a 316 SST conduit plug (uninstalled) in place of standard carbon steel conduit plug.
32. Not available with alternate process connection; DIN flanges and level flanges.
33. The V5 option is not needed with the T1 option; external ground screw assembly is included with the T1 option.
34. NACE compliant wetted materials are identified by [Footnote 8](#).

Rosemount 3051T In-Line Pressure Transmitter



Rosemount 3051T In-Line Pressure Transmitters are the industry standard for gage and absolute pressure measurement. The in-line, compact design allows the transmitter to be connected directly to a process for quick, easy and cost effective installation. Capabilities include:

- Power Advisory can proactively detect degraded electrical loop integrity issues (option code DA0)
- LOI with straightforward menus and built-in configuration buttons (option code M4)
- Safety Certification (option code QT)

Additional information:

Specifications: [page 44](#)

Certifications: [page 55](#)

Dimensional drawings: [page 65](#)

See “Specifications” on [page 44](#) and options 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 [page 53](#) for more information on material selection.

Table 2. Rosemount 3051T In-Line Pressure Transmitter Ordering Information

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.

Model ⁽¹⁾	Transmitter type		
3051T	In-line pressure transmitter		
Pressure type			
G	Gage		★
A ⁽²⁾	Absolute		★
Pressure range			
	Gage (3051TG)⁽³⁾	Absolute (3051TA)	
1	-14.7 to 30 psi (-1,01 to 2,06 bar)	0 to 30 psia (0 to 2,06 bar)	★
2	-14.7 to 150 psi (-1,01 to 10,34 bar)	0 to 150 psia (0 to 10,34 bar)	★
3	-14.7 to 800 psi (-1,01 to 55,15 bar)	0 to 800 psia (0 to 55,15 bar)	★
4	-14.7 to 4000 psi (-1,01 to 275,79 bar)	0 to 4000 psia (0 to 275,79 bar)	★
5	-14.7 to 10000 psi (-1,01 to 689,47 bar)	0 to 10000 psia (0 to 689,47 bar)	★
6 ⁽⁴⁾	-14.7 to 20000 psi (-1,01 to 1378,95 bar)	0 to 20000 psia (0 to 1378,95 bar)	
Transmitter output			
A ⁽⁵⁾	4–20 mA with Digital Signal Based on HART Protocol		★
F	FOUNDATION Fieldbus Protocol		★
W ⁽⁶⁾	PROFIBUS PA Protocol		★
X ⁽⁷⁾	Wireless (requires wireless options and engineered polymer housing)		★
M ⁽⁸⁾	Low-power 1–5 Vdc with Digital Signal Based on HART Protocol		
Process connection style			
2B	1/2–14 NPT female (range 1–5 only)		★
2C ⁽⁹⁾	G1/2 A DIN 16288 male (range 1–4 only)		★

Table 2. Rosemount 3051T In-Line Pressure Transmitter Ordering Information

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.

2F ⁽¹⁰⁾	Coned and threaded, compatible with autoclave Type F-250-C (range 5–6 only)		
61 ⁽¹¹⁾	Non-threaded Instrument flange (range 1–4 only)		
Isolating diaphragm⁽¹²⁾		Process connection wetted parts material	
2	316L SST	316L SST	★
3	Alloy C-276	Alloy C-276	★
Sensor fill fluid			
1	Silicone		★
2 ⁽¹¹⁾	Inert		★
Housing material		Conduit entry size	
A	Aluminum	1/2–14 NPT	★
B	Aluminum	M20 × 1.5	★
J	SST	1/2–14 NPT	★
K	SST	M20 × 1.5	★
P ⁽¹³⁾	Engineered polymer	No conduit entries	★
D ⁽¹⁴⁾	Aluminum	G1/2	
M ⁽¹⁴⁾	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, 2.4GHz 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	★
WR5	5-year limited warranty	★
PlantWeb control functionality⁽¹⁵⁾		
A01	FOUNDATION Fieldbus control function block suite	★
PlantWeb diagnostic functionality		
DA0 ⁽²⁴⁾	Power Advisory HART diagnostic	★
D01 ⁽¹⁵⁾	FOUNDATION Fieldbus diagnostics suite	★
Integral assembly⁽¹⁶⁾		
S5	Assemble to Rosemount 306 Integral Manifold	★

Table 2. Rosemount 3051T In-Line Pressure Transmitter Ordering Information

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.

Diaphragm seal assemblies⁽¹⁶⁾		
S1	Assemble to one Rosemount 1199 seal	★
Mounting bracket⁽¹⁷⁾		
B4	Bracket for 2-in. pipe or panel mounting, all SST	★
Product certifications		
E8	ATEX Flameproof and Dust Certification	★
I1 ⁽¹⁸⁾	ATEX Intrinsic Safety and Dust	★
IA	ATEX Intrinsic Safety for FISCO; for FOUNDATION Fieldbus or PROFIBUS PA protocols only	★
N1	ATEX Type n Certification and Dust	★
K8	ATEX Flame-proof, Intrinsic Safety, Type n, Dust (combination of E8, I1 and N1)	★
E4 ⁽¹⁹⁾	TIIS Flameproof	★
E5	FM Explosion-proof, Dust Ignition-proof	★
I5 ⁽²⁰⁾	FM Intrinsically Safe, Nonincendive	★
IE	FM FISCO Intrinsically Safe; for FOUNDATION Fieldbus or PROFIBUS PA protocols only	★
K5	FM Explosion-proof, Dust Ignition-proof, Intrinsically Safe, and Division 2	★
C6	CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, and Division 2	★
I6 ⁽¹³⁾	CSA Intrinsic Safety	★
K6	CSA 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 Flameproof, Dust Ignition-proof, Intrinsic Safety, and Type n (combination of I7, N7, and E7)	★
E2	INMETRO Flameproof	★
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	FM and CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, and Division 2 (combination of K5 and C6)	★
KD	FM, CSA, and ATEX Explosion-proof, Intrinsically Safe (combination of K5, C6, I1, and E8)	★
Drinking water approval⁽²¹⁾		
DW	NSF drinking water approval	★

Table 2. Rosemount 3051T In-Line Pressure Transmitter Ordering Information

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.

