

Rosemount™ 3051S MultiVariable™ Extension Supplement



With the Rosemount 3051S MultiVariable Extensions, you can gain valuable process insight with two measurements in one device. This reduces overall installation time and cost as well as wiring and conduit cost.

Rosemount 3051SMV SuperModule™ platform



The most advanced pressure, flow, and level measurements

- The all-welded hermetic SST design delivers the industry's highest field reliability
- Ultra performance provides up to ±0.025% accuracy and 200:1 rangedown
- 15-year stability and 15-year limited warranty

Rosemount 3051SMV Series selection guide



Rosemount 3051S MultiVariable with coplanar static pressure and temperature

See ordering information on [page 3](#).

- Coplanar platform enables integrated manifold and seal system solutions
- Sensor technology allows calibrated spans from 0.3 to 4000 psi (20,7 mbar to 276 bar)
- Available with 316L SST, Alloy C-276, Alloy 400, Tantalum, or gold-plated 316L SST process isolators



Rosemount 3051S MultiVariable with in-line static pressure and temperature

See ordering information on [page 10](#).

- Direct threaded connection, manifold or seal system solutions
- Sensor technology allows calibrated spans from 0.3 to 10000 psi (20,7 mbar to 689 bar)
- Available with 316L SST or Alloy C-276 process isolators

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Rosemount 3051S MultiVariable with coplanar static pressure and temperature



Rosemount 3051SMV P-T Coplanar

The Rosemount 3051S MultiVariable Coplanar™ pressure and temperature transmitter delivers two measurements in one device, reducing installation time and overall project cost for a variety of applications.

Additional information

Specifications: [page 15](#)

Certifications: [page 24](#)

Dimensional drawings: [page 30](#)

Specification and selection of product materials, options, or components must be made by the purchaser of the equipment. See [page 22](#) for more information on material selection.

Table 1. Rosemount 3051S Scalable™ MultiVariable Coplanar Pressure and Temperature 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		
3051SMV	Scalable MultiVariable Transmitter		★
Performance class⁽¹⁾			
1	Ultra: 0.025% span SP accuracy, 200:1 rangedown, 15-year stability, 15-year limited warranty		★
2	Classic: 0.035% span SP accuracy, 150:1 rangedown, 15-year stability		★
MultiVariable type			
P	MultiVariable measurement with direct process variable output		★
Measurement type			
5	Static pressure and temperature (no DP) - coplanar style		★
Differential pressure range			
N	None		★
Static pressure type			
A	Absolute		★
G	Gage		★
Static pressure range		Absolute (A)	Gage (G)
0	Range 0	0.5 to 5 psia (0,03 to 0,34 bar)	N/A
1	Range 1	0 to 30 psia (0 to 2.1 bar)	-25 to 25 inH ₂ O (-62,2 to 62,2 mbar)
2	Range 2	0 to 150 psia (0 to 10,3 bar)	-250 to 250 inH ₂ O (-623 to 623 mbar)
3	Range 3	0 to 800 psia (0 to 55,2 bar)	-393 to 1000 inH ₂ O (-1,0 to 2,5 bar)
4	Range 4	0 to 4000 psia (0 to 275,8 bar)	-14.2 to 300 psi (-0,979 to 20,7 bar)
5 ⁽²⁾	Range 5	N/A	-14.2 to 2000 psi (-0,979 to 137,9 bar)

Table 1. Rosemount 3051S Scalable™ MultiVariable Coplanar Pressure and Temperature 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.

Temperature input ⁽³⁾						
R	RTD input (type Pt 100, -328 to 1562 °F [-200 to 850 °C])					★
Isolating diaphragm						
2 ⁽⁴⁾	316L SST					★
3 ⁽⁴⁾	Alloy C-276					★
5 ⁽²⁾	Tantalum					
7 ⁽⁴⁾	Gold-plated 316L SST					
Process connection	Connection size	Material type				
		Flange material	Drain vent	Bolting		
000	None (no process flange)					★
A11 ⁽⁵⁾⁽⁶⁾	Assemble to Rosemount 305 Integral Manifold					★
A12 ⁽⁵⁾	Assemble to Rosemount 304 or AMF Manifold with 316 SST Traditional Flange					★
A15 ⁽⁵⁾	Assemble to Rosemount 304 or AMF Manifold to SST Traditional Flange with Alloy C-276 Drain Vents					★
A16 ⁽⁵⁾	Assemble to Rosemount 304 or AMF Manifold to DIN SST Traditional Flange					★
A22 ⁽⁵⁾	Assemble AMF Manifold to SST Coplanar Flange					★
B11 ⁽⁵⁾⁽⁷⁾	Assemble to one Rosemount 1199 Diaphragm Seal					★
E11	Coplanar flange	1/4–18 NPT	Carbon steel	316 SST	N/A	★
E12	Coplanar flange	1/4–18 NPT	316 SST	316 SST	N/A	★
E13 ⁽⁴⁾	Coplanar flange	1/4–18 NPT	Cast C-276	Alloy C-276	N/A	★
E14	Coplanar flange	1/4–18 NPT	Cast Alloy 400	Alloy 400/K-500	N/A	★
E15 ⁽⁴⁾	Coplanar flange	1/4–18 NPT	SST	Alloy C-276	N/A	★
E16 ⁽⁴⁾	Coplanar flange	1/4–18 NPT	Carbon steel	Alloy C-276	N/A	★
E21	Coplanar flange	RC 1/4	Carbon steel	316 SST	N/A	★
E22	Coplanar flange	RC 1/4	SST	316 SST	N/A	★
E23 ⁽⁴⁾	Coplanar flange	RC 1/4	Cast C-276	Alloy C-276	N/A	★
E24	Coplanar flange	RC 1/4	Cast Alloy 400	Alloy 400/K-500	N/A	★
E25 ⁽⁴⁾	Coplanar flange	RC 1/4	SST	Alloy C-276	N/A	★
E26 ⁽⁴⁾	Coplanar flange	RC 1/4	Carbon steel	Alloy C-276	N/A	★
F12	Traditional flange	1/4–18 NPT	SST	316 SST	N/A	★
F13 ⁽⁴⁾	Traditional flange	1/4–18 NPT	Cast C-276	Alloy C-276	N/A	★
F14	Traditional flange	1/4–18 NPT	Cast Alloy 400	Alloy 400/K-500	N/A	★
F15 ⁽⁴⁾	Traditional flange	1/4–18 NPT	SST	Alloy C-276	N/A	★
F22	Traditional flange	RC 1/4	SST	316 SST	N/A	★
F23 ⁽⁴⁾	Traditional flange	RC 1/4	Cast C-276	Alloy C-276	N/A	★

Table 1. Rosemount 3051S Scalable™ MultiVariable Coplanar Pressure and Temperature 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.

Process connection		Connection size	Material type			
			Flange material	Drain vent	Bolting	
F24	Traditional flange	RC 1/4	Cast Alloy 400	Alloy 400/K-500	N/A	★
F25 ⁽⁴⁾	Traditional flange	RC 1/4	SST	Alloy C-276	N/A	★
F52	DIN-compliant traditional flange	1/4–18 NPT	316 SST	316 SST	7/16-in. bolting	★
G11	Vertical mount level flange	2-in. ANSI class 150	SST	316 SST	N/A	★
G12	Vertical mount level flange	2-in. ANSI class 300	SST	316 SST	N/A	★
G14 ⁽⁴⁾	Vertical mount level flange	2-in. ANSI class 150	Cast C-276	316 SST	N/A	★
G15 ⁽⁴⁾	Vertical mount level flange	2-in. ANSI class 300	Cast C-276	316 SST	N/A	★
G21	Vertical mount level flange	2-in. ANSI class 150	SST	316 SST	N/A	★
G22	Vertical mount level flange	2-in. ANSI class 300	SST	316 SST	N/A	★
G31	Vertical mount level flange	DIN- DN 50 PN 40	SST	316 SST	N/A	★
F32	Bottom vent traditional flange	1/4–18 NPT	SST	316 SST	N/A	
F42	Bottom vent traditional flange	RC 1/4	SST	316 SST	N/A	
F62	DIN-compliant traditional flange	1/4–18 NPT	SST	316 SST	M10 bolting	
F72	DIN-compliant traditional flange	1/4–18 NPT	SST	316 SST	M12 bolting	
G41	Vertical mount level flange	DIN- DN 80 PN 40	SST	316 SST	N/A	
Transmitter output						
A	4–20 mA with digital signal based on HART® protocol					★
Housing style			Material	Conduit entry size		
1A	PlantWeb™ housing		Aluminum	1/2–14 NPT		★
1B	PlantWeb housing		Aluminum	M20 × 1.5 (CM20)		★
1J	PlantWeb housing		SST	1/2–14 NPT		★
1K	PlantWeb housing		SST	M20 × 1.5 (CM20)		★
1C	PlantWeb housing		Aluminum	G1/2		
1L	PlantWeb housing		SST	G1/2		

Options (include with selected model number)

RTD cable options		Cable length	Protection type	
C12	RTD input	12 ft (3,66 m)	Shielded cable	★
C13	RTD input	24 ft (7,32 m)	Shielded cable	★
C14	RTD input	75 ft (22,86 m)	Shielded cable	★
C22	RTD input	12 ft (3,66 m)	Armored shielded cable	★
C23	RTD input	24 ft (7,32 m)	Armored shielded cable	★

Table 1. Rosemount 3051S Scalable™ MultiVariable Coplanar Pressure and Temperature 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.

RTD cable options		Cable length	Protection type		
C24	RTD input	75 ft (22,86 m)	Armored shielded cable	★	
C32	RTD input	12 ft (3,66 m)	ATEX/IECEX flameproof cable	★	
C33	RTD input	24 ft (7,32 m)	ATEX/IECEX flameproof cable	★	
C34	RTD input	75 ft (22,86 m)	ATEX/IECEX flameproof cable	★	
Mounting bracket options ⁽⁶⁾		Bracket material	Pipe/panel	Bolt material	
B4	Coplanar flange bracket	All SST	2-in. pipe and panel	SST	★
B1	Traditional flange bracket	Carbon steel	2-in. pipe	N/A	★
B2	Traditional flange bracket	Carbon steel	Panel	N/A	★
B3	Traditional flange flat bracket	Carbon steel	2-in. pipe	N/A	★
B7	Traditional flange bracket B1	Carbon steel	2-in. pipe	SST	★
B8	Traditional flange bracket B2	Carbon steel	Panel	SST	★
B9	Traditional flange bracket B3	Carbon steel	2-in. pipe	SST	★
BA	Traditional flange bracket B1	All SST	2-in. pipe	SST	★
BC	Traditional flange bracket B3	All SST	2-in. pipe	SST	★
Software configuration					
C1	Custom software configuration (A Rosemount 3051SMV Configuration Data Sheet must be completed)			★	
C4	NAMUR alarm and saturation levels, high alarm			★	
C5	NAMUR alarm and saturation levels, low alarm			★	
C6	Custom alarm and saturation signal levels, high alarm			★	
C7	Custom alarm and saturation signal levels, low alarm			★	
C8	Low alarm (standard Rosemount alarm and saturation levels)			★	
Process adapters ⁽⁸⁾					
D2	1/2–14 NPT process adapter			★	
D9	RC 1/2 SST flange adapter				
External ground screw assembly ⁽⁹⁾					
D4	External ground screw assembly			★	
Drain/vent valve ⁽⁸⁾					
D5	Remove transmitter drain/vent valves and install plugs			★	
D7	Coplanar flange without drain/vent ports				
Conduit plug ⁽¹⁰⁾					
DO	316 SST conduit plug			★	

Table 1. Rosemount 3051S Scalable™ MultiVariable Coplanar Pressure and Temperature 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.

