Models 305 and 306 Integral Manifolds

MODELS 305 AND 306 FEATURE...

- *Unique Coplanar™ design of the Model 3051C family allows "flangeless" valve integration*
- *Coplanar, traditional, and pressure styles*
- *Compact, lightweight assembly*
- *Factory assembled, seal-tested and calibrated*
- *Easy in-process calibration*
- *50% fewer process seals than conventional manifold/transmitter assemblies*
- *Direct-mount capability*

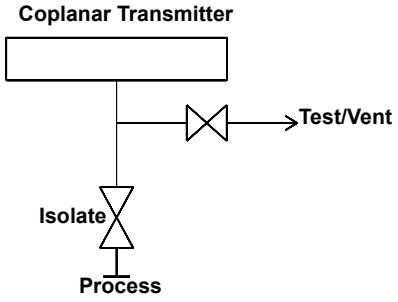
Content

Model 305R Coplanar Style Integral Manifolds

MODEL 305R TWO-VALVE

This two-valve manifold is used with Models 3051CG and 3051CA pressure transmitters. The first valve provides instrument isolation. The second valve allows venting, draining, or calibration through the test port.

- Model 305RC2
- Model 305RT2
- Model 305RM2
- Model 305RC7

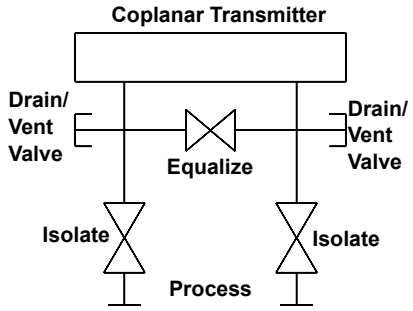


3051-305-30530C2A

MODEL 305R THREE-VALVE

This three-valve manifold is used with Models 3095 and 3051CD differential pressure transmitters. It provides two blocking valves and one equalizing valve. Two drain/vent valves are also installed at the test ports.

- Model 305RC3
- Model 305RT3
- Model 305RM3
- Model 305RC8

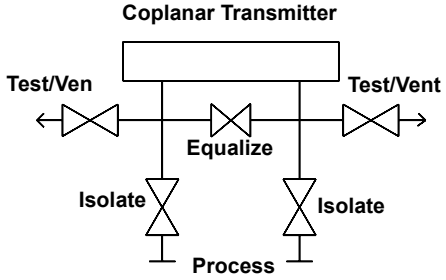


3051-305-30532C2A

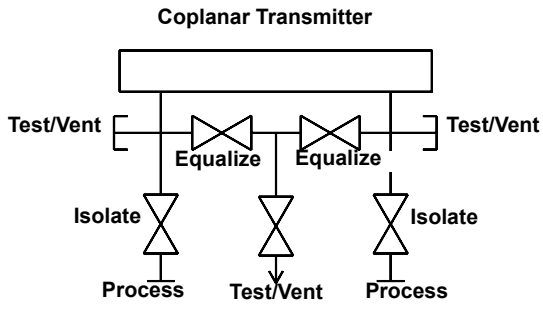
MODEL 305R FIVE-VALVE

This five-valve manifold is used with Models 3095 and 3051CD differential pressure transmitters. It provides two blocking valves, two test/vent valves, and one equalizing valve. The two vent valves allow for 100% capture of vented or drained process, and simplified in-process calibration capability. We also offer a five-valve integral manifold with a metering pattern for Natural Gas installations.

- Model 305RC5
- Model 305RC6
- Model 305RC9
- Model 305RM5



FIVE-VALVE NATURAL GAS



305-30533C2A

Specifications

Test Connections
1/4-18 NPT

Adapters
CF-8M (Cast version of 316 SST, material per ASTM-A743)

Bolts for Manifolds
Standard material is plated carbon steel per ASTM A449, Type 1

Alternative bolt materials offered through Option Codes

- L4 Austenitic 316 Stainless Steel Bolts
- L5 ASTM-A-193-B7M bolts

TABLE 1. Pressure Ratings(1)

Model 305	Pressure
Teflon®	6000 psi (414 bar) (2)
Graphite-based	6000 psi (414 bar)
Model 306	**Pressure**
Teflon	10000 psi (689 bar)(3)
Graphite-based	6000 psi (689 bar)(2)

(1) Except Option HK: 2320 psig (160 bar) at 200 °F (93 °C)

(2) At 200 °F (93 °C)

(3) At 85 °F (29 °C)

Shipping Weights

TABLE 2. Model 305 Manifold Weights Without Options (lb/kg)