Shipboard approvals⁽¹¹⁾		
SBS	American Bureau of Shipping	★
SBV ⁽²²⁾	Bureau Veritas (BV)	★
SDN	Det Norske Veritas	★
SLL ⁽²²⁾	Lloyds Register (LR)	★
Custody transfer		
C5	Measurement Canada Accuracy Approval (limited availability depending on transmitter type and range. Contact an Emerson representative.)	★
Calibration certification		
Q4	Calibration Certificate	★
QG ⁽²³⁾	Calibration Certificate and GOST Verification Certificate	★
QP	Calibration Certification and tamper evident seal	★
Material traceability certification		
Q8	Material Traceability Certification per EN 10204 3.1	★
Quality certification for safety⁽²⁴⁾		
QS	Prior-use certificate of FMEDA Data	★
QT	Safety certified to IEC 61508 with certificate of FMEDA	★
Configuration buttons		
D4 ⁽²⁴⁾	Analog zero and span	★
DZ ⁽²⁵⁾	Digital zero trim	★
Display and interface options		
M4 ⁽²⁶⁾	LCD display with LOI	★
M5	LCD display	★
Wireless SST sensor module⁽¹³⁾		
WSM	Wireless SST sensor module	★
Conduit plug⁽¹¹⁾⁽²⁷⁾		
DO	316 SST conduit plug	★
Transient terminal block⁽¹¹⁾⁽²⁸⁾		
T1	Transient protection terminal block	★
Software configuration⁽²⁵⁾		
C1	Custom Software Configuration (For wired, see the Rosemount 3051 Configuration Data Sheet . For wireless, see the Rosemount 3051 Wireless Configuration Data Sheet .)	★
Low power output		
C2	0.8–3.2 Vdc output with digital signal based on HART Protocol (available with output code M only)	

Table 2. Rosemount 3051T In-Line Pressure Transmitter Ordering Information

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.

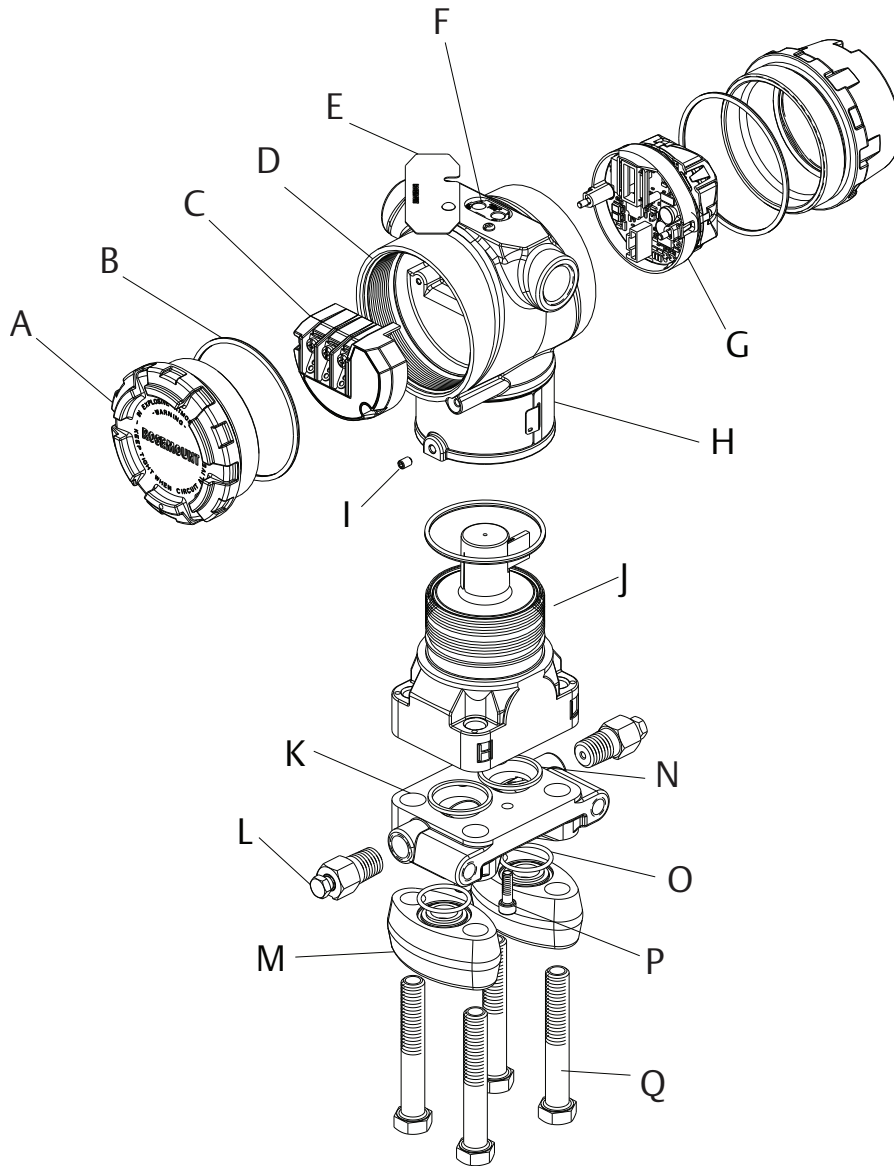
Alarm levels⁽²⁴⁾		
C4	Analog output levels compliant with NAMUR recommendation NE 43, alarm high	★
CN	Analog output levels compliant with NAMUR recommendation NE 43, low alarm	★
CR	Custom alarm and saturation signal levels, high alarm (requires C1 and Rosemount 3051 Configuration Data Sheet)	★
CS	Custom alarm and saturation signal levels, low alarm (requires C1 and Rosemount 3051 Configuration Data Sheet)	★
CT	Rosemount standard low alarm	★
Pressure testing		
P1	Hydrostatic testing with certificate	
Cleaning process area⁽²⁹⁾		
P2	Cleaning for special service	
P3	Cleaning for <1 PPM chlorine/fluorine	
Ground screw⁽¹¹⁾⁽³⁰⁾		
V5	External ground screw assembly	★
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⁽¹¹⁾		
GE	M12, 4-pin, male connector (eurofast)	★
GM	A size mini, 4-pin, male connector (minifast)	★
NACE certificate⁽³¹⁾		
Q15	Certificate of Compliance to NACE MR0175/ISO15156 for wetted materials	★
Q25	Certificate of Compliance to NACE MR0103 for wetted materials	★
Cold temperature		
BR5	–50 °F (–58 °C) cold temperature	★
BR6	–76 °F (–60 °C) cold temperature	★
HART Revision configuration (requires HART Protocol output code A)⁽⁵⁾		
HR5	Configured for HART Revision 5	★
HR7	Configured for HART Revision 7	★
Typical model number: 3051T G 5 F 2A 2 1 A B4		