Product certifications		
E1	ATEX Flameproof	★
I1	ATEX Intrinsic Safety	★
N1	ATEX Type n	★
ND	ATEX Dust	★
K1	ATEX Flameproof, Intrinsic Safety, Type n, Dust (combination of E1, I1, N1, and ND)	★
E4	TIIS Flameproof	★
E5	FM Explosion-proof, Dust Ignition-proof	★
I5	FM Intrinsically Safe; Division 2	★
K5	FM Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination E5 and I5)	★
E6 ⁽¹¹⁾⁽¹²⁾	CSA Explosion-proof, Dust Ignition-proof, Division 2	★
I6	CSA Intrinsically Safe	★
K6 ⁽¹¹⁾⁽¹²⁾	CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination E6 and I6)	★
E7	IECEx Flameproof	★
I7	IECEx Intrinsic Safety	★
N7	IECEx Type n	★
K7	IECEx Flameproof, Intrinsic Safety, and Type n (combination of E7, I7, and N7)	★
E2	INMETRO Flameproof	★
I2	INMETRO Intrinsic Safety	★
E3	China Flameproof	★
I3	China Intrinsic Safety	★
KA ⁽¹¹⁾⁽¹²⁾	ATEX and CSA Explosion-proof, Intrinsically Safe, Division 2 (combination E1, E6, I1 and I6)	★
KB ⁽¹¹⁾⁽¹²⁾	FM and CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination E5, I5, E6, and I6)	★
KC ⁽¹²⁾	FM and ATEX Explosion-proof, Intrinsically Safe, Division 2 (combination E5, I5, E1, and I1)	★
KD ⁽¹¹⁾⁽¹²⁾	FM, CSA, and ATEX Explosion-proof, Intrinsically Safe (combination E5, E6, E1, I5, I6 and I1)	★
Drinking water approval⁽¹³⁾		
DW	NSF drinking water certification	★
Shipboard approvals		
SBS	American Bureau of Shipping	★
Alternate materials of construction		
L1	Inert sensor fill fluid (gage sensors only) Note: Silicone fill fluid is standard.	★
L2	Graphite-filled PTFE O-ring	★
L4 ⁽⁸⁾	Austenitic 316 SST bolts	★
L5 ⁽⁸⁾	ASTM A193, Grade B7M bolts	★
L6 ⁽⁸⁾	Alloy K-500 bolts	★

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Alternate materials of construction⁽⁸⁾		
L7 ⁽¹⁴⁾	ASTM A453, Class D, Grade 660 bolts	★
L8	ASTM A193, Class 2, Grade B8M bolts	★
Digital display		
M5	PlantWeb LCD display	★
Special procedures		
P1 ⁽¹⁵⁾	Hydrostatic testing with certificate	★
P2 ⁽⁸⁾	Cleaning for special services	
P3 ⁽⁸⁾	Cleaning for less than 1PPM chlorine/fluorine	
Special certification		
Q4	Calibration certificate	★
QP	Calibration data certificate and tamper evident seal	★
Transient protection⁽⁹⁾		
T1	Transient terminal block	
Material traceability certification		
Q8	Material traceability certification per EN 102043.1	
Surface finish certification		
Q16	Surface finish certification for sanitary remote seals	
Toolkit total system performance reports⁽¹⁶⁾		
QZ	Remote seal system performance calculation report	
Conduit electrical connector⁽¹⁷⁾		
GE	M12, 4-pin, male connector (eurofast®)	★
GM	A size mini, 4-pin, male connector (minifast®)	★
NACE® certificates⁽¹⁸⁾		
Q15	Certificate of compliance to NACE MR0175/ISO 15156 for wetted materials	★
Q25	Certificate of compliance to NACE MR0103 for wetted materials	★
Cold temperature		
BRR	-58 °F (-50 °C) cold temperature start-up	★
Typical model number: 3051SMV 1 P 5 N A 4 R 2 E12 A 1A C12 B4 C1 M5		

1. For detailed specifications see "Specifications" on page 15.
2. Specification for gage pressure only.
3. RTD Sensor must be ordered separately.

4. Materials of Construction comply with metallurgical requirements highlighted within 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.
5. "Assemble to" items are specified separately and require a completed model number.
6. For Process connection option code A11, the mounting bracket must be ordered as part of the manifold model number.
7. Consult an Emerson™ Process Management representative for performance specifications.
8. Not available with process connection option code A11.
9. This assembly is included with transient terminal block and certification options E1, N1, K1, ND, E4, E7, N7, K7, E2, E3, KA, KC, and KD.
10. Transmitter is shipped with 316 SST conduit plug (uninstalled) in place of standard carbon steel conduit plug.
11. Not available with M20 or G 1/2 conduit entry size.
12. RTD cable not available with this option.
13. Requires 316L SST diaphragm material, glass-filled PTFE O-ring (standard), and process connection code E12 or F12.
14. Bolts are not considered process wetted. In instances where NACE MR0175/ ISO 15156 and NACE MR0103 conformance is required for bolting, L7 is the recommended bolting option.
15. Not available with SP range 0 with absolute.
16. Remote Seal System Performance Calculation Report is only available with process connection B11.
17. Available with Intrinsically Safe approvals only. For FM Intrinsically Safe; Nonincendive approve; (option code I5), install in accordance with Rosemount drawing 03152-1009.
18. NACE compliant wetted materials are identified by [Footnote 4](#).

Rosemount 3051S MultiVariable with in-line static pressure and temperature



Rosemount 3051SMV P-T in-line

The Rosemount 3051S MultiVariable in-line pressure and temperature transmitter delivers two measurements in one device reducing installation time and overall project cost for a variety of applications.

Additional information

- Specifications: [page 15](#)
- Certifications: [page 24](#)
- Dimensional drawings: [page 30](#)

Specification and selection of product materials, options, or components must be made by the purchaser of the equipment. See [page 22](#) for more information on material selection.

Table 2. Rosemount 3051S Scalable MultiVariable In-line Pressure and Temperature 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			
3051SMV	Scalable MultiVariable Transmitter		★	
Performance class⁽¹⁾				
1	Ultra: 0.025% span SP accuracy, 200:1 rangedown, 15-year stability, 15-year limited warranty		★	
2	Classic: 0.035% span SP accuracy, 150:1 rangedown, 15-year stability		★	
MultiVariable type				
P	MultiVariable measurement with direct process variable output		★	
Measurement type				
6	Static pressure and temperature (no DP) – in-line style		★	
Differential pressure range				
N	None		★	
Static pressure type				
A	Absolute		★	
G	Gage		★	
Static pressure range		Absolute (A)	Gage (G)	
1	Range 1	0 to 30 psia (0 to 2,1 bar)	-14.7 to 30 psig (-1,0 to 2,1 bar)	★
2	Range 2	0 to 150 psia (0 to 10,3 bar)	-14.7 to 150 psig (-1,0 to 10,3 bar)	★
3	Range 3	0 to 800 psia (0 to 55,2 bar)	-14.7 to 800 psig (-1,0 to 55,2 bar)	★
4	Range 4	0 to 4000 psia (0 to 275,8 bar)	-14.7 to 4000 psig (-1,0 to 275,8 bar)	★
5 ⁽²⁾	Range 5	0 to 10000 psia (0 to 689 bar)	N/A	★

Table 2. Rosemount 3051S Scalable MultiVariable In-line Pressure and Temperature 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.

Temperature input⁽³⁾				
R	RTD input (type Pt 100, -328 to 1562 °F [-200 to 850 °C])			★
Isolating diaphragm⁽⁴⁾				
2	316L SST			★
3	Alloy C-276			★
Process connection				
A11 ⁽⁵⁾	Assemble to Rosemount 306 Integral Manifold			★
B11 ⁽⁵⁾⁽⁶⁾	Assemble to one Rosemount 1199 Diaphragm Seal			★
K11	1/2–14 NPT female			★
M11 ⁽⁷⁾	G1/2 A DIN 16288 male			★
L11 ⁽⁷⁾	Non-threaded instrument flange (I-flange)			
Transmitter output				
A	4–20 mA with digital signal based on HART protocol			★
Housing style		Material	Conduit entry size	
1A	PlantWeb housing	Aluminum	1/2–14 NPT	★
1B	PlantWeb housing	Aluminum	M20 × 1.5 (CM20)	★
1J	PlantWeb housing	SST	1/2–14 NPT	★
1K	PlantWeb housing	SST	M20 × 1.5 (CM20)	★
1C	PlantWeb housing	Aluminum	G1/2	
1L	PlantWeb housing	SST	G1/2	

Options (include with selected model number)

RTD cable options		Cable length	Protection type	
C12	RTD input	12 ft (3,66 m)	Shielded cable	★
C13	RTD input	24 ft (7,32 m)	Shielded cable	★
C14	RTD input	75 ft (22,86 m)	Shielded cable	★
C22	RTD input	12 ft (3,66 m)	Armored shielded cable	★
C23	RTD input	24 ft (7,32 m)	Armored shielded cable	★
C24	RTD input	75 ft (22,86 m)	Armored shielded cable	★
C32	RTD input	12 ft (3,66 m)	ATEX/IECEx flameproof cable	★
C33	RTD input	24 ft (7,32 m)	ATEX/IECEx flameproof cable	★
C34	RTD input	75 ft (22,86 m)	ATEX/IECEx flameproof cable	★
Mounting brackets⁽⁸⁾				
B4	In-line bracket	All SST	2-in. pipe and panel SST	★

Table 2. Rosemount 3051S Scalable MultiVariable In-line Pressure and Temperature 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.

Software configuration		
C1	Custom software configuration (A Rosemount 3051SMV Configuration Data Sheet must be completed)	★
C4	NAMUR alarm and saturation levels, high alarm	★
C5	NAMUR alarm and saturation levels, low alarm	★
C6	Custom alarm and saturation signal levels, high alarm	★
C7	Custom alarm and saturation signal levels, low alarm	★
C8	Low alarm (standard Rosemount alarm and saturation levels)	★
External ground screw assembly⁽⁹⁾		
D4	External ground screw assembly	★
Conduit plug⁽¹⁰⁾		
DO	316 SST conduit plug	★
Product certifications		
E1	ATEX Flameproof	★
I1	ATEX Intrinsic Safety	★
N1	ATEX Type n	★
ND	ATEX Dust	★
K1	ATEX Flameproof, Intrinsic Safety, Type n, Dust (combination of E1, I1, N1, and ND)	★
E4	TIIS Flameproof	★
E5 ⁽¹¹⁾	FM Explosion-proof, Dust Ignition-proof	★
I5	FM Intrinsically Safe, Division 2	★
K5 ⁽¹¹⁾	FM Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination E5 and I5)	★
E6 ⁽¹¹⁾⁽¹²⁾	CSA Explosion-proof, Dust Ignition-proof, Division 2	★
I6	CSA Intrinsically Safe	★
K6 ⁽¹¹⁾⁽¹²⁾	CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination E6 and I6)	★
E7	IECEX Flameproof	★
I7	IECEX Intrinsic Safety	★
N7	IECEX Type n	★
K7	IECEX Flameproof, Intrinsic Safety, and Type n (combination E7, I7, and N7)	★
E2	INMETRO Flameproof	★
I2	INMETRO Intrinsic Safety	★
E3	China Flameproof	★
I3	China Intrinsic Safety	★
KA ⁽¹¹⁾⁽¹²⁾	ATEX and CSA Explosion-proof, Intrinsically Safe, Division 2 (combination E1, E6, I1 and I6)	★
KB ⁽¹¹⁾⁽¹²⁾	FM and CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination E5, I5, E6, and I6)	★

Table 2. Rosemount 3051S Scalable MultiVariable In-line Pressure and Temperature 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.