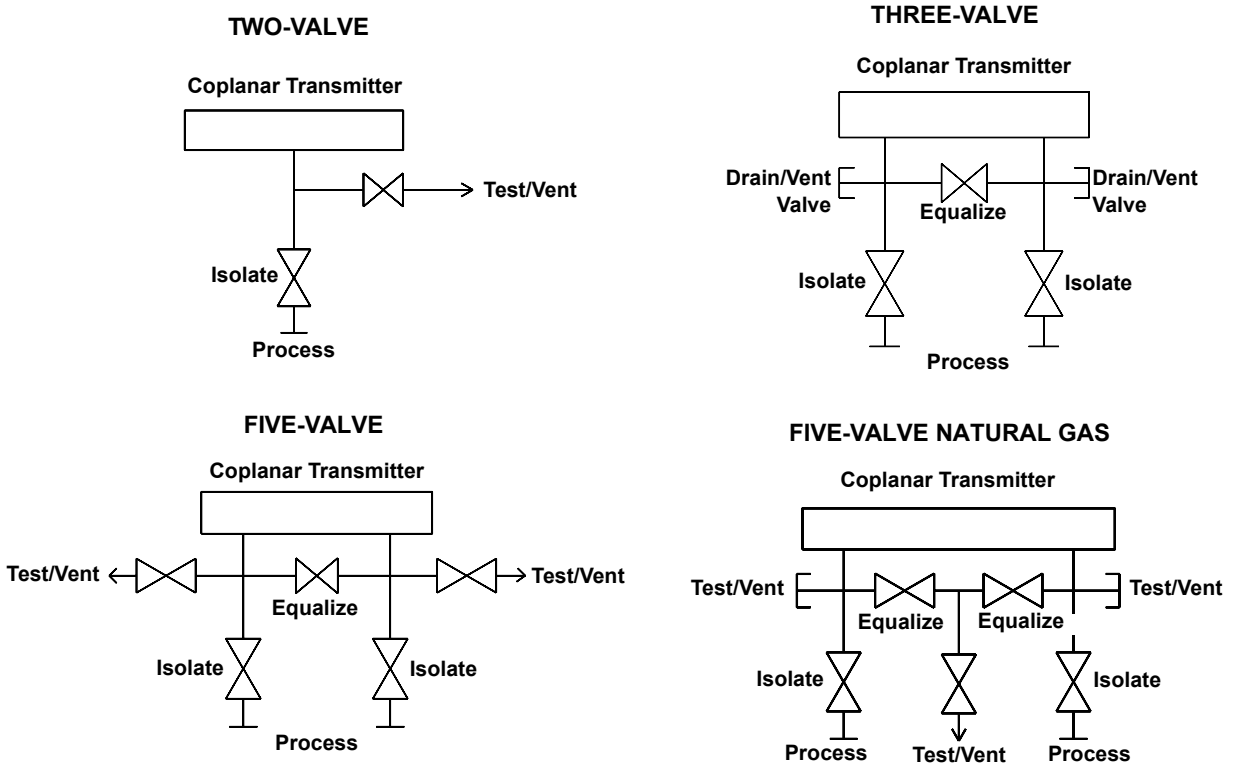
Manifold Model	Max Manifold Weight	Manifold with Models 3051C/ 3051P	Manifold with Model 3095
0305_C2	4.5 (2,0)	9.4 (4,3)	9.9 (4,5)
0305_C3	4.7 (2,1)	9.6 (4,4)	10.1 (4,6)
0305_C5	6.5 (3,0)	11.4 (5,17)	11.9 (5,4)
0305_C6	6.4 (2,9)	11.3 (5,1)	11.8 (5,35)
0305_C7	4.7 (2,1)	9.6 (4,4)	10.1 (4,6)
0305_C8	5.0 (2,3)	9.9 (4,5)	10.4 (4,8)
0305_C9	6.3(2,85)	11.2 (5,1)	11.7 (5,3)
0305_T2	6.0 (2,7)	10.9 (4,9)	–
0305_T3	6.0 (2,7)	10.9 (4,9)	–
0305_T7	6.2 (2,8)	11.1 (5,0)	–
0305_T8	6.2 (2,8)	11.1 (5,0)	–

TABLE 3. Model 306 Manifold Weights Without Options (lb/kg)

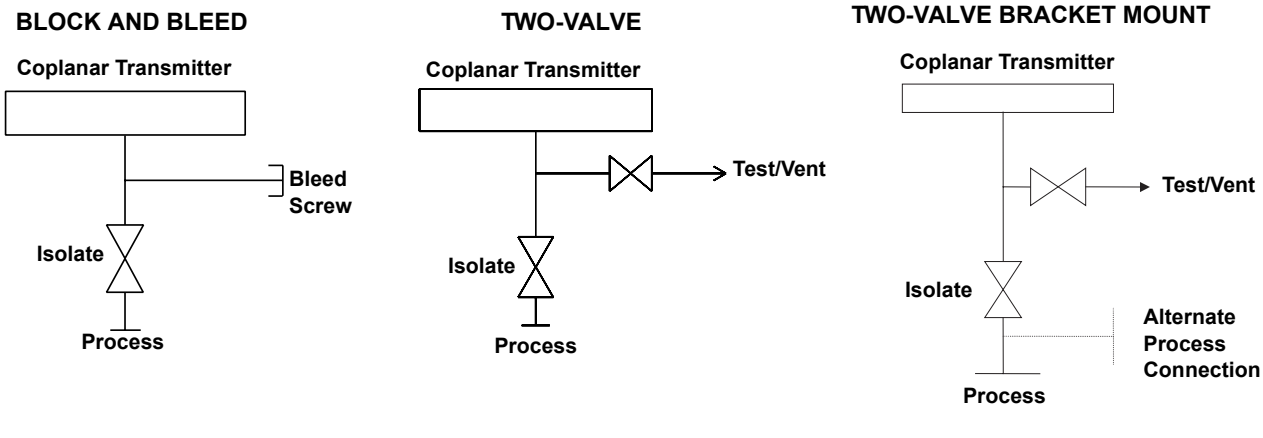
Manifold Model	Max Manifold Weight	Manifold with Model 3051T	Manifold with Model 2088
0306_T1	1.1 (0,5)	4.1 (1,9)	3.1 (1,4)
0306_T2	2.5 (1,1)	5.5 (2,5)	4.5 (2,0)
0306_T3	2.5 (1,1)	5.5 (2,5)	4.5 (2,0)