1. Select configuration buttons (option code D4 or DZ) or LOI (option code M4) if local configuration buttons are required.
2. 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 polymer housing (code P). Wireless output and range 6 is only available with coned and threaded process connection (code 2F) and polymer housing.

3. Rosemount 3051TG lower range limit varies with atmospheric pressure.
4. Not available with PROFIBUS PA or Low Power 1–5 Vdc transmitter output (option code W or M), inert sensor fill fluid (option code 2), NSW drinking water approval (option code DW), or assemble to manifolds (option code S5).
5. Option HR5 configures the HART output to HART Revision 5. Option HR7 configures the HART output to HART Revision 7. The device can be field configured to HART Revision 5 or 7 if desired. HART Revision 5 is the default HART output.
6. For local addressing and configuration, M4 (LOI) is required.
7. Requires wireless options and engineered polymer housing. Available approvals are FM Intrinsically Safe, (option code I5), CSA Intrinsically Safe (option code I6), ATEX Intrinsic Safety (option code I1), IECEx Intrinsic Safety (option code I7), and EAC Intrinsic Safety (option code IM).
8. Only available with C6, E2, E5, I5, K5, KB and E8 product certifications. Not available with GE, GM, SBS, DA0, M4, D4, DZ, QT, HR5, HR7, CR, CS, CT.
9. Wireless output (code X) only available in G¹/2 A DIN 16288 male process connection (code 2C) with range 1–4, 316 SST isolating diaphragm (code 2), silicone fill fluid (code 1) and housing (code P).
10. Not available with wireless output for range 5.
11. Not available with wireless (output code X).
12. 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.
13. Only available with wireless (output code X).
14. Not available with Product certifications options E8, K8, E5, K5, C6, K6, E7, K7, E2, K2, E3, KB, KD.
15. Only valid with FOUNDATION Fieldbus output code F.
16. “Assemble-to” items are specified separately and require a completed model number.
17. Panel mounting bolts are not supplied.
18. Dust approval not applicable to output code X. See “[IEC 62591 \(WirelessHART Protocol\)](#)” on page 61 for wireless approvals.
19. Only available with output codes A - 4–20mA HART, F - FOUNDATION Fieldbus, and W - PROFIBUS PA. Also only available with G¹/2 housing thread types.
20. Nonincendive certification not provided with wireless output option code (X).
21. Not available with Alloy C-276 isolator (option code 3), assemble-to manifolds (option code S5), assemble-to seals (option code S1), surface finish certification (option code Q16), and remote seal system report (option code QZ).
22. Only available with product certifications E7, E8, I1, I7, IA, K7, K8, KD, N1, N7.
23. Contact an Emerson representative for availability.
24. Only available with HART 4–20 mA output code A.
25. Only available with HART 4–20 mA output code A and wireless output code X.
26. Not available with FOUNDATION Fieldbus (output code F) and wireless output code X) or low power (output code M).
27. Transmitter is shipped with 316 SST conduit plug (uninstalled) in place of standard carbon steel conduit plug.
28. The T1 option is not needed with FISCO Product Certifications; transient protection is included in the FISCO product certification codes IA, IB, and IE.
29. Not valid with alternate process connection S5.
30. The V5 option is not needed with T1 option; external ground screw assembly is included with the T1 option.
31. NACE compliant wetted materials are identified by [Footnote 11](#).

Dimensional drawings⁽¹⁾

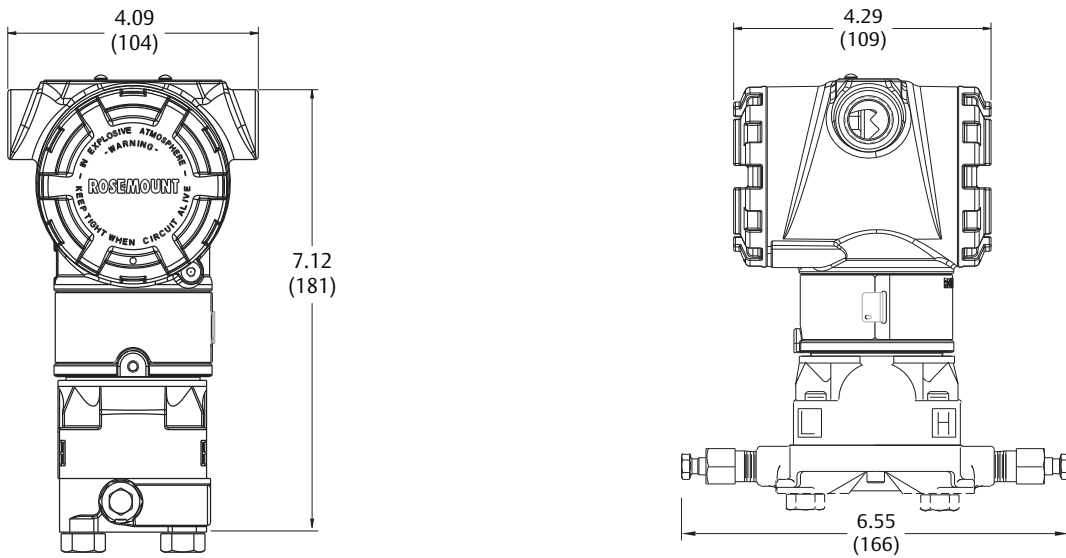
Figure 1. Rosemount 3051C Exploded View



- | | | |
|--------------------------------|---|--|
| A. Cover | G. Electronics board | L. Drain/vent valve |
| B. Cover O-ring | H. Name plate | M. Flange adapters |
| C. Terminal block | I. Housing rotation set screw (180 degree maximum rotation without further disassembly) | N. Process O-ring |
| D. Electronics housing | J. Sensor module | O. Flange adapter O-ring |
| E. Configuration buttons cover | K. Coplanar flange | P. Flange alignment screw (not pressure retaining) |
| F. Local configuration buttons | | Q. Flange bolts |