KC ⁽¹¹⁾	FM and ATEX Explosion-proof, Intrinsically Safe, Division 2 (combination E5, I5, E1, and I1)	★
KD ⁽¹¹⁾⁽¹²⁾	FM, CSA, and ATEX Explosion-proof, Intrinsically Safe (combination E5, E6, E1, I5, I6 and I1)	★
Drinking water approval⁽¹³⁾		
DW	NSF drinking water certification	★
Shipboard approvals		
SBS	American Bureau of Shipping	★
Alternate materials of construction		
L1	Inert sensor fill fluid (Gage sensors only) Note: Silicone fill fluid is standard.	★
Digital display		
M5	PlantWeb LCD display	★
Special procedures		
P1	Hydrostatic testing with certificate	★
P2 ⁽¹⁴⁾	Cleaning for special services	
P3 ⁽¹⁴⁾	Cleaning for less than 1PPM chlorine/fluorine	
Special certification		
Q4	Calibration certificate	★
QP	Calibration certificate and tamper evident seal	★
Material traceability certification		
Q8	Material traceability certification per EN 10204 3.1B	★
Surface finish certification		
Q16	Surface finish certification for sanitary remote seals	★
Toolkit total system performance reports⁽¹⁵⁾		
QZ	Remote seal system performance calculation report	★
Terminal block⁽⁹⁾		
T1	Transient terminal block	★
Conduit electrical connector⁽¹⁶⁾		
GE	M12, 4-pin, male connector (eurofast)	★
GM	A size mini, 4-pin, male connector (minifast)	★
NACE certificate⁽¹⁷⁾		
Q15	Certificate of compliance to NACE MR0175/ISO 15156 for wetted materials	★
Q25	Certificate of compliance to NACE MR0103 for wetted materials	★

Table 2. Rosemount 3051S Scalable MultiVariable In-line Pressure and Temperature 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.

Cold temperature		
BRR	-58 °F (-50 °C) cold temperature start-up	★
Typical model number: 3051SMV 1 P 6 N G 3 R 2 A11 A1 A M5		

- For detailed specifications see “Specifications” on page 15.
- Specification for absolute pressure only.
- RTD Sensor must be ordered separately.
- Materials of Construction comply with metallurgical requirements highlighted within 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.
- “Assemble to” items are specified separately and require a completed model number.
- Consult an Emerson Process Management representative for performance specifications.
- Range 1-4 only.
- For process connection option code A11, the mounting bracket must be ordered as part of the manifold model number.
- This assembly is included with transient terminal block and certification options E1, N1, K1, ND, E4, E7, N7, K7, E2, E3, KA, KC, and KD.
- Transmitter is shipped with 316 SST conduit plug (uninstalled) in place of standard carbon steel conduit plug.
- Not available with M20 or G 1/2 conduit entry size.
- RTD cable not available with this option.
- Requires 316L SST diaphragm material, glass-filled PTFE O-ring (standard), and process connection option code K11 or M11.
- Not available with process connection option code A11.
- Remote Seal System Performance Calculation Report is only Available with process connection B11.
- Available with Intrinsically Safe approvals only. For FM Intrinsically Safe; Nonincendive approval (option code I5), install in accordance with Rosemount drawing 03151-1009.
- NACE compliant wetted materials are identified by [Footnote 4](#).

Specifications

Performance specifications

For zero-based spans, reference conditions, silicone oil fill, glass-filled PTFE o-rings, SST materials, coplanar flange (3051SMV __5) or 1/2-14 NPT (3051SMV __6) process connections, digital trim values set to equal range points.

Conformance to specification ($\pm 3\sigma$ [sigma])

Technology leadership, advanced manufacturing techniques, and statistical process control ensure pressure measurement specification conformance to $\pm 3\sigma$ or better.

Reference accuracy

Stated reference accuracy equations include terminal based linearity, hysteresis, and repeatability.

Table 3. Transmitter with Coplanar Sensor Module

Gage pressure (3051SMV __5)		
	Ultra	Classic
Ranges 2–4	$\pm 0.025\%$ of span; For spans less than 10:1, $\pm(0.005 + 0.0035[\text{URL}/\text{Span}])\%$ of span	$\pm 0.035\%$ of span; For spans less than 10:1, $\pm(0.015 + 0.005[\text{URL}/\text{Span}])\%$ of span
Range 5	$\pm 0.05\%$ of span; For spans less than 10:1, $\pm(0.005 + 0.0045[\text{URL}/\text{Span}])\%$ of span	$\pm 0.065\%$ of span; For spans less than 10:1, $\pm(0.015 + 0.005[\text{URL}/\text{Span}])\%$ of span
Range 1	$\pm 0.09\%$ of span; For spans less than 15:1, $\pm(0.015 + 0.005[\text{URL}/\text{Span}])\%$ of span	$\pm 0.10\%$ of span; For spans less than 15:1, $\pm(0.025 + 0.005[\text{URL}/\text{Span}])\%$ of span
Absolute pressure (3051SMV __5)		
	Ultra	Classic
Ranges 1–4	$\pm 0.025\%$ of span; For spans less than 10:1, $\pm 0.004\%$ of URL	$\pm 0.035\%$ of span; For spans less than 10:1, $\pm 0.0065\%$ of URL
Range 0	$\pm 0.075\%$ of span; For spans less than 5:1, $\pm(0.025 + 0.01[\text{URL}/\text{Span}])\%$ of span	$\pm 0.075\%$ of span; For spans less than 5:1, $\pm(0.025 + 0.01[\text{URL}/\text{Span}])\%$ of span

Table 4. Transmitter with In-line Sensor Module

Absolute pressure (3051SMV __6) Gage pressure (3051SMV __6)		
	Ultra	Classic
Ranges 1–4	$\pm 0.025\%$ of span; For spans less than 10:1, $\pm 0.004\%$ of URL	$\pm 0.035\%$ of span; For spans less than 10:1, $\pm 0.0065\%$ of URL
Range 5 ⁽¹⁾	$\pm 0.04\%$ of span; For spans less than 10:1, $\pm 0.004\%$ of URL	$\pm 0.065\%$ of span; For spans less than 10:1, $\pm 0.0065\%$ of URL

1. Specification for absolute pressure only.

Process temperature RTD interface

Process temperature (3051SMV__5 or 6)
±0.67 °F (0.37 °C)

Transmitter total performance⁽¹⁾

Total performance is based on combined errors of reference accuracy, ambient temperature effect, and line pressure effect at normal operating conditions (70% of span typical reading, 740 psi [51 bar] line pressure).

Models		Ultra	Classic
3051SMV__5	Ranges 2–4 (A) Ranges 2–5 (G)	±0.1% of span; For ±50 °F (28 °C) temperature changes; 0–100% relative humidity, from 1:1 to 5:1 rangedown	±0.14% of span; For ±50 F (28 °C) temperature changes, 0–100% relative humidity, from 1:1 to 5:1 rangedown
3051SMV__6	Ranges 2–4		

Long term stability

Table 5. Pressure

Models		Ultra	Classic
3051SMV__5	Ranges 2–5	±0.15% of URL for 15 years; for ±50 °F (28 °C) temperature changes, up to 1000 psi (68,95 bar) line pressure	±0.20% of URL for 15 years; for ±50 °F (28 °C) temperature changes, up to 1000 psi (68,95 bar) line pressure
3051SMV__6	Ranges 1–5		

Table 6. Process temperature⁽²⁾

Models		
3051SMV__5 or 6	RTD Interface	The greater of ±0.185 °F (0.103 °C) or 0.1% of reading per year (excludes RTD sensor stability)

Warranty⁽³⁾

Ultra	Classic
15-year limited warranty ⁽⁴⁾	1-year limited warranty ⁽⁵⁾

1. Transmitter total performance specification applies to pressure measurement only.
2. Specifications for process temperature are for the transmitter portion only. The transmitter is compatible with any Pt 100 (100 ohm platinum) RTD. Examples of compatible RTDs include the Rosemount Series 68 and 78 RTD Temperature Sensors.
3. Warranty details can be found in Emerson Process Management Terms and Conditions of Sale, Document 63445, Rev G (10/06).
4. Rosemount Ultra transmitters have a limited warranty of fifteen (15) years from date of shipment. All other provisions of Emerson Process Management standard limited warranty remain the same.
5. Goods are warranted for 12 months from the date of initial installation or 18 months from the date of shipment by seller, whichever period expires first.

Dynamic performance

Table 7. Total Time Response at 75 °F (24 °C), includes Dead Time

	3051SMV__5	3051SMV__6
Range 1	310 ms	140 ms
Range 2	170 ms	
Range 3–5	155 ms	

Table 8. Dead Time

3051SMV__5 or 6	
100 ms (nominal)	

Table 9. Sensor Update Rate

3051SMV__5 or 6	
SP	22 updates per second
RTD interface	1 update per second

Ambient temperature effect**Table 10. Transmitter with Coplanar Sensor Module**

Gage pressure(3051SMV__5)		
	Ultra (per 50 °F [28 °C])	Classic (per 50 °F [28 °C])
Ranges 2–5	±(0.009% URL + 0.025% span) from 1:1 to 10:1; ±(0.018% URL + 0.08% span) from > 10:1 to 200:1	±(0.0125% URL + 0.0625% span) from 1:1 to 5:1; ±(0.025% URL + 0.125% span) from > 5:1 to 150:1
Range 1	±(0.1% URL + 0.25% span) from 1:1 to 50:1	±(0.1% URL + 0.25% span) from 1:1 to 50:1
Absolute pressure (3051SMV__5)		
	Ultra (per 50 °F [28 °C])	Classic (per 50 °F [28 °C])
Ranges 2–4	±(0.0125% URL + 0.0625% span) from 1:1 to 5:1; ±(0.025% URL + 0.125% span) from > 5:1 to 200:1	±(0.0125% URL + 0.0625% span) from 1:1 to 5:1; ±(0.025% URL + 0.125% span) from > 5:1 to 150:1
Range 0	±(0.1% URL + 0.25% span) from 1:1 to 30:1	±(0.1% URL + 0.25% span) from 1:1 to 30:1
Range 1	±(0.0125% URL + 0.0625% span) from 1:1 to 5:1; ±(0.025% URL + 0.125% span) from > 5:1 to 100:1	±(0.0125% URL + 0.0625% span) from 1:1 to 5:1; ±(0.025% URL + 0.125% span) from > 5:1 to 100:1

Table 11. Transmitter with In-line Sensor Module

Absolute pressure (3051SMV__6) Gage pressure (3051SMV__6)		
	Ultra (per 50 °F [28 °C])	Classic (per 50 °F [28 °C])
Ranges 2–4	±(0.009% URL + 0.025% span) from 1:1 to 10:1; ±(0.018% URL + 0.08% span) from >10:1 to 200:1	±(0.0125% URL + 0.0625% span) from 1:1 to 5:1; ±(0.025% URL + 0.125% span) from >5:1 to 150:1
Range 5 ⁽¹⁾	±(0.05% URL + 0.075% span) from 1:1 to 10:1	±(0.05% URL + 0.075% span) from 1:1 to 5:1
Range 1	±(0.0125% URL + 0.0625% span) from 1:1 to 5:1; ±(0.025% URL + 0.125% span) from >5:1 to 100:1	±(0.0125% URL + 0.0625% span) from 1:1 to 5:1; ±(0.025% URL + 0.125% span) from >5:1 to 100:1

1. Specification for absolute pressure only.

Process temperature RTD interface⁽¹⁾

Process temperature (3051SMV__5 or 6)	
Classic and Ultra (per 50 °F [28 °C])	
±0.39 °F (0.216 °C)	

1. Specifications for process temperature are for the transmitter portion only. The transmitter is compatible with any Pt 100 (100 ohm platinum) RTD. Examples of compatible RTDs include Rosemount series 68 and 78 RTD Temperature Sensors.