Schematic Drawing Summary

Model 305 Coplanar or Traditional Integral Manifolds

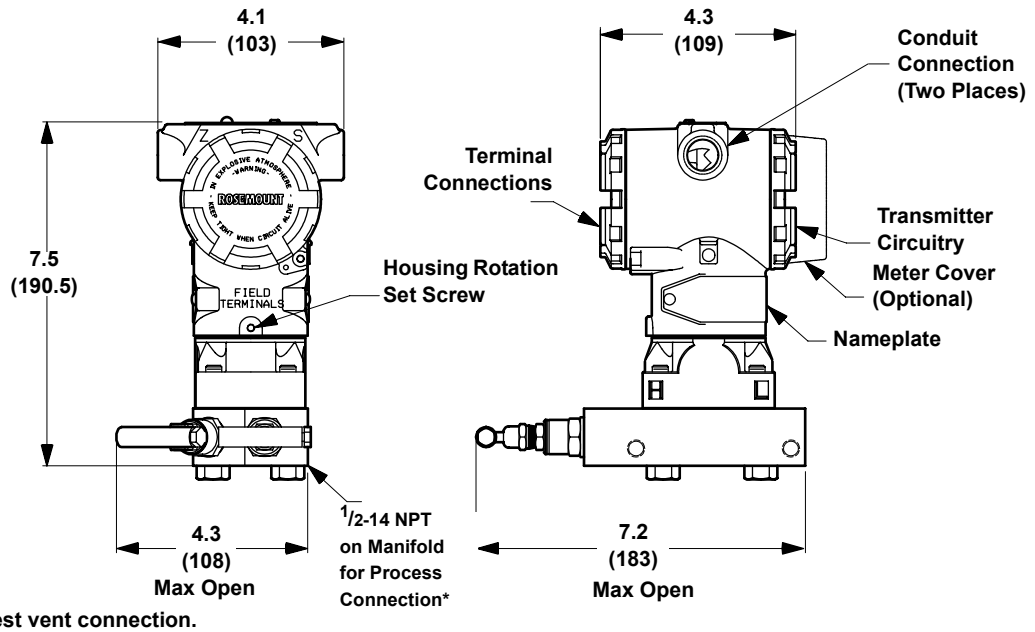


Model 306 Integral Manifolds



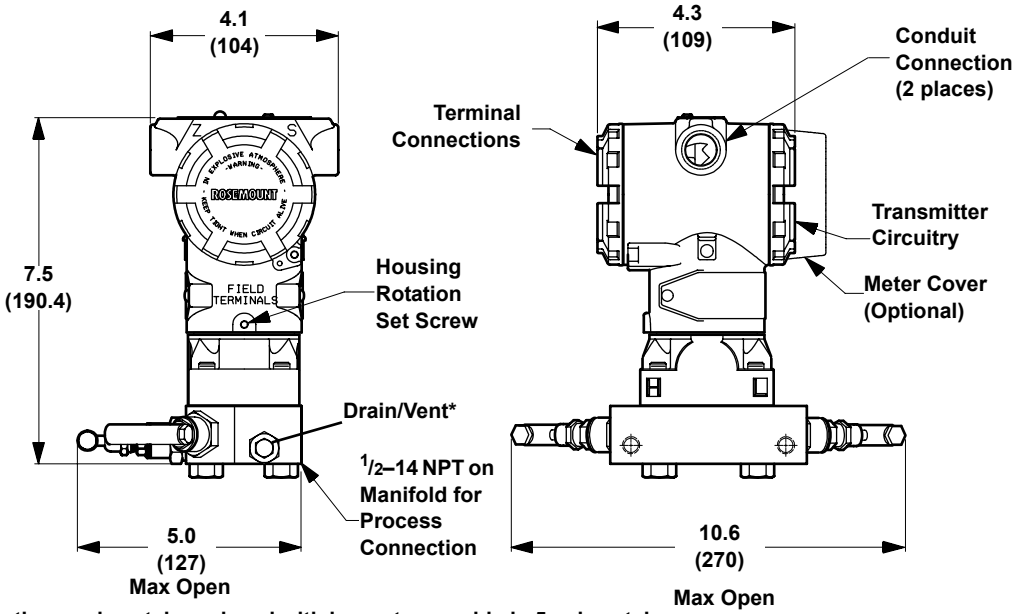
Rosemount Specific Dimensional Drawings

Model 305R Two-Valve Coplanar Style Manifold



* 1/4-18 NPT for test vent connection.
NOTE: Dimensions are in inches (millimeters).

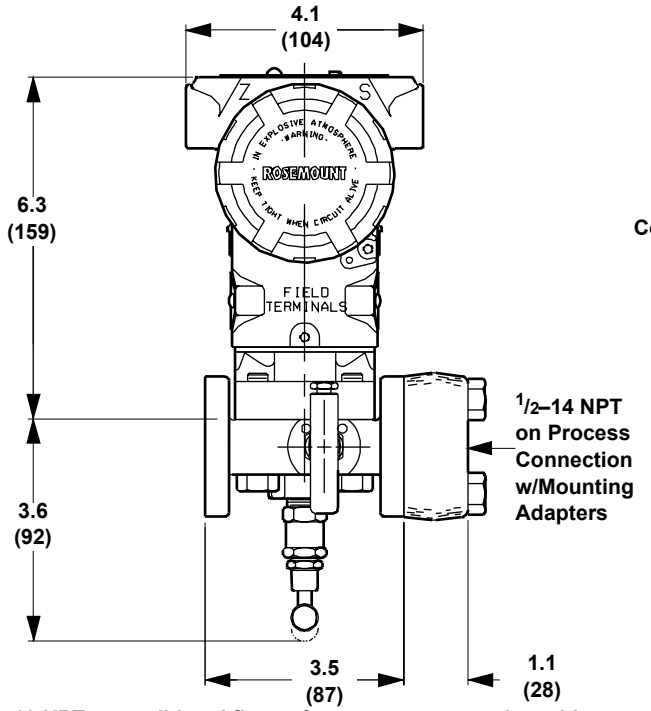
Model 305R Three- and Five-Valve Coplanar Style Manifolds

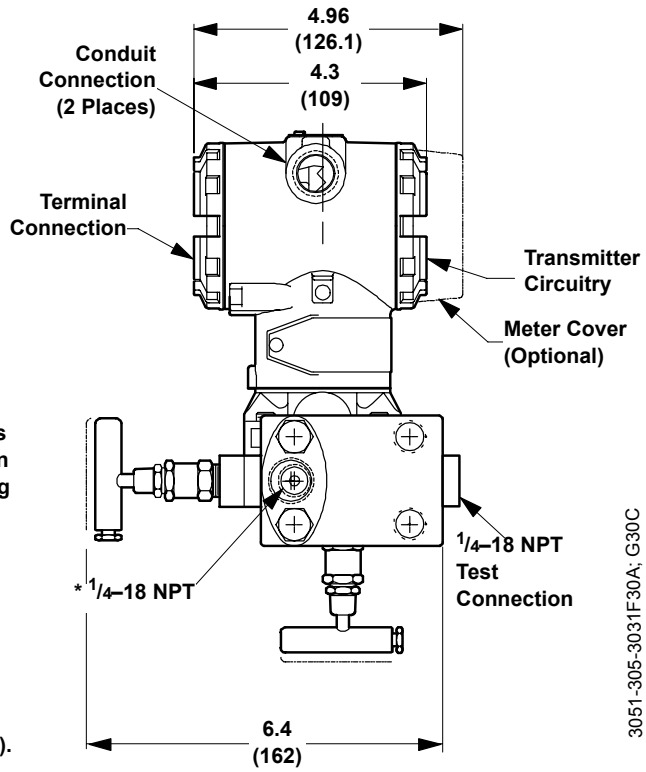


* Drain/ Vent in three-valve style replaced with bonnet assembly in 5-valve style.
NOTE: Measurements are in inches (millimeters).