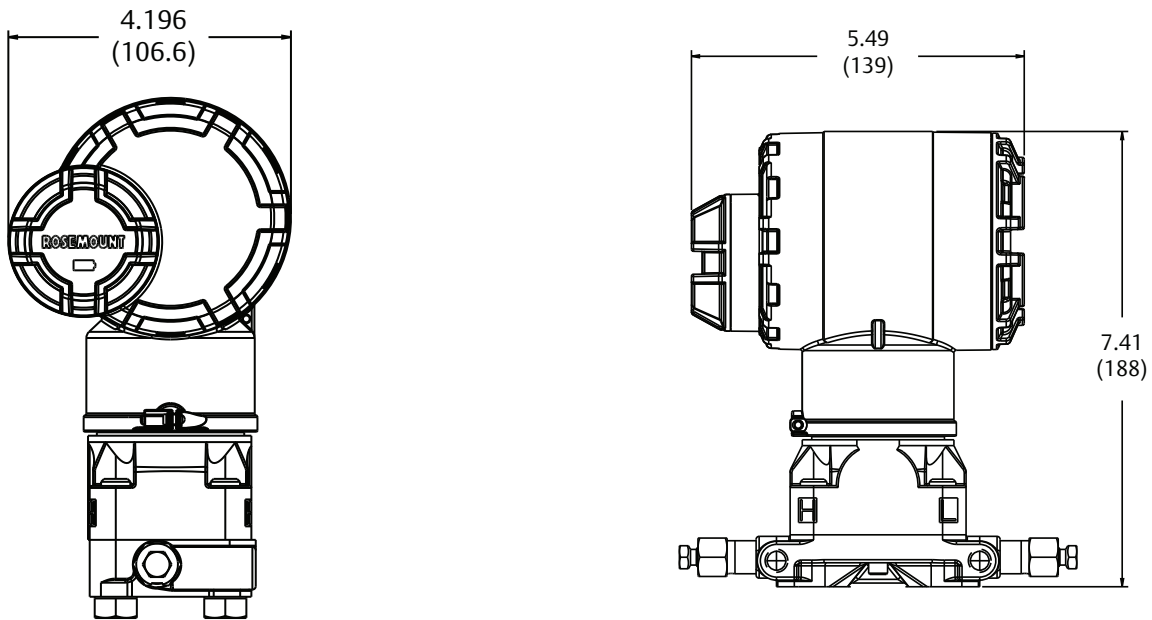
1. This section contains dimensional drawings for output codes A, F and X. For output codes W and M, visit Emerson.com/Rosemount/Documentation-and-Drawings

Figure 2. Rosemount 3051C Coplanar Flange



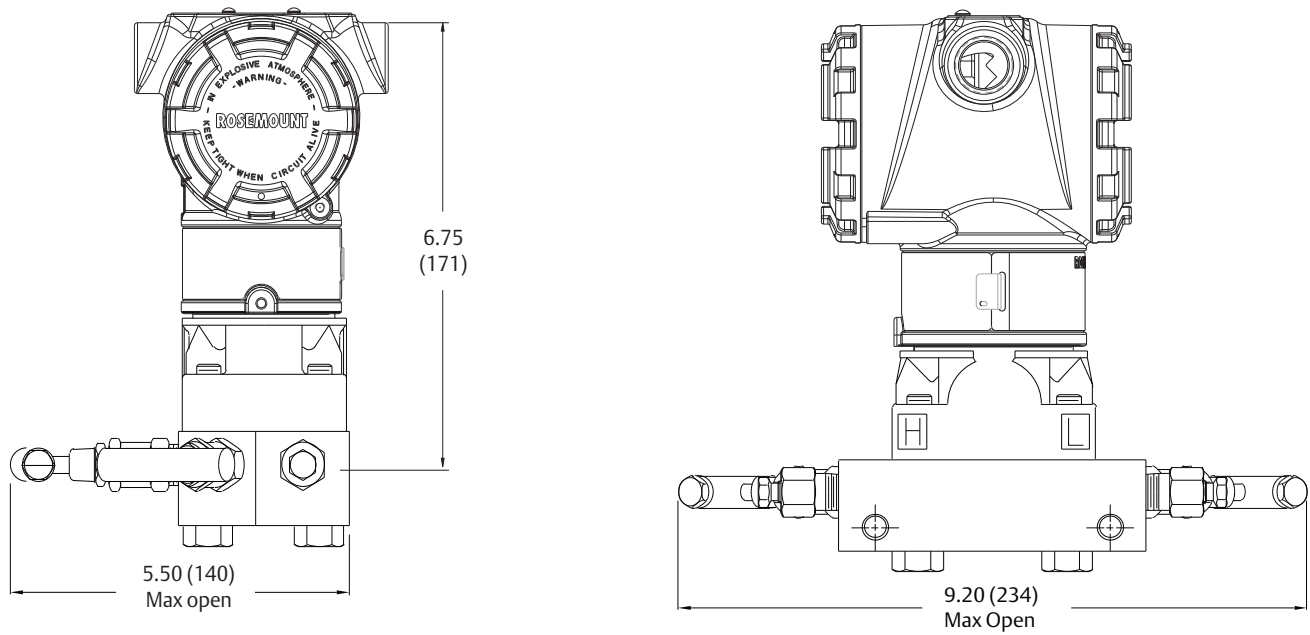
Dimensions are in inches (millimeters).