Mounting position effects

Models	Ultra and Classic MV
3051SMV __5 or 6	Zero shifts to ± 2.5 inH ₂ O (6,22 mbar), which can be zeroed Span: no effect
3051SMV __5 (G)	Zero shifts to ± 1.25 inH ₂ O (3,11 mbar), which can be zeroed Span: no effect

Vibration effect

Less than $\pm 0.1\%$ of URL when tested per the requirements of IEC60770-1 field or pipeline with high vibration level (10–60 Hz 0.21 mm displacement peak amplitude/60–2000 Hz 3g).

For housing style codes 1J, 1K, and 1L:

Less than $\pm 0.1\%$ of URL when tested per the requirements of IEC60770-1 field with general application or pipeline with low vibration level (10–60 Hz 0.15 mm displacement peak amplitude/60–500 Hz 2g).

Power supply effect

Less than $\pm 0.005\%$ of calibrated span per volt change in voltage at the transmitter terminals

Electromagnetic compatibility (EMC)

Meets all industrial environment requirements of EN61326 and NAMUR NE-21⁽¹⁾⁽²⁾. Maximum deviation < 1% span during EMC disturbance⁽³⁾⁽⁴⁾.

1. NAMUR NE-21 is met on Rosemount 3051SMV output type A if no external temperature sensor is attached.
2. NAMUR NE-21 does not apply to wireless output code X.
3. During surge event device may exceed maximum EMC deviation limit or reset; however, device will self-recover and return to normal operation within specified start-up time.
4. Rosemount 3051SMV Measurement Type 1, 3, 5, 6 and 3051SF Measurement Type 1, 3, 5, 7 require shielded cable for the process temperature connection.

Transient protection (option T1)

Tested in accordance with IEEE C62.41.2-2002, Location Category B

6 kV crest (0.5 μ s–100 kHz)

3 kA crest (8 \times 20 microseconds)

6 kV crest (1.2 \times 50 microseconds)

Functional specifications

Range and sensor limits

Table 12. Transmitter with Coplanar Sensor Module

Range	GP Sensor (3051SMV__5)		AP Sensor (3051SMV__5)	
	Lower (LRL) ⁽¹⁾	Upper (URL)	Lower (LRL)	Upper (URL)
0	N/A	N/A	0 psia (0 bar)	5.00 psia (0,34 bar)
1	-25.00 inH ₂ O (-62,16 mbar)	25.00 inH ₂ O (62,16 mbar)	0 psia (0 bar)	30.00 psia (2,06 bar)
2	-250.00 inH ₂ O (-621,60 mbar)	250.00 inH ₂ O (621,60 mbar)	0 psia (0 bar)	150.00 psia (10,34 bar)
3	0.50 psia (34,47 mbar)	1000.00 inH ₂ O (2,48 bar)	0 psia (0 bar)	800.00 psia (55,15 bar)
4	0.50 psia (34,47 mbar)	300.00 psi (20,68 bar)	0 psia (0 bar)	4000.00 psia (275,79 bar)
5	0.50 psia (34,47 mbar)	2000.00 psi (137,89 bar)	N/A	N/A

1. Assumes atmospheric pressure of 14.7 psia (1 bar-a).

Table 13. Transmitter with In-Line Sensor Module

Range	GP Sensor (3051SMV__6)		AP Sensor (3051SMV__6)	
	Lower (LRL) ⁽¹⁾	Upper (URL)	Lower (LRL)	Upper (URL)
1	-14.70 psig (-1,01 bar)	30.00 psig (2,06 bar)	0 psia (0 bar)	30.00 psia (2,06 bar)
2	-14.70 psig (-1,01 bar)	150.00 psig (10,34 bar)	0 psia (0 bar)	150.00 psia (10,34 bar)
3	-14.70 psig (-1,01 bar)	800.00 psig (55,15 bar)	0 psia (0 bar)	800.00 psia (55,15 bar)
4	-14.70 psig (-1,01 bar)	4000.00 psig (275,79 bar)	0 psia (0 bar)	4000.00 psia (275,79 bar)
5	N/A	N/A	0 psia (0 bar)	10000.00 psia (689,47 bar)

1. Assumes atmospheric pressure of 14.7 psia (1 bar-a).

Process temperature RTD interface (3051SMV__5 or 6)⁽¹⁾

Lower (LRL)	Upper (URL)
-328 °F (-200 °C)	1562 °F (850 °C)

1. Transmitter is compatible with any Pt 100 RTD sensor. Examples of compatible RTDs include Rosemount Series 68 and 78 RTD Temperature Sensors.

Minimum span limits

Table 14. Transmitter with Coplanar Sensor Module

Range	GP sensor (3051SMV__5)		AP sensor (3051SMV__5)	
	Ultra	Classic	Ultra	Classic
0	N/A	N/A	0.167 psia (11,51 mbar)	0.167 psia (11,51 mbar)
1	0.50 inH ₂ O (1,24 mbar)	0.50 inH ₂ O (1,24 mbar)	0.30 psia (20,68 mbar)	0.30 psia (20,68 mbar)
2	1.25 inH ₂ O (3,11 mbar)	1.67 inH ₂ O (4,15 mbar)	0.75 psia (51,71 mbar)	1.00 psia (68,94 mbar)
3	5.00 inH ₂ O (12,43 mbar)	6.67 inH ₂ O (16,58 mbar)	4.00 psia (275,79 mbar)	5.33 psia (367,49 mbar)
4	1.50 psig (103,42 mbar)	2.00 psig (137,89 mbar)	20.00 psia (1,38 bar)	26.67 psia (1,83 bar)
5	10.00 psig (689,48 mbar)	13.33 psig (919,01 bar)	N/A	N/A

Table 15. Transmitter with In-line Sensor Module

Range	GP sensor (3051SMV__6)		AP sensor (3051SMV__6)	
	Ultra	Classic	Ultra	Classic
1	0.30 psig (20,68 mbar)	0.30 psig (20,68 mbar)	0.30 psia (20,68 mbar)	0.30 psia (20,68 mbar)
2	0.75 psig (51,71 mbar)	1.00 psig (68,94 mbar)	0.75 psia (51,71 mbar)	1.00 psia (68,94 mbar)
3	4.00 psig (275,79 mbar)	5.33 psig (367,49 mbar)	4.00 psia (275,79 mbar)	5.33 psia (367,49 mbar)
4	20.00 psig (1,38 bar)	26.67 psig (1,83 bar)	20.00 psia (1,38 bar)	26.67 psia (1,83 bar)
5	N/A	N/A	1000.00 psia (68,95 bar)	2000.00 psia (137,89 bar)

Process temperature RTD interface (3051SMV__5 or 6)

Minimum span = 52 °F (11 °C)

Service

Liquid, gas, and vapor applications

4–20 mA HART

Zero and span adjustment

Zero and span values can be set anywhere within the range. Span must be greater than or equal to the minimum span.

Output

Two-wire 4–20 mA is user-selectable for linear or square root output. Digital process variable superimposed on 4–20 mA signal, available to any host that conforms to the HART protocol.

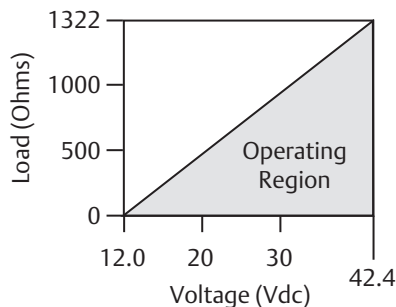
Power supply

External power supply required.

3051SMV: 12 to 42.4 Vdc with no load

Figure 1. Rosemount3051SMV__5 or 6

Maximum loop resistance = $43.5 \times (\text{Power supply voltage} - 12.0)$



The Field Communicator requires a minimum loop resistance of 250Ω for communication.

Overpressure limits

Transmitters withstand the following limits without damage:

Table 16. Coplanar Sensor Module (Single Variable)

Range	GP (3051SMV__5)	AP (3051SMV__5)
0	N/A	60 psia (4,14 bar)
1	2000 psi (137,90 bar)	750 psia (51,71 bar)
2	3626 psi (250,00 bar)	1500 psia (103,42 bar)
3	3626 psi (250,00 bar)	1600 psia (110,32 bar)
4	3626 psi (250,00 bar)	6000 psia (413,69 bar)
5	3626 psi (250,00 bar)	N/A

Table 17. In-line Sensor Module

Range	GP (3051SMV__6)	AP (3051SMV__6)
1	750 psi (51,71 bar)	
2	1500 psi (103,42 bar)	
3	1600 psi (110,32 bar)	
4	6000 psi (413,69 bar)	
5 ⁽¹⁾	15000 psi (1034,21 bar)	

1. Specification for absolute pressure only.

Maximum working pressure limits

Maximum working pressure is the maximum pressure allowed for normal transmitter operation. For a gage or absolute pressure transmitter, the maximum working pressure is the same as the upper range limit (URL). The maximum working pressure of transmitters with assemble-to options is limited by the lowest maximum pressure rating of the individual components.