Models 305 and 306 Manifolds

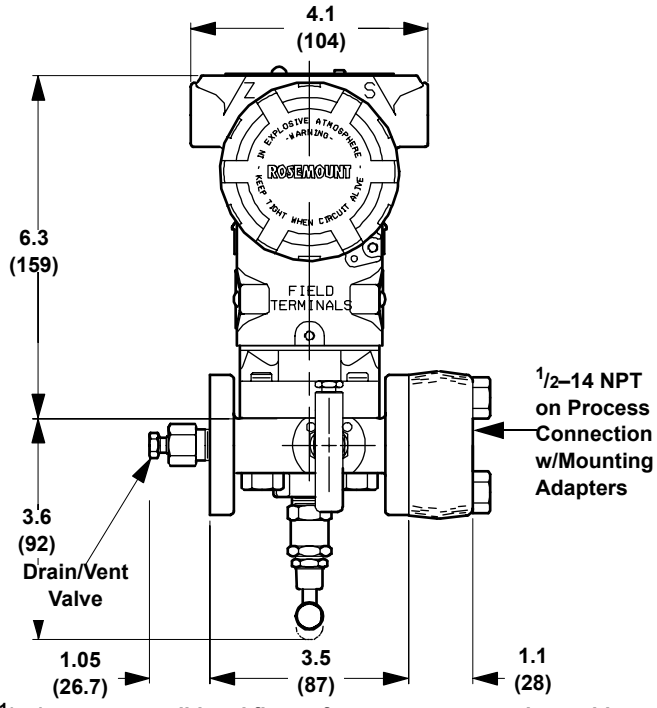
Model 305RT Two-Valve Traditional Style Manifold

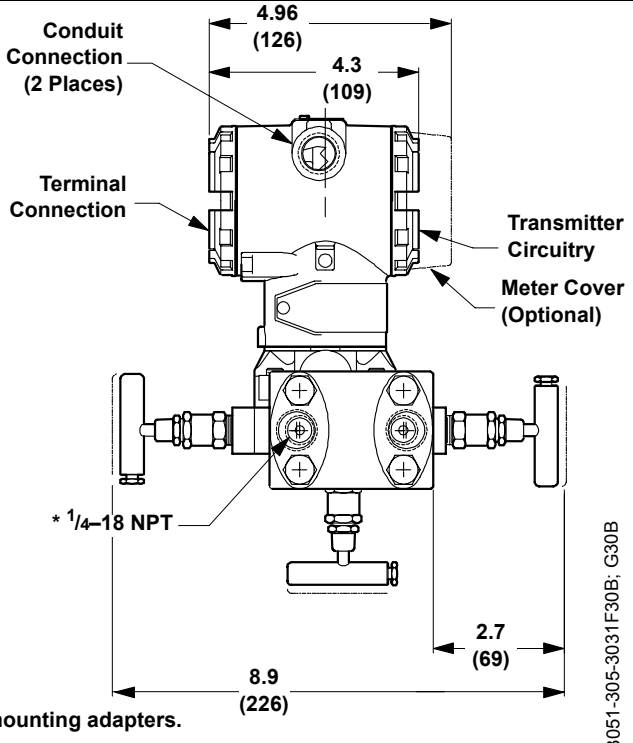




* 1/4–18 NPT on traditional flange for process connection without mounting adapters. NOTE: Dimensions are in inches (millimeters).

Model 305RT Three-Valve Traditional Style Manifold

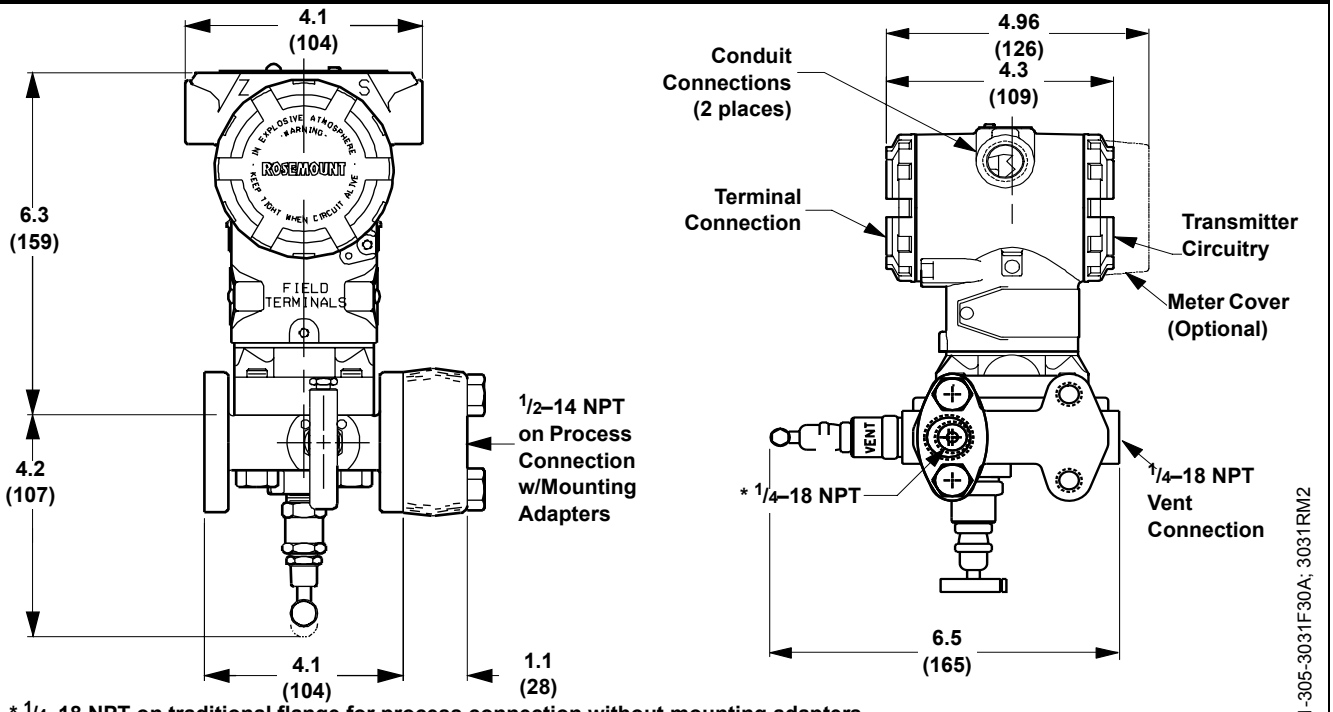




* 1/4–18 NPT on traditional flange for process connections without mounting adapters.
NOTE: Dimensions are in inches (millimeters).