Figure 3. Rosemount 3051 Wireless Housing with Coplanar Flange



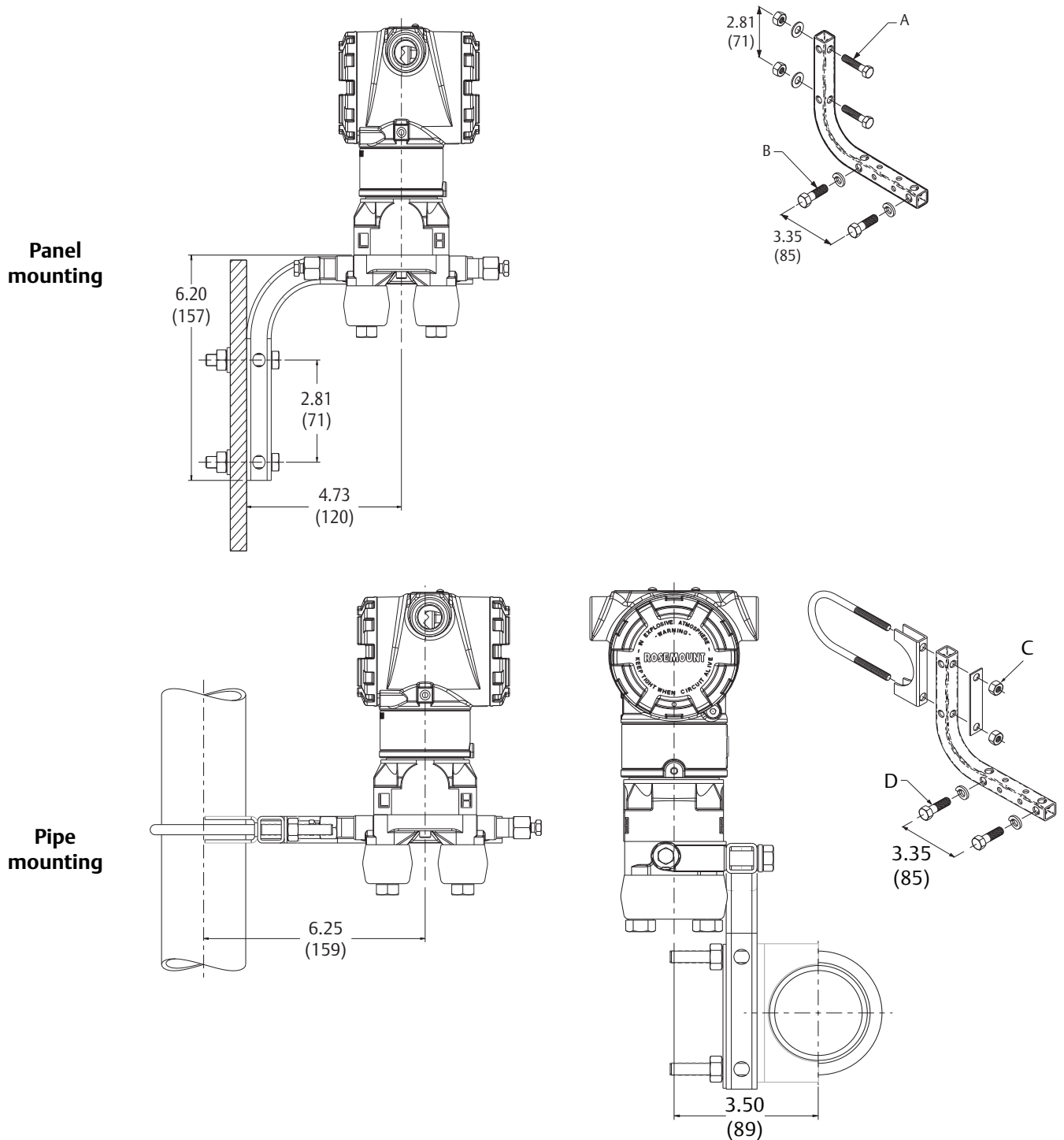
Dimensions are in inches (millimeters).

Figure 4. Rosemount 3051C Coplanar Flange with Rosemount 305RC3 3-Valve Coplanar Integral Manifold



Dimensions are in inches (millimeters).

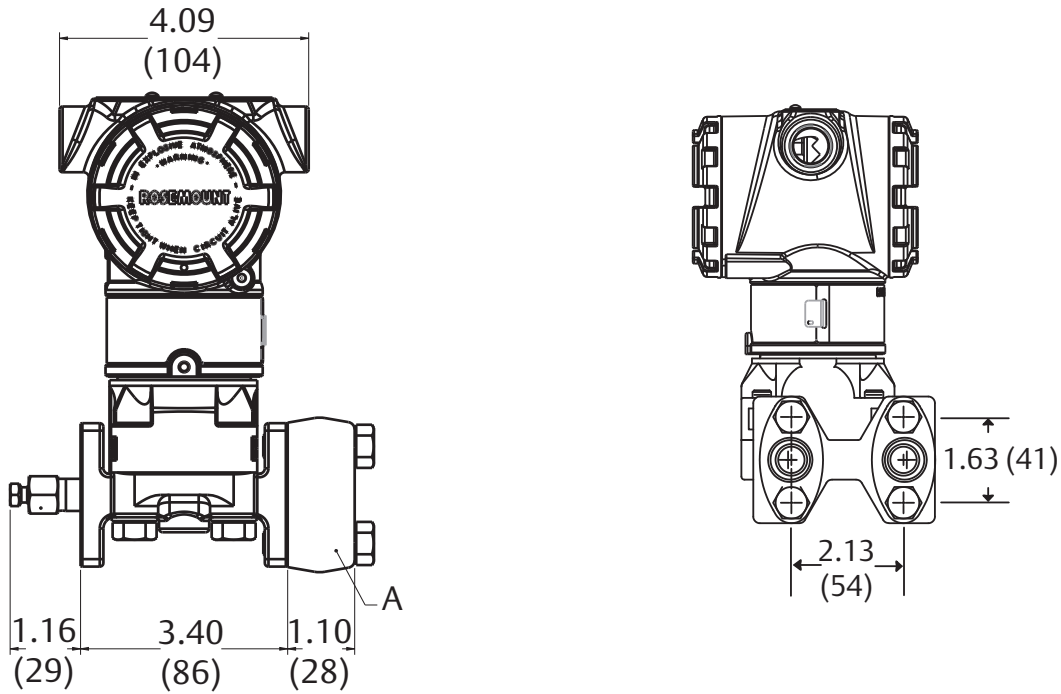
Figure 5. Coplanar Flange Mounting Configurations with Optional Bracket (B4) for 2-in. Pipe or Panel Mounting