Burst pressure limits

Coplanar sensor module (3051SMV__5)

10000 psig (689,47 bar)

In-line sensor module (3051SMV__6)

- Ranges 1-4: 11000 psi (758,42 bar)
- Range 5: 26000 psi (1792,64 bar)⁽¹⁾

1. For absolute pressure only.

Temperature limits

Ambient

-40 to 185 °F (-40 to 85 °C)
 With LCD display⁽¹⁾: -40 to 175 °F (-40 to 80 °C)
 With option code P0: -20 to 185 °F (-29 to 85 °C)

1. LCD display may not be readable and LCD display updates will be slower at temperatures below -4 °F (-20 °C).

Storage

-50 to 185 °F (-46 to 85 °C)
 With LCD display: -40 to 185 °F (-40 to 85 °C)

Process temperature limits

At atmospheric pressures and above:⁽¹⁾

Coplanar sensor module	
3051SMV__5	
Silicone fill sensor ⁽²⁾	
with coplanar flange	-40 to 250 °F (-40 to 121 °C) ⁽³⁾
with traditional flange	-40 to 300 °F (-40 to 149 °C) ⁽³⁾
with level flange	-40 to 300 °F (-40 to 149 °C) ⁽³⁾
with 305 integral manifold	-40 to 300 °F (-40 to 149 °C) ⁽³⁾
Inert fill sensor ⁽²⁾	-40 to 185 °F (-40 to 85 °C) ⁽⁴⁾⁽⁵⁾
3051SMV__6	
Silicone fill sensor ⁽²⁾	-40 to 250 °F (-40 to 121 °C) ⁽³⁾
Inert fill sensor ⁽²⁾	-22 to 250 °F (-30 to 121 °C) ⁽³⁾

1. Upper temperature limit is 464 °F (240 °C) for a 2-in. direct-mount extension, 500 °F (260 °C) for a 4-in. direct-mount extension.
2. Process temperatures above 185 °F (85 °C) require derating the ambient limits by a 1.5:1 ratio. For example, for process temperature of 195 °F (91 °C), new ambient temperature limit is equal to 170 °F (77 °C). This can be determined as follows:
 $(195\text{ °F} - 185\text{ °F}) \times 1.5 = 15\text{ °F}$
 $185\text{ °F} - 15\text{ °F} = 170\text{ °F}$
3. 220 °F (104 °C) limit in vacuum service; 130 °F (54 °C) for pressures below 0.5 psia.
4. For 3051SMV__5, 160 °F (71 °C) limit in vacuum service.
5. Not available for 3051SMV__5.A.

Humidity limits

0–100% relative humidity

Turn-on time

When power is applied to the transmitter during startup, performance will be within specifications per the time period described below:

Transmitter	Turn-on time (typical)
3051SMV	5 seconds

Volumetric displacement

Less than 0.005 in³ (0,08 cm³)

Damping

Analog output response time to a step change is user-selectable from 0 to 60 seconds for one time constant. For Rosemount 3051SMV, each variable can be individually adjusted. Software damping is in addition to sensor module response time.

Failure mode alarm

4–20 mA HART (output option code A)

If self-diagnostics detect a gross transmitter failure, the analog signal will be driven offscale to alert the user. Rosemount standard (default), NAMUR, and custom alarm levels are available (see [Alarm configuration](#) below).

High or low alarm signal is hardware-selectable via the switch.

Alarm configuration

	High alarm	Low alarm
Default	≥ 21.75 mA	≤ 3.75 mA
NAMUR compliant ⁽¹⁾	≥ 22.5 mA	≤ 3.6 mA
Custom levels ⁽²⁾	20.2 - 23.0 mA	3.6 - 3.8 mA

1. Analog output levels are compliant with NAMUR recommendation NE 43, see option codes C4 or C5.
2. Low alarm must be 0.1 mA less than low saturation and high alarm must be 0.1 mA greater than high saturation.

Physical specifications

Material selection

Emerson provides a variety of Rosemount products with various product options and configurations including materials of construction that can be expected to perform well in a wide range of applications. The Rosemount product information presented is intended as a guide for the purchaser to make an appropriate selection for the application. It is the purchaser's sole responsibility to make a careful analysis of all process parameters (such as all chemical components, temperature, pressure, flow rate, abrasives, contaminants, etc.), when specifying product materials, options, and components for the particular application. Emerson Process Management is not in a position to evaluate or guarantee the compatibility of the process fluid or other process parameters with the product options, configuration, or materials of construction selected.

Electrical connections

1/2–14 NPT, G1/2, and M20 × 1.5 conduit. HART interface connections fixed to terminal block for Output code A.

Process connections

Coplanar sensor module (3051SMV__5)	
Standard	1/4–18 NPT on 2 1/8-in. centers
Flange adapters	1/2–14 NPT and RC 1/2 on 2-in. (50.8 mm), 2 1/8-in. (54.0 mm), or 2 1/4-in. (57.2 mm) centers
In-line sensor module (3051SMV__6)	
K11	1/2–14 NPT female
L11	Non-threaded instrument flange (available in SST for sensor ranges 1–4 only)
M11	G 1/2 A DIN 16288 male (available in SST for sensor ranges 1–4 only)

Process-wetted parts

Process isolating diaphragms

Coplanar sensor module (3051SMV__5)	
316L SST (UNS S31603), Alloy C-276 (UNS N10276), Gold-plated 316L SST	
B11	Low side process connection is SST
In-line sensor module (3051SMV__6)	
316L SST (UNS S31603), Alloy C-276 (UNS N10276)	

Drain/vent valves

316 SST, Alloy C-276, or Alloy 400/K-500 material (Drain vent seat: Alloy 400, Drain vent stem: Alloy K-500)

Process flanges and flange adapters

Plated carbon steel
 SST: CF-8M (Cast 316 SST) per ASTM A743
 Cast C-276: CW-12MW per ASTM A494
 Cast Alloy 400: M-30C per ASTM A494

Wetted O-rings

Glass-filled PTFE

Non-wetted parts

Electronics housing

Low-copper aluminum alloy or CF-8M (Cast 316 SST)
 Enclosures meet NEMA® Type 4X, IP66, and IP68 (66 ft [20 m] for 168 hours) when properly installed.

Coplanar sensor module housing

SST: CF-3M (Cast 316L SST)

Bolts

Plated carbon steel per ASTM A449, Type 1
 Austenitic 316 SST per ASTM F593
 ASTM A453, Class D, Grade 660 SST
 ASTM A193, Grade B7M alloy steel
 ASTM A193, Class 2, Grade B8M SST
 Alloy K-500

Sensor module fill fluid

Silicone is standard.
 Inert is available as option code (L1).⁽¹⁾
 Inert for in-line series uses Fluorinert™ FC-43.
 Inert for Coplanar series uses Halocarbon.

1. Inert is not available with 3051SMV__5_A.

Paint for aluminum housing

Polyurethane

Cover O-rings

Buna-N

Sensor module weights

Coplanar sensor module ⁽¹⁾
3.1 lb (1,4 kg)
In-line sensor module
1.4 lb (0,6 kg)

1. Flange and bolts not included.

Transmitter weights⁽¹⁾

Transmitter with coplanar sensor module (3051SMV__5)	
PlantWeb housing, SST flange	6.7 lb (3,1 kg)
Transmitter with in-line sensor module (3051SMV__6)	
PlantWeb housing	3.7 lb (1,7 kg)

1. Fully functional transmitter with sensor module, housing, terminal block, and covers. Does not include LCD display.

Transmitter option weights

Option code	Option	Add lb (kg)
1J, 1K, 1L	SST PlantWeb housing	3.5 (1,6)
1A, 1B, 1C	Aluminum PlantWeb housing	1.1 (0,5)
M5	LCD display for Aluminum PlantWeb housing ⁽¹⁾ , LCD display for SST PlantWeb housing ⁽¹⁾	0.8 (0,4) 1.6 (0,7)
B4	SST mounting bracket for coplanar flange	1.2 (0,5)
B4	SST mounting bracket for in-line	1.3 (0,6)

1. Includes LCD display and display cover.

Transmitter component weights

Item	Weight lb (kg)
Aluminum standard cover	0.4 (0,2)
SST standard cover	1.3 (0,6)
Aluminum display cover	0.7 (0,3)
SST display cover	1.5 (0,7)
LCD display ⁽¹⁾	0.1 (0,04)
PlantWeb terminal block	0.2 (0,1)

1. Display only.

Product Certifications

Rev 1.14

European Directive Information

A copy of the EU Declaration of Conformity can be found at the end of the Quick Start Guide. The most recent revision of the EU Declaration of Conformity can be found at EmersonProcess.com/Rosemount.

Ordinary Location Certification

As standard, the transmitter has been examined and tested to determine that the design meets the basic electrical, mechanical, and fire protection requirements by a nationally recognized test laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

Installing Equipment in North America

The US National Electrical Code® (NEC) and the Canadian Electrical Code (CEC) permit the use of Division marked equipment in Zones and Zone marked equipment in Divisions. The markings must be suitable for the area classification, gas, and temperature class. This information is clearly defined in the respective codes.

USA

- E5** US Explosionproof (XP) and Dust Ignition-proof (DIP)
Certificate: 3008216
Standards: FM Class 3600 – 2011, FM Class 3615 – 2006, FM Class 3616 – 2011, FM Class 3810 – 2005, ANSI/NEMA 250 – 2003
Markings: XP CL I, DIV 1, GP B, C, D; T5; DIP CL II, DIV 1, GP E, F, G; CL III; T5(-50 °C ≤ T_a ≤ +85 °C); Factory Sealed; Type 4X
- I5** US Intrinsically Safe (IS) and Nonincendive (NI)
Certificate: 3031960
Standards: FM Class 3600 – 2011, FM Class 3610 – 2007, FM Class 3611 – 2004, FM Class 3810 – 2005, NEMA 250 – 1991
Markings: IS CL I, DIV 1, GP A, B, C, D; CL II, DIV 1, GP E, F, G; Class III; Class 1, Zone 0 AEx ia IIC T4; NI CL 1, DIV 2, GP A, B, C, D; T4(-50 °C ≤ T_a ≤ +70 °C) when connected per Rosemount drawing 03151-1206; Type 4X

Note

Transmitters marked with NI CL 1, DIV 2 can be installed in Division 2 locations using general Division 2 wiring methods or Nonincendive Field Wiring (NIFW). See Drawing 03151-1206.

- IE** US FISCO Intrinsically Safe
Certificate: 3031960
Standards: FM Class 3600 – 2011, FM Class 3610 – 2010, FM Class 3611 – 2004, FM Class 3616 – 2006, FM Class 3810 – 2005, NEMA 250 – 1991
Markings: IS CL I, DIV 1, GP A, B, C, D; T4(-50 °C ≤ T_a ≤ +70 °C); when connected per Rosemount drawing 03151-1006; Type 4X

Canada

- E6** Canada Explosionproof, Dust Ignition-proof, Division 2
Certificate: 1143113
Standards: CAN/CSA C22.2 No. 0-10, CSA Std C22.2 No. 25-1966, CSA Std C22.2 No. 30-M1986, CSA C22.2 No. 94.2-07, CSA Std C22.2 No. 213-M1987, CAN/CSA C22.2 60079-11:14, CAN/CSA-C22.2 No. 61010-1-12, ANSI/ISA 12.27.01-2003, CSA Std C22.2 No. 60529:05 (R2010)
Markings: Explosionproof Class I, Division 1, Groups B, C, D; Dust-Ignitionproof Class II, Division 1, Groups E, F, G; Class III; suitable for Class I, Division 2, Groups A, B, C, D; Type 4X
- I6** Canada Intrinsically Safe
Certificate: 1143113
Standards: CAN/CSA C22.2 No. 0-10, CSA Std C22.2 No. 25-1966, CSA Std C22.2 No. 30-M1986, CSA C22.2 No. 94.2-07, CSA Std C22.2 No. 213-M1987, CAN/CSA C22.2 60079-11:14, CAN/CSA-C22.2 No. 61010-1-12, ANSI/ISA 12.27.01-2003, CSA Std C22.2 No. 60529:05 (R2010)
Markings: Intrinsically Safe Class I, Division 1; suitable for Class 1, Zone 0, IIC, T3C, T_a = 70 °C; when connected per Rosemount drawing 03151-1207; Type 4X
- IF** Canada FISCO Intrinsically Safe
Certificate: 1143113
Standards: CAN/CSA C22.2 No. 0-10, CSA Std C22.2 No. 25-1966, CSA Std C22.2 No. 30-M1986, CSA C22.2 No. 94.2-07, CSA Std C22.2 No. 213-M1987, CAN/CSA C22.2 60079-11:14, CAN/CSA-C22.2 No. 61010-1-12, ANSI/ISA 12.27.01-2003, CSA Std C22.2 No. 60529:05 (R2010)
Markings: FISCO Intrinsically Safe Class I, Division 1; Groups A, B, C, D; suitable for Class I, Zone 0; T3C, T_a = 70 °C; when installed per Rosemount drawing 03151-1207; Type 4X

Europe

E1 ATEX Flameproof

Certificate: KEMA 00ATEX2143X
 Standards: EN 60079-0:2012, EN 60079-1:2007,
 EN 60079-26:2007 (3051SFx models with RTD
 are certified to EN 60079-0:2006)
 Markings: Ⓔ II 1/2 G Ex d IIC T6...T4 Ga/Gb,
 T6(-60 °C ≤ T_a ≤ +70 °C),
 T5/T4(-60 °C ≤ T_a ≤ +80 °C)

Temperature class	Process temperature
T6	-60 °C to +70 °C
T5	-60 °C to +80 °C
T4	-60 °C to +120 °C

Special Conditions for Safe Use (X):

- The device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer's instructions for installation and maintenance shall be followed in detail to assure safety during its expected lifetime.
- For information on the dimensions of the flameproof joints the manufacturer shall be contacted.