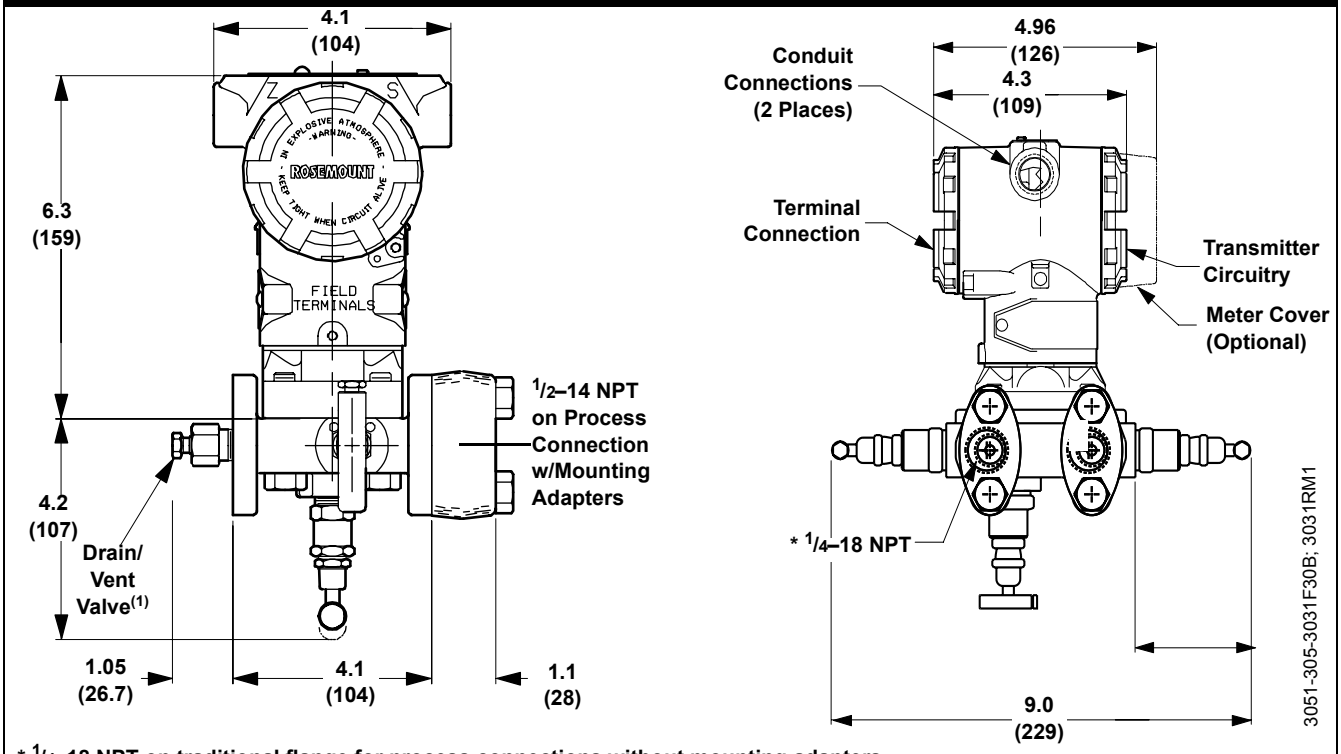
Models 305 and 306 Manifolds

Model 305RM Two-Valve Traditional Style Manifold



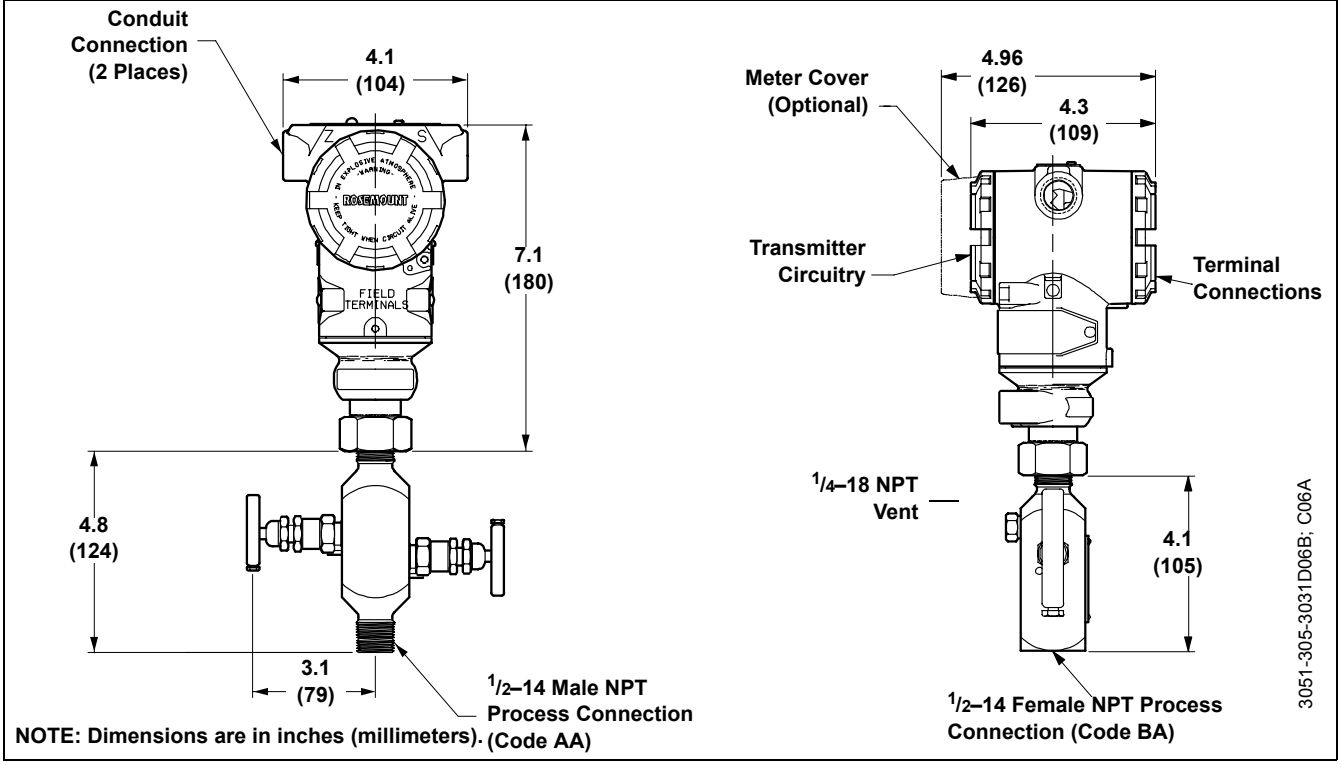
* 1/4–18 NPT on traditional flange for process connection without mounting adapters.
NOTE: Dimensions are in inches (millimeters).