A. 5/16-18 bolts (not supplied)
 B. 3/8-16 bolts
 Dimensions are in inches (millimeters).

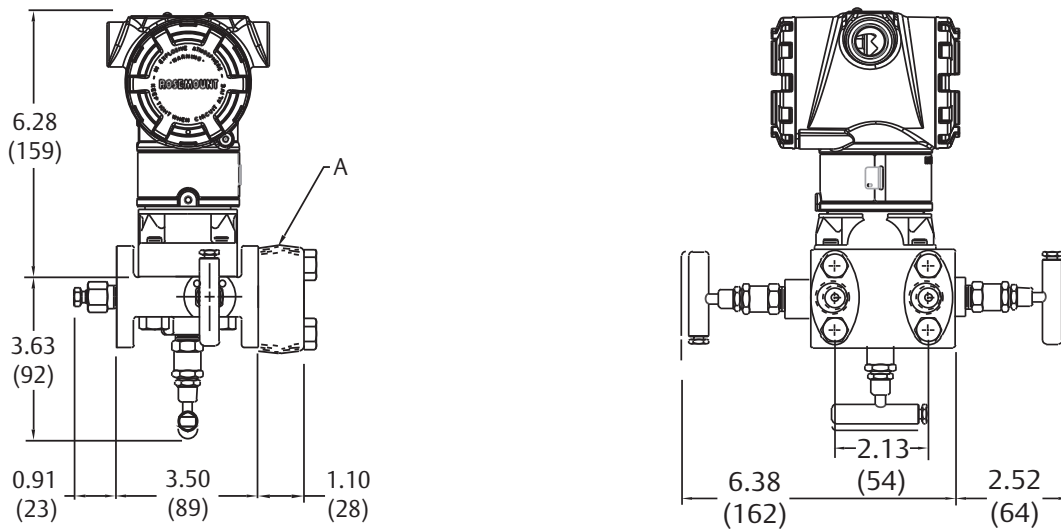
C. 2-in. U-bolt
 D. 3/8-16 bolts

Figure 6. Rosemount 3051C Coplanar with Traditional Flange



A. Flange adapters (optional)
 Dimensions are in inches (millimeters).

Figure 7. Rosemount 3051C Coplanar with Rosemount 305RT3 3-Valve Traditional Integral Manifold