I1 ATEX Intrinsic Safety

Certificate: Baseefa08ATEX0064X
 Standards: EN 60079-0:2012, EN 60079-11:2012
 Markings: Ⓔ II 1 G Ex ia IIC T4 Ga, T4(-60 °C ≤ T_a ≤ +70 °C)

Parameter	HART	FOUNDATION™ Fieldbus	SuperModule only	RTD (for 3051SFx)	
				HART	Fieldbus
Voltage U _i	30 V	30 V	7.14 V	30 V	30 V
Current I _i	300 mA	300 mA	300 mA	2.31 mA	18.24 mA
Power P _i	1 W	1.3 W	887 mW	17.32 mW	137 mW
Capacitance C _i	14.8 nF	0	0.11 μF	0	0.8 nF
Inductance L _i	0	0	0	0	1.33 mH

Special Conditions for Safe Use (X):

- If the equipment is fitted with the optional 90 V transient suppressor, it is incapable of withstanding the 500 V isolation from earth test and this must be taken into account during installation.
- The enclosure may be made of aluminum alloy and given a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion if located in a Zone 0 environment.

IA ATEX FISCO

Certificate: Baseefa08ATEX0064X
 Standards: EN 60079-0:2012, EN 60079-11:2012
 Markings: Ⓔ II 1 G Ex ia IIC T4 Ga, T4(-60 °C ≤ T_a ≤ +70 °C)

Parameters	FISCO
Voltage U _i	17.5 V
Current I _i	380 mA
Power P _i	5.32 W
Capacitance C _i	0
Inductance L _i	0

ND ATEX Dust

Certificate: BAS01ATEX1374X
 Standards: EN 60079-0:2012, EN 60079-31:2009
 Markings: Ⓔ II 1 D Ex ta IIIC T105 °C T₅₀₀ 95 °C Da,
 (-20 °C ≤ T_a ≤ +85 °C), V_{max} = 42.4 V

Special Conditions for Safe Use (X):

- Cable entries must be used which maintain the ingress protection of the enclosure to at least IP66.
- Unused cable entries must be filled with suitable blanking plugs which maintain the ingress protection of the enclosure to at least IP66.
- Cable entries and blanking plugs must be suitable for the ambient temperature range of the apparatus and capable of withstanding a 7 J impact test.
- The SuperModule(s) must be securely screwed in place to maintain the ingress protection of the enclosure(s).

N1 ATEX Type n

Certificate: Baseefa08ATEX0065X
 Standards: EN 60079-0:2012, EN 60079-15:2010
 Markings: Ⓔ II 3 G Ex nA IIC T4 Gc, (-40 °C ≤ T_a ≤ 70 °C),
 V_{max} = 45 V

Special Condition for Safe Use (X):

- If fitted with a 90 V transient suppressor, the equipment is not capable of withstanding the 500 V electrical strength test as defined in Clause 6.5.1 of EN 60079-15:2010. This must be taken into account during installation.

International

E7 IECEx Flameproof and Dust

Certificate: IECEx KEM 08.0010X (Flameproof)

Standards: IEC 60079-0:2011, IEC 60079-1:2007, IEC 60079-26:2006 (3051SFx models with RTD are certified to IEC 60079-0:2004)

Markings: Ex d IIC T6...T4 Ga/Gb, T6(-60 °C ≤ T_a ≤ +70 °C), T5/T4(-60 °C ≤ T_a ≤ +80 °C)

Temperature class	Process temperature
T6	-60 °C to +70 °C
T5	-60 °C to +80 °C
T4	-60 °C to +120 °C

Special Conditions for Safe Use (X):

1. The device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer’s instructions for installation and maintenance shall be followed in detail to assure safety during its expected lifetime.
2. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.

Certificate: IECEx BAS 09.0014X (Dust)

Standards: IEC 60079-0:2011, IEC 60079-31:2008

Markings: Ex ta IIIC T105 °C T₅₀₀ 95 °C Da, (-20 °C ≤ T_a ≤ +85 °C), V_{max} = 42.4 V

Special Conditions for Safe Use (X):

1. Cable entries must be used which maintain the ingress protection of the enclosure to at least IP66.
2. Unused cable entries must be filled with suitable blanking plugs which maintain the ingress protection of the enclosure to at least IP66.
3. Cable entries and blanking plugs must be suitable for the ambient temperature range of the apparatus and capable of withstanding a 7J impact test.
4. The Rosemount 3051S - SuperModule must be securely screwed in place to maintain the ingress protection of the enclosure.

I7 IECEx Intrinsic Safety

Certificate: IECEx BAS 08.0025X

Standards: IEC 60079-0:2011, IEC 60079-11:2011

Markings: Ex ia IIC T4 Ga, T4(-60 °C ≤ T_a ≤ +70 °C)

Parameter	HART	FOUNDATION Fieldbus	SuperModule only	RTD (for 3051SFx)	
				HART	Fieldbus
Voltage U _i	30 V	30 V	7.14 V	30 V	30 V
Current I _i	300 mA	300 mA	300 mA	2.31 mA	18.24 mA
Power P _i	1 W	1.3 W	887 mW	17.32 mW	137 mW
Capacitance C _i	14.8 nF	0	0.11 μF	0	0.8 nF
Inductance L _i	0	0	0	0	1.33 mH

Special Conditions for Safe Use (X):

1. If the equipment is fitted with the optional 90 V transient suppressor, it is incapable of withstanding the 500 V isolation from earth test and this must be taken into account during installation.
2. The enclosure may be made of aluminum alloy and given a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion if located in a Zone 0 environment.

IG IECEx FISCO

Certificate: IECEx BAS 08.0025X

Standards: IEC 60079-0:2011, IEC 60079-11:2011

Markings: Ex ia IIC T4 Ga, T4(-60 °C ≤ T_a ≤ +70 °C)

Parameters	FISCO
Voltage U _i	17.5 V
Current I _i	380 mA
Power P _i	5.32 W
Capacitance C _i	0
Inductance L _i	0

N7 IECEx Type n

Certificate: IECEx BAS 08.0026X

Standards: IEC 60079-0:2011, IEC 60079-15:2010

Markings: Ex nA IIC T5 Gc, (-40 °C ≤ T_a ≤ +70 °C)

Special Condition for Safe Use (X):

1. If fitted with a 90 V transient suppressor, the equipment is not capable of withstanding the 500 V electrical strength test as defined in Clause 6.5.1 of IEC 60079-15:2010. This must be taken into account during installation.

Brazil

- E2** INMETRO Flameproof
 Certificate: UL-BR 15.0393X
 Standards: ABNT NBR IEC 60079-0:2008 + Corrigendum 1:2011, ABNT NBR IEC 60079-1:2009 + Corrigendum 1:2011, ABNT NBR IEC 60079-26:2008 + Corrigendum 1: 2008
 Markings: Ex d IIC T* Ga/Gb, T6(-60 °C ≤ T_a ≤ +70 °C), T5/T4(-60 °C ≤ T_a ≤ +80 °C), IP66

Special Conditions for Safe Use (X):

- The device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer's instructions for installation and maintenance shall be followed in detail to assure safety during its expected lifetime.
 - For information on the dimensions of the flameproof joints, the manufacturer shall be contacted.
- I2** INMETRO Intrinsic Safety
 Certificate: UL-BR 15.0357X
 Standards: ABNT NBR IEC 60079-0:2008 + Addendum 1:2011, ABNT NBR IEC 60079-11:2009
 Markings: Ex ia IIC T4 Ga (-60 °C ≤ T_a ≤ +70 °C)

Special Conditions for Safe Use (X):

- If the equipment is fitted with the optional 90 V transient suppressor, it is incapable of withstanding the 500 V isolation from earth test and this must be taken into account during installation.
- For processes with temperatures above 135 °C, the user must assess whether the SuperModule temperature class is suitable for such applications, because in this situation there is a risk of the SuperModule temperature being above T4.

Parameter	HART		Fieldbus	
	Input	RTD	Input	RTD
Voltage U _i	30 V	30 V	30 V	30 V
Current I _i	300 mA	2.31 mA	300 mA	18.24 mA
Power P _i	1 W	17.32 mW	1.3 W	137 mW
Capacitance C _i	14.8 nF	0	0	0.8 nF
Inductance L _i	0	0	0	1.33 mH

China

- E3** China Flameproof and Dust Ignition-proof
 Certificate: 3051SMV: GYJ14.1039X [Mfg USA, China, Singapore]
 3051SFx: GYJ11.1711X [Mfg USA, China, Singapore]
 Standards: 3051SMV: GB3836.1-2010, GB3836.2-2010, GB3836.20-2010
 3051SFx: GB3836.1-2010, GB3836.2-2010, GB3836.20-2010, GB12476.1-2000
 Markings: 3051SMV: Ex d IIC T6/T5 Ga/Gb
 3051SFx: Ex d IIC T6/T5 Ga/Gb; DIP A20 T_A 105 °C; IP66

Special Conditions for Safe Use (X):

- Symbol "X" is used to denote specific conditions of use: For information on the dimensions of the flameproof joints the manufacturer shall be contacted.
- The relationship between T code and ambient temperature range are as follows:

T code	Ambient temperature range
T6	-50 °C ~ +65 °C
T5	-50 °C ~ +80 °C

- The earth connection facility in the enclosure should be connected reliably.
- During installation, use and maintenance of the product in explosive atmosphere, observe the warning "Do not open cover when circuit is alive". During installation, use, and maintenance in explosive dust atmosphere, observe the warning "Do not open when an explosive dust atmosphere is present".
- During installation there should be no mixture harmful to the housing.
- During installation, use and maintenance in explosive dust atmosphere, product enclosure should be cleaned to avoid dust accumulation, but compressed air should not be used.
- During installation in a hazardous location, cable glands and blanking plugs certified by state appointed inspection bodies with Ex d IIC Gb or Ex d IIC Gb DIP A20 [Flowmeters] IP66 type of protection should be used. Redundant cable entries should be blocked with blanking plugs.
- End users are not permitted to change any components, but to contact the manufacturer to avoid damage to the product.
- Maintenance should be done when no explosive gas and dust atmosphere is present.