Model 305RM Three-Valve Traditional Style Manifold



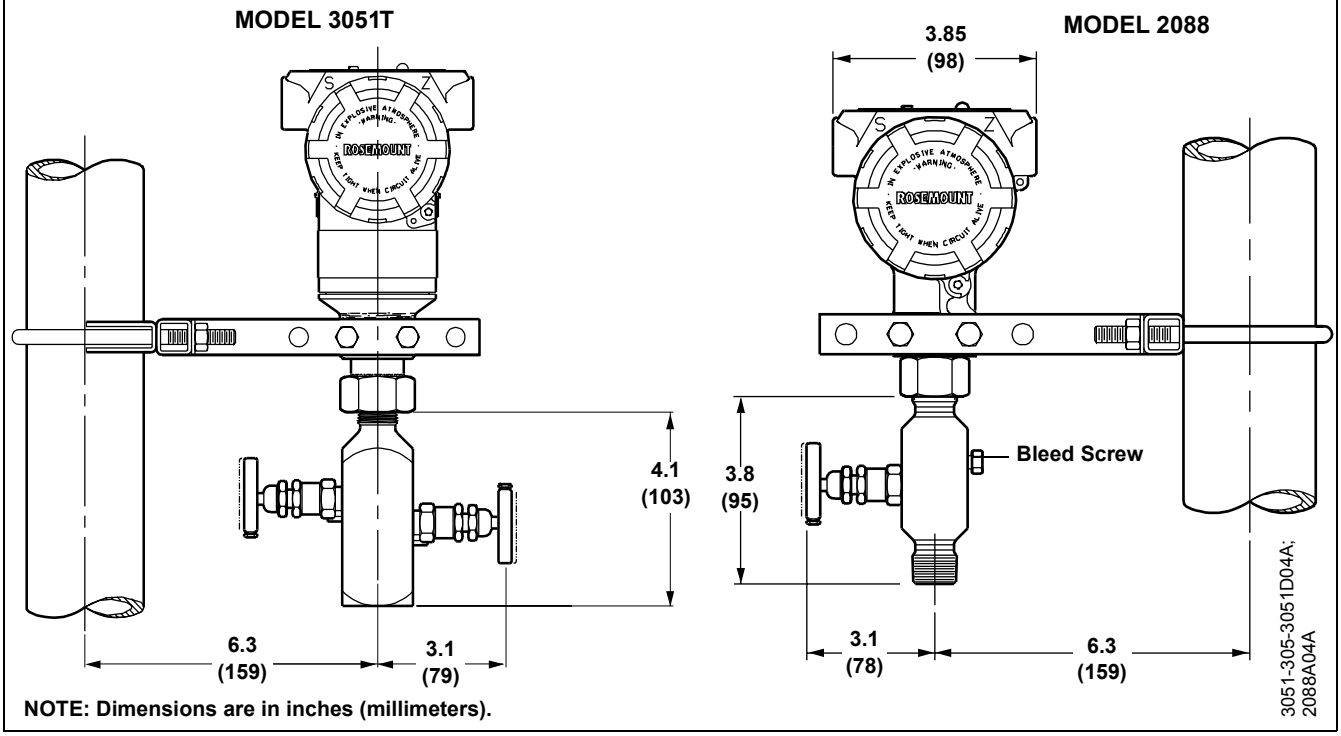
* 1/4–18 NPT on traditional flange for process connections without mounting adapters.
(1) Drain/ Vent in three-valve style replaced with bonnet assembly in 5-valve style, which extends 2.4 in. (61 mm) from the body.
NOTE: Dimensions are in inches (millimeters).

Model 306R Two-Valve Pressure Style Manifold (Model 3051T Shown)



NOTE: Dimensions are in inches (millimeters).

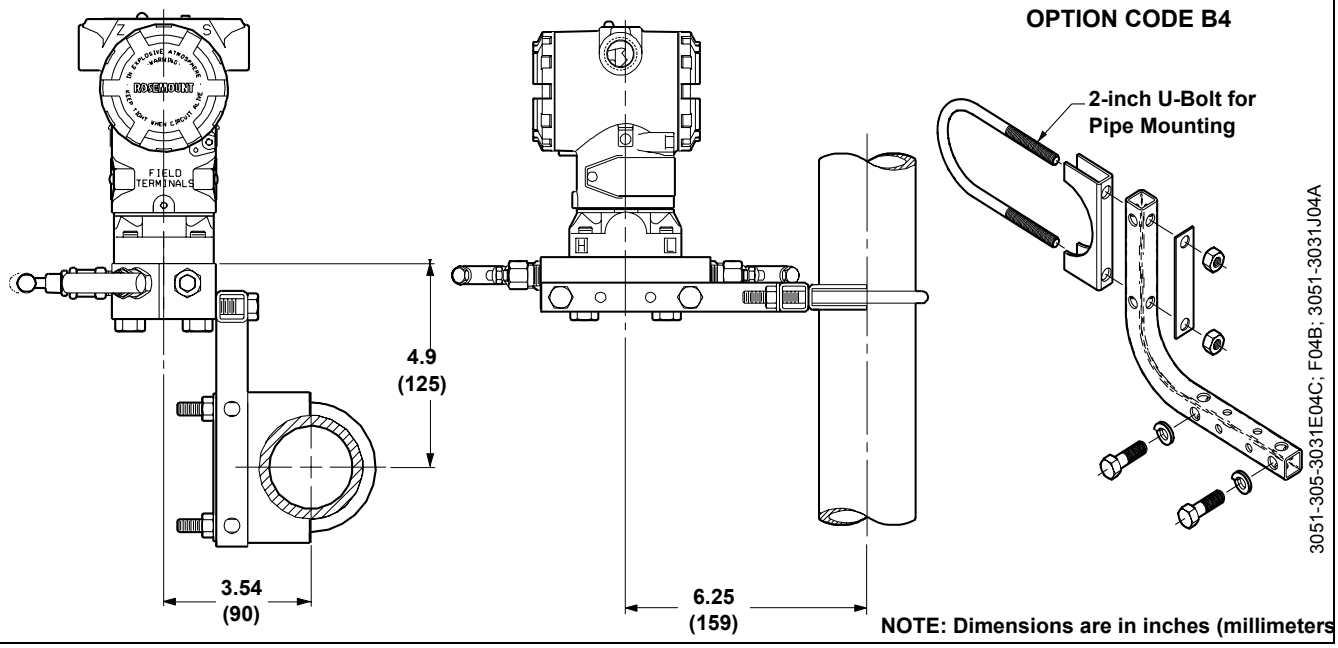
Installations for Models 3051T and 2088 Transmitters for 2-in. Pipe Mounting