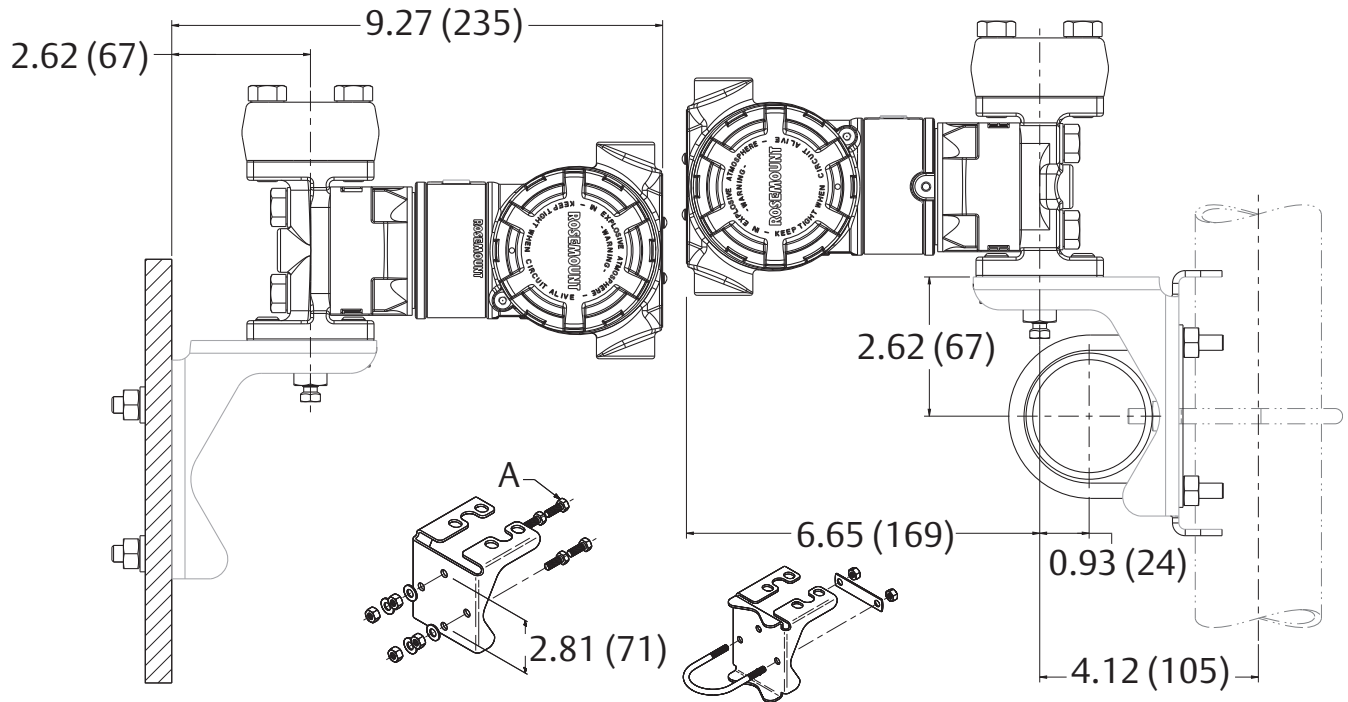


A. 1/2-14 NPT flange adapter (optional)
 Dimensions are in inches (millimeters).

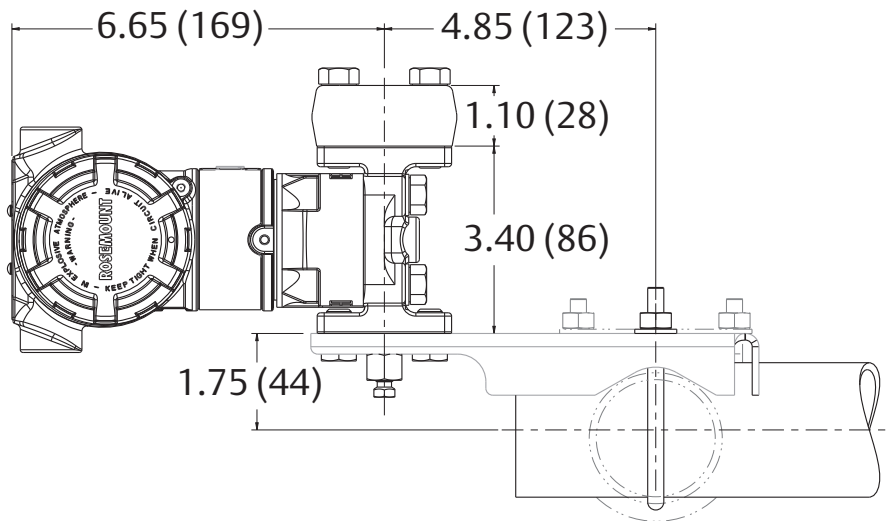
Figure 8. Traditional Flange Mounting Configurations with Optional Brackets for 2-in. Pipe or Panel Mounting

Panel mounting bracket (option B2/B8)

Pipe mounting bracket (option B1/B7/BA)

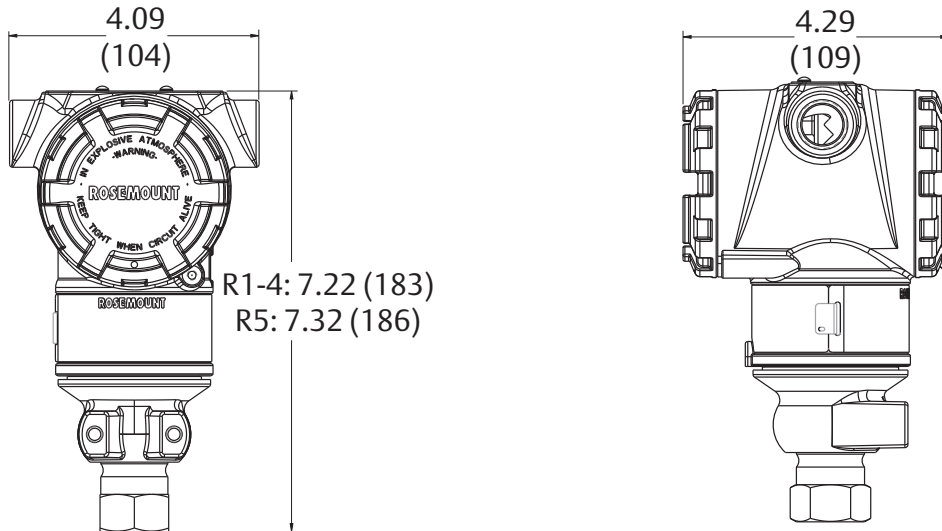


Pipe mounting bracket (option B3/B9/BC)



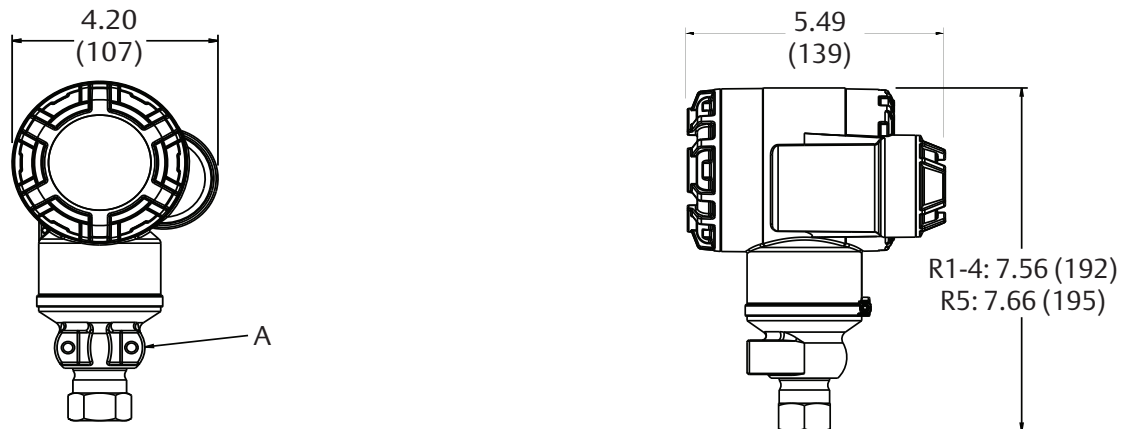
A. ⁵/₁₆-18 bolts (not supplied)
 Dimensions are in inches (millimeters).

Figure 9. Rosemount 3051T



Dimensions are in inches (millimeters).