10. During installation, use and maintenance of this product, observe following standards:
 GB3836.13-1997 “Electrical apparatus for explosive gas atmospheres Part 13: Repair and overhaul for apparatus used in explosive gas atmospheres”
 GB3836.15-2000 “Electrical apparatus for explosive gas atmospheres Part 15: Electrical installations in hazardous area (other than mines)”
 GB3836.16-2006 “Electrical apparatus for explosive gas atmospheres Part 16: Inspection and maintenance of electrical installation (other than mines)”
 GB50257-1996 “Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering”

I3 China Intrinsic Safety
 Certificate: 3051SMV: GY]14.1040X [Mfg USA, China, Singapore]
 3051SFx: GY]11.1707X [Mfg USA, China, Singapore]
 Standards: 3051SMV: GB3836.1-2010, GB3836.4-2010, GB3836.20-2010
 3051SFx: GB3836.1/4-2010, GB3836.20-2010, GB12476.1-2000
 Markings: 3051SMV: Ex ia IIC T4 Ga
 3051SFx: Ex ia IIC T4 Ga, DIP A20 T_A105 °C; IP66

Special Conditions for Safe Use (X):

1. The enclosure may contain light metal, attention should be taken to avoid ignition hazard due to impact or friction.
2. The apparatus is not capable of withstanding the 500 V electrical strength test defined in Clause 6.3.12 of GB3836.4-2010.
3. Ambient temperature range: -60 °C ~ +70 °C.
4. Intrinsically safe electric parameters:

Maximum input voltage: U _i (V)	Maximum input current: I _i (mA)	Maximum input power: P _i (W)	Maximum internal parameters:	
			C _i (nF)	L _i (μH)
30	300	1.0	14.8	0

	Maximum output voltage: U _i (V)	Maximum output current: I _i (mA)	Maximum output power: P _i (W)	Maximum external parameters:	
				C _i (nF)	L _i (μH)
RTD	30	2.31	17.32	0	0
SuperModule	7.14	300	8871.0	110	0

5. The cables between this product and associated apparatus should be shielded cables. The shield should be grounded reliably in non-hazardous area.
6. The product should be used with Ex certified associated apparatus to establish explosion protection system that can be used in explosive gas atmospheres. Wiring and terminals should comply with the instruction manual of the product and associated apparatus.

7. End users are not permitted to change any components, contact the manufacturer to avoid damage to the product.
8. During installation in hazardous location, cable glands, conduit, and blanking plugs certified by state-appointed inspection bodies with DIP A20 IP66 type of protection should be used. Redundant cable entries should be blocked with blanking plugs.
9. During installation, use, and maintenance in explosive dust atmosphere, observe the warning “Do not open when an explosive dust atmosphere is present”.
10. Maintenance should be done when no explosive dust atmosphere is present.
11. During installation, use and maintenance of this product, observe following standards:
 GB3836.13-1997 “Electrical apparatus for explosive gas atmospheres Part 13: Repair and overhaul for apparatus used in explosive gas atmospheres”
 GB3836.15-2000 “Electrical apparatus for explosive gas atmospheres Part 15: Electrical installations in hazardous area (other than mines)”
 GB3836.16-2006 “Electrical apparatus for explosive gas atmospheres Part 16: Inspection and maintenance of electrical installation (other than mines)”
 GB50257-1996- “Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering”

EAC – Belarus, Kazakhstan, Russia

EM Technical Regulation Customs Union (EAC) Flameproof
 Certificate: RU C-US.AA87.B.00094
 Markings: Ga/Gb Ex d IIC T6...T4 X

IM Technical Regulation Customs Union (EAC) Intrinsic Safety
 Certificate: RU C-US.AA87.B.00094
 Markings: 0Ex ia IIC T4 Ga X

Japan

E4 Japan Flameproof
 Certificate: TC19070, TC19071, TC19072, TC19073
 Markings: Ex d IIC T6

Republic of Korea

EP Republic of Korea Flameproof [HART Only]
 Certificate: 12-KB4BO-0180X [Mfg USA],
 11-KB4BO-0068X [Mfg Singapore]
 Markings: Ex d IIC T5 or T6

IP Republic of Korea Intrinsic Safety [HART Only]
 Certificate: 10-KB4BO-0021X [Mfg USA, SMMC]
 Markings: Ex ia IIC T4

Combinations

- K1** Combination of E1, I1, N1, and ND
- K2** Combination of E2 and I2
- K5** Combination of E5 and I5
- K6** Combination of E6 and I6
- K7** Combination of E7, I7, and N7
- KA** Combination of E1, I1, E6, and I6
- KB** Combination of E5, I5, E6, and I6
- KC** Combination of E1, I1, E5, and I5
- KD** Combination of E1, I1, E5, I5, E6, and I6
- KM** Combination of EM and IM
- KP** Combination of EP and IP

Additional Certifications

- SBS** American Bureau of Shipping (ABS) Type Approval
 Certificate: 00-HS145383
 Intended Use: Measure gauge or absolute pressure of liquid, gas or vapor applications on ABS classed vessels, marine, and offshore installations [HART Only]
- SBV** Bureau Veritas (BV) Type Approval
 Certificate: 31910 BV
 Requirements: Bureau Veritas Rules for the Classification of Steel Ships
 Application: Class Notations: AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS [HART Only]
- SDN** Det Norske Veritas (DNV) Type Approval
 Certificate: A-14186
 Intended Use: Det Norske Veritas' Rules for Classification of Ships, High Speed and Light Craft, and Det Norske Veritas' Offshore Standards [HART Only]

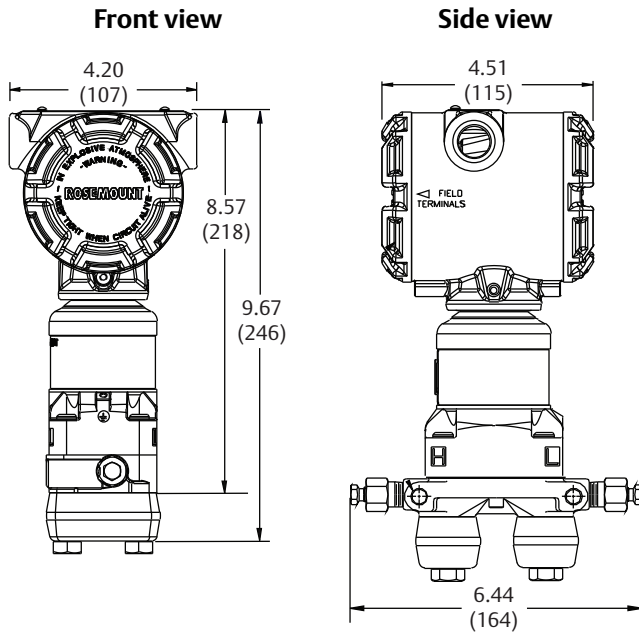
Application:

Location classes	
Type	3051S
Temperature	D
Humidity	B
Vibration	A
EMC	A
Enclosure	D/IP66/IP68

- SLL** Lloyds Register (LR) Type Approval
 Certificate: 11/60002
 Application: Environmental categories ENV1, ENV2, ENV3, and ENV5 [HART Only]

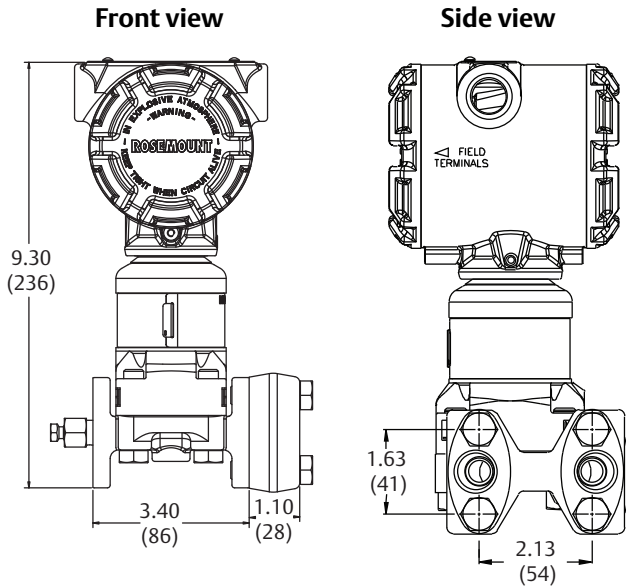
Dimensional drawings

Figure 2. Transmitter with Coplanar Sensor Module and Flange - PlantWeb Housing



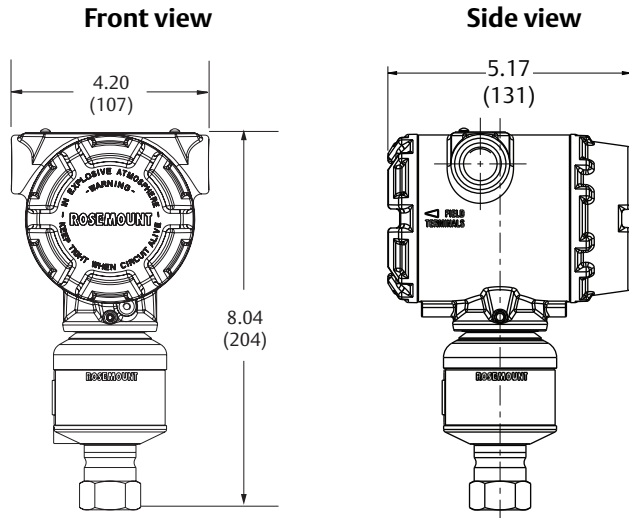
Dimensions are in inches (millimeters).

Figure 3. Transmitter with Coplanar Sensor Module and Traditional Flange - PlantWeb Housing



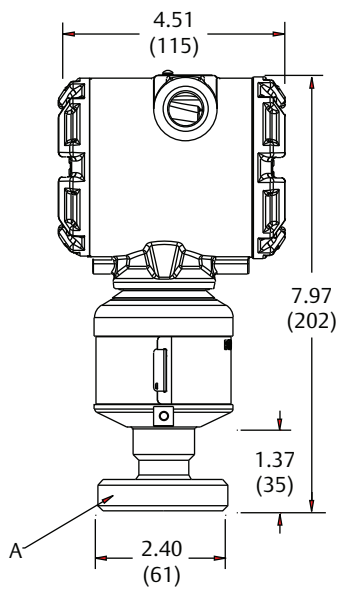
Dimensions are in inches (millimeters).

Figure 4. Transmitter with In-line Sensor Module - PlantWeb Housing⁽¹⁾



Dimensions are in inches (millimeters).