NOTE: Dimensions are in inches (millimeters).

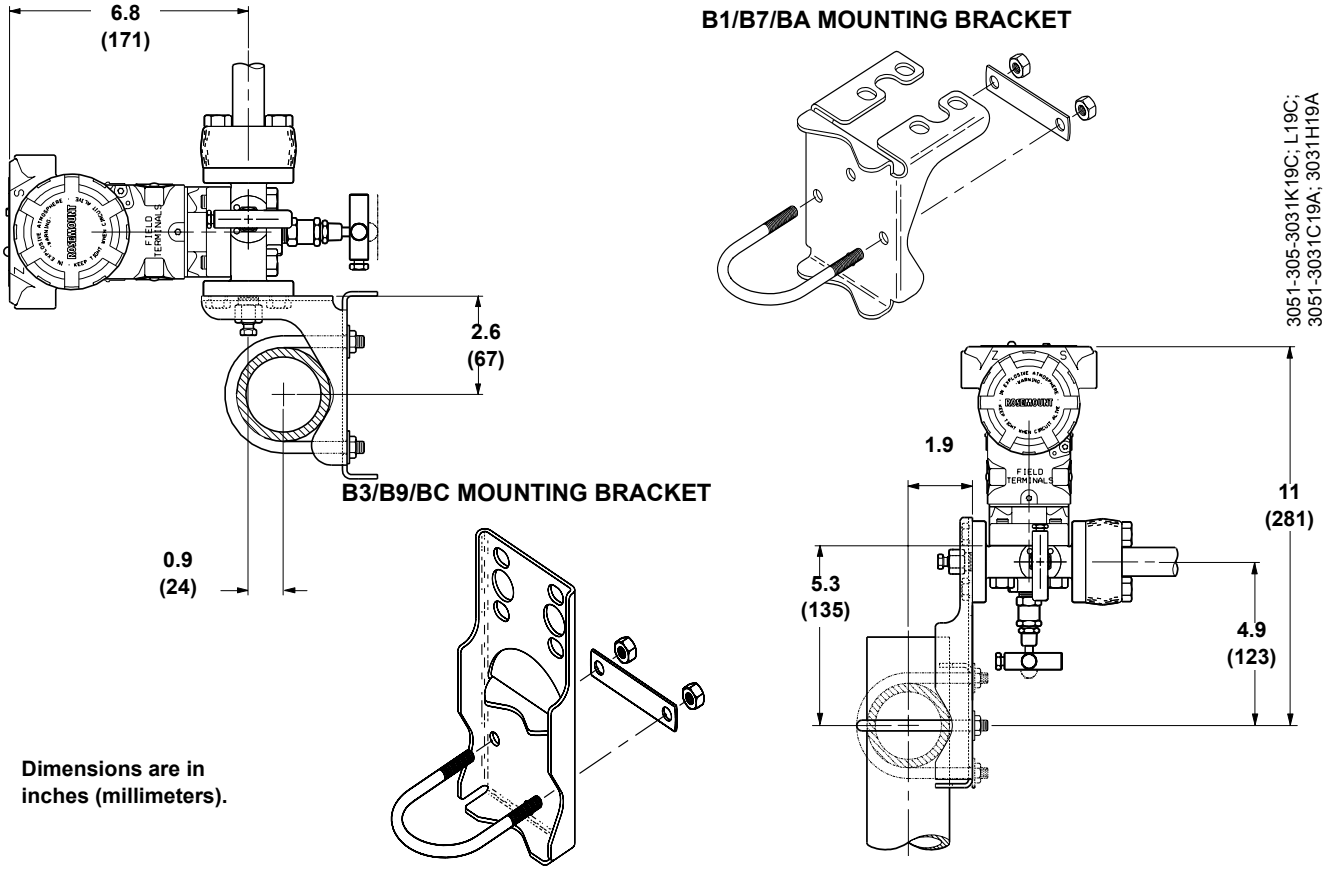
Models 305 and 306 Manifolds

Coplanar Manifold with Optional Bracket for 2-in. Pipe Mounting



NOTE: Dimensions are in inches (millimeters

Traditional Manifold with Optional Brackets for 2-in. Pipe Mounting



Dimensions are in inches (millimeters).