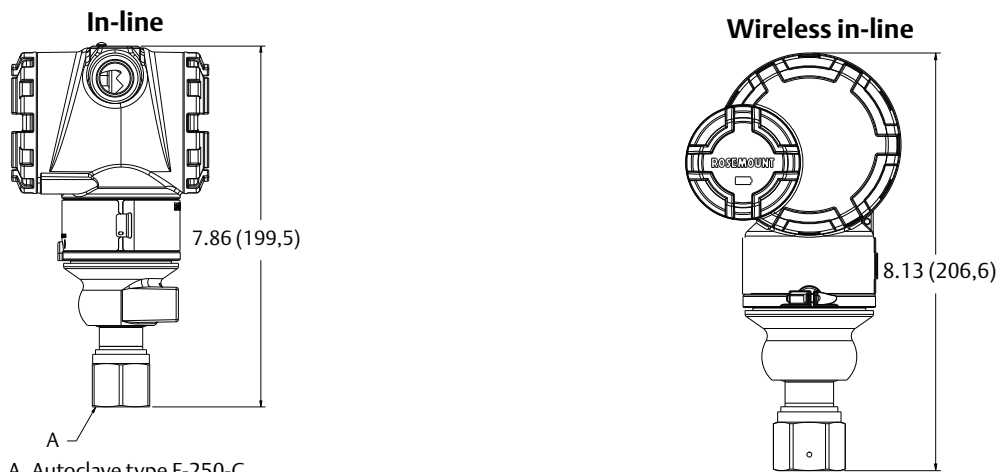
Figure 10. Rosemount 3051T Wireless Housing



A. U-Bolt bracket

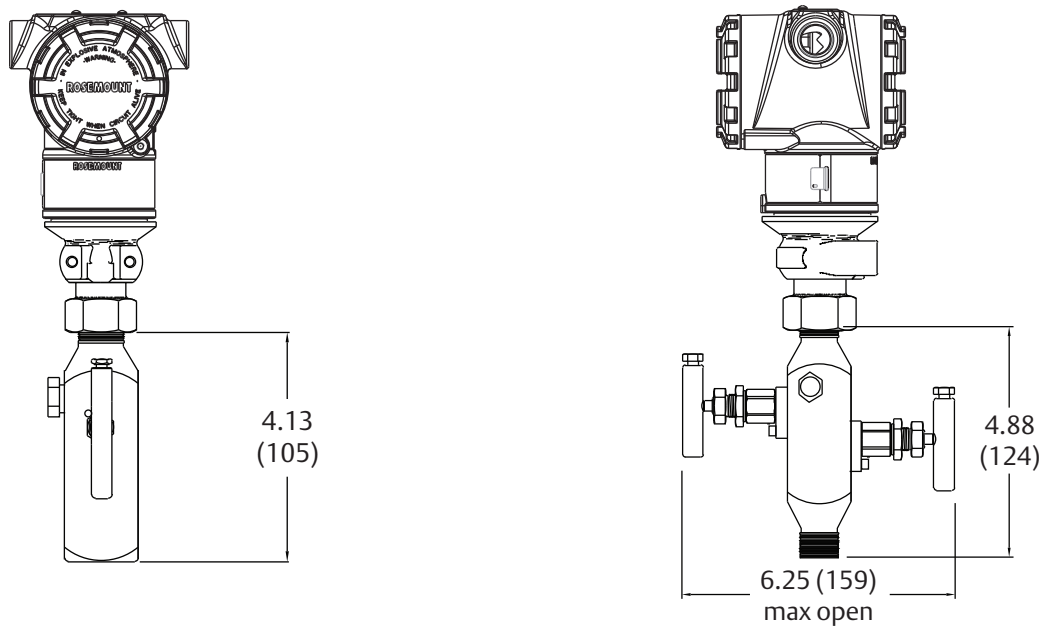
Dimensions are in inches (millimeters).

Figure 11. Rosemount 3051T In-Line Range 6



A. Autoclave type F-250-C

Figure 12. Rosemount 3051T with Rosemount 306 2-Valve Integral Manifold

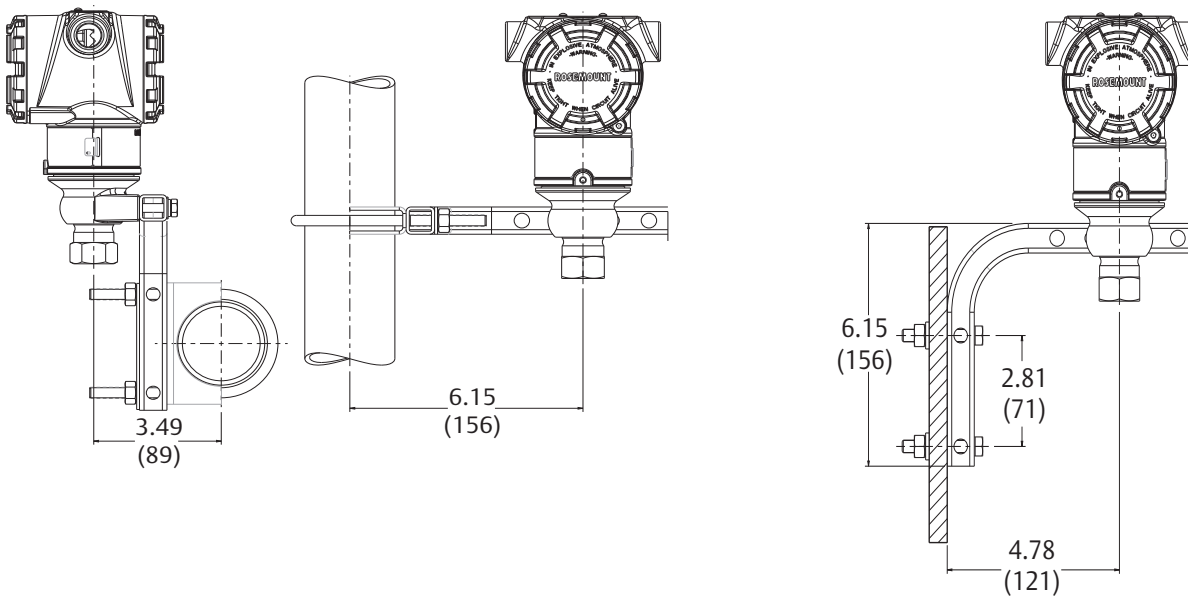


Dimensions are in inches (millimeters).

Figure 13. Rosemount 3051T Typical Mounting Configurations with Optional Mounting Bracket

Pipe mounting

Panel mounting



Dimensions are in inches (millimeters).