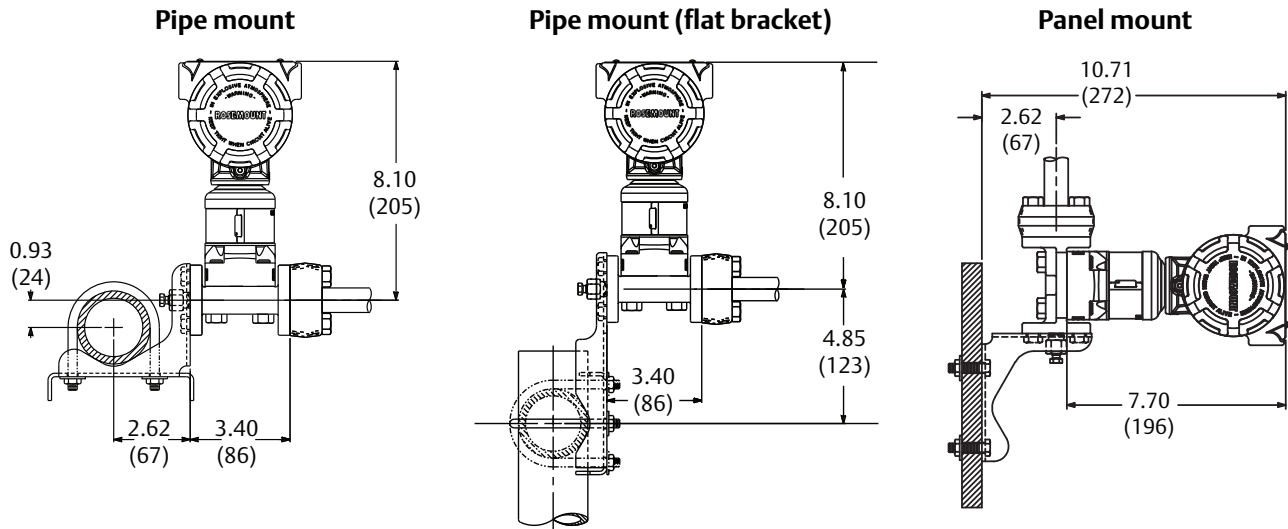
Figure 5. PlantWeb Housing with In-line SuperModule Platform



A. I-flange process connector
 Dimensions are in inches (millimeters).

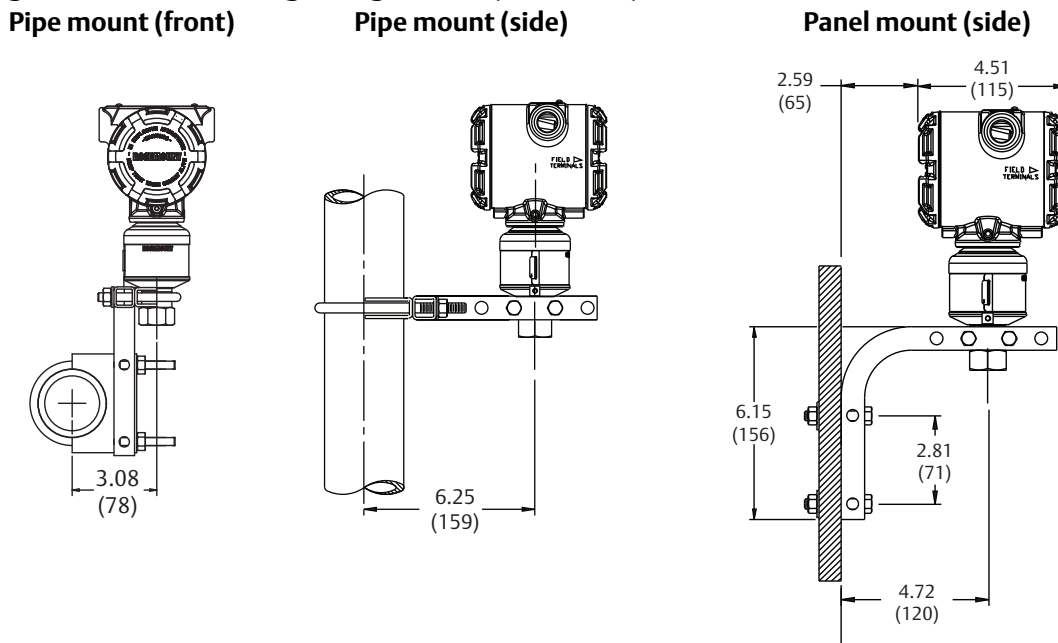
1. For ranges 1A-4A, 1/2-in. NPT 316L SST process wetted connection. For detailed dimensions on other configurations, see Type I drawings at EmersonProcess.com/Rosemount.

Figure 6. Traditional Mounting Configurations



Dimensions are in inches (millimeters).

Figure 7. In-line Mounting Configurations (B4 Bracket)



Dimensions are in inches (millimeters).

Figure 8. Rosemount 3051SMV Scalable Transmitter with FF Seal⁽¹⁾⁽²⁾

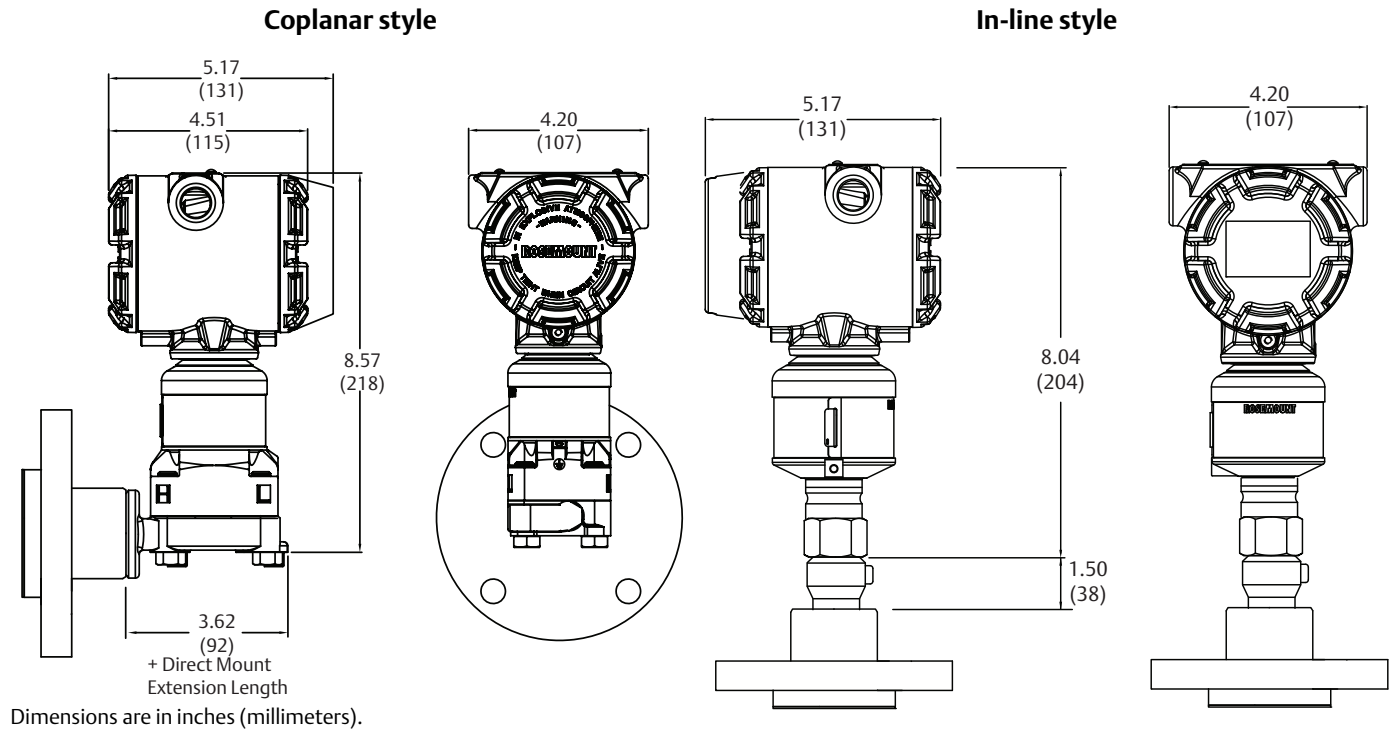
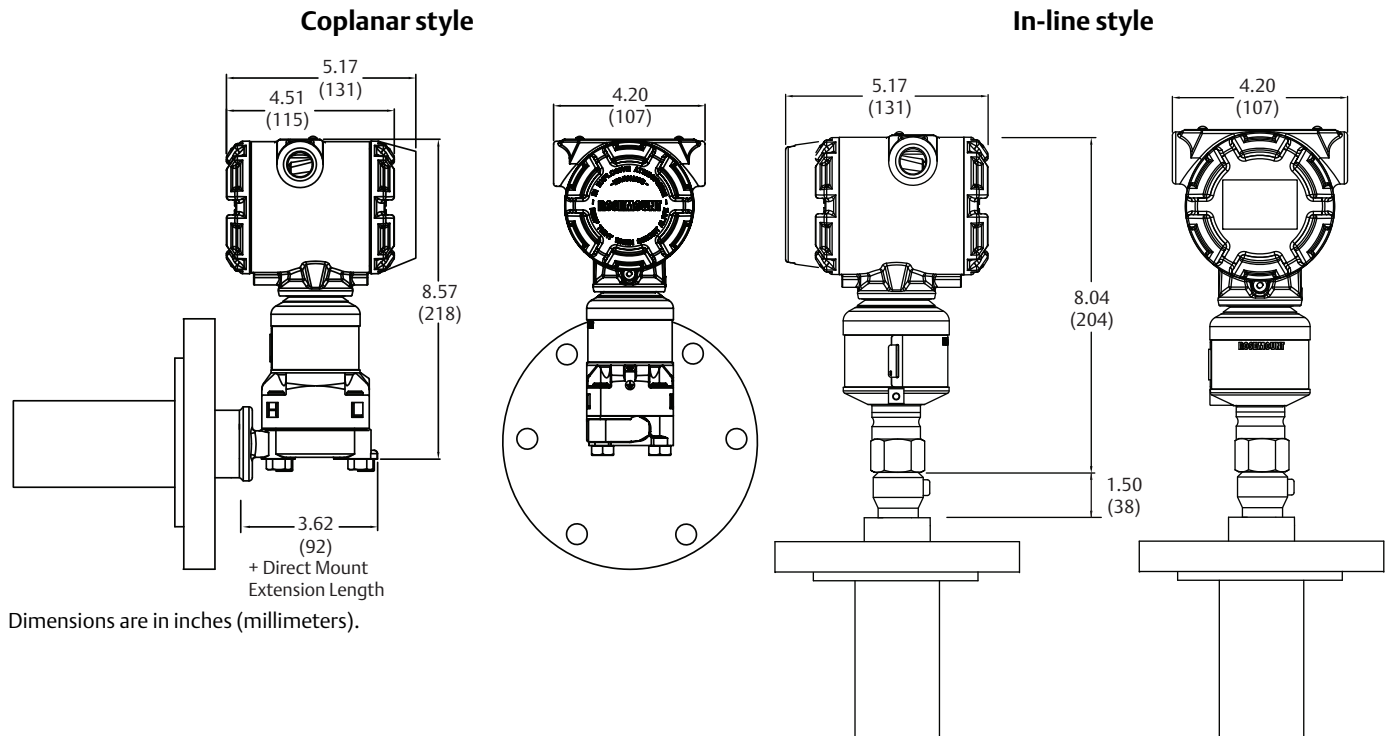