Model 305R Integral Manifolds Ordering Information

TABLE 4. Model 305R Integral Manifolds

Model	Product Description			
0305	Integral Manifold			
R	Rosemount Inc.			
Code	**Manifold Style**			
C	Coplanar			
T	Traditional			
M	Traditional (Model 3095-compatible; DIN-compliant flange)			
Code	**Manifold Type**			
2	2-valve			
3	3-valve			
5(1)	5-valve			
6(2)	5-valve for natural gas/metering pattern			
7(2)(3)	2-valve (per ASME B31.1[ANSI] power and piping code)			
8(2)(3)	3-valve (per ASME B31.1[ANSI] power and piping code)			
9(2)(3)	5-valve (per ASME B31.1[ANSI] power and piping code)			
	Materials of Construction			
Code	**Body**	**Bonnet**	**Stem**	**Drain/Vent**
2	316 SST	316 SST	316 SST	316 SST
3(2)	Hastelloy C	Hastelloy C	Hastelloy C	Hastelloy C (Meets NACE material recommendations per MR 01-75)
4(2)	Monel®	Monel	Monel	Monel (Meets NACE material recommendations per MR 01-75)
Code	**Process Connection**			
A	¼–18 NPT (Traditional manifold styles T and M)			
B	1/2–14 NPT (Coplanar manifold style only)			
Code	**Packing Material**			
1	Teflon			
2	Graphite-based			
Code	**Valve Seat**			
1	Integral			
5	Soft delrin (only available with natural gas/ metering pattern)			
Code	**305R Options**			
P2	Cleaning for special services (Not available with graphite-based packing)			
SG(4)	Materials of construction to meet NACE material recommendations per MR 01-75 (Not available with option P2)			
L4(5)	Austenitic 316 SST bolts			
L5	ASTM-A-193-B7M bolts			
	Coplanar Options			
B4	SST bracket for 2-in. pipe mount with series 300 SST bolts			
	Traditional Options			
B1	Bracket for 2-in. pipe mounting, CS bolts			
B3	Flat bracket for 2-in. pipe mounting, CS bolts			
B7	B1 bracket with series 300 SST bolts			
B9	B3 bracket with series 300 SST bolts			
BA	SST B1 bracket with series 300 SST bolts			
BC	SST B3 bracket with series 300 SST bolts			
DF	1/2–14 NPT flange adapters, SST (Not available with graphite-based packing or HK, HL options)			
HK(6)	10mm (M10) process flange bolting connection			
HL(6)	12mm (M12) process flange bolting connection			
Typical Coplanar Integral Manifold Model Number: 305RC32B11B4				
Typical Transmitter Model Number: 3051CD2A02A1AS5				

(1) Not available with traditional manifold style T.

(2) Only available with Coplanar manifold style

(3) Only available with Graphite-based packing.

(4) Only available with Materials of Construction Code 2: 316 SST body, bonnets, and stems; Monel drain/vents

(5) Not available with manifold codes 7, 8, and 9.

(6) Only available with traditional manifold style M

Model 306RT Integral Manifolds

TABLE 5. Model 305RT Integral Manifolds

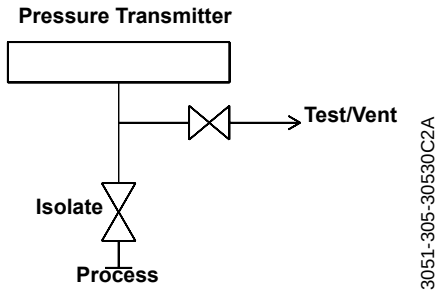
Model	Product Description			
0306	Pressure Manifold			
Code	**Manufacturer**			
R	Rosemount Inc.			
Code	**Manifold Style**			
T	Threaded			
Code	**Manifold Type**			
1	Block-and-bleed			
2	2-valve			
	Materials of Construction			
Code	**Body**	**Bonnet**	**Stem**	**Drain/Vent Plug**
2	316 SST	316 SST	316 SST	316 SST
Code	**Process Connection**			
AA	1/2–14 male NPT			
BA(1)	1/2–14 female NPT			
Code	**Packing Material**			
1	Teflon			
2	Graphite-based			
Code	**Valve Seat**			
1	Integral			
Code	**306RT Options**			
P2	Cleaning for special services (Not available with graphite-based packing)			
SG	Materials of construction to meet NACE material recommendations per MR 01-75 (Not available with option P2)			
Typical Integral Manifold Model Number: 3 0 6 R T 2 2 B A 1 1				
Typical Transmitter Model Number: 3051TG3A2B21AS5B4				

(1) Not available with block-and-bleed manifold type

Model 306RT Two-Valve Manifolds

This two-valve pressure manifold is used with Models 3051 and 2088 gage and absolute pressure transmitters. The first valve provides instrument isolation. The second valve allows venting, draining, or calibration through the test port. Available in 1/2–14 NPT male or female process connections.

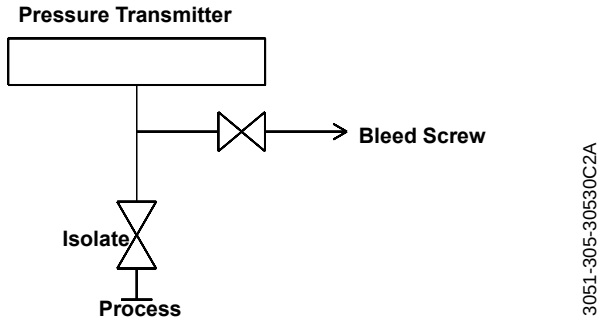
- Model 306RT2



Model 306RT Block-and-Bleed Manifolds

This pressure manifold is used with Models 3051 and 2088 gage and absolute pressure transmitters. It provides a single block valve for instrument isolation. There is also a plug for drain/vent capabilities. Available in 1/2–14 NPT male process connection.

- Model 306RT1



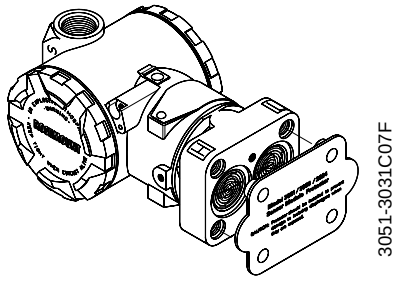
Models 305 and 306 Manifolds

OPTIONS

Module Guard

A sensor module guard is available to protect the transmitter process isolating diaphragms. This guard should be used whenever the transmitter is removed from the integral manifold to avoid damage to the isolating diaphragms.

- Part number: 00305-1000-0001 (5/pack)



P2 Cleaning for Special Services

This option minimizes process contaminants by cleaning wetted surfaces with a suitable detergent.

SG Sour Gas

Valves can be manufactured in accordance with current NACE MR-01-75 standards.

ASME B31.1 (ANSI)

The Model 305 and 306 Manifolds are available in configurations that meet the requirements of ASME B31.1(ANSI) Power and Piping Code. This code specifies design criteria for most air, gas, steam, water, and oil systems used in electric generating systems, central and district heating systems, industrial power plants and geothermal plants. ASME B31.1(ANSI) includes requirements for manifolds, valves, and piping. Transmitters and other measuring devices do not fall within the scope of this code.

Tagging

Manifolds are tagged with a part number, schematic drawing, temperature and pressure limits.

Other Publications

For information regarding additional vendors see www.rosemount.com.

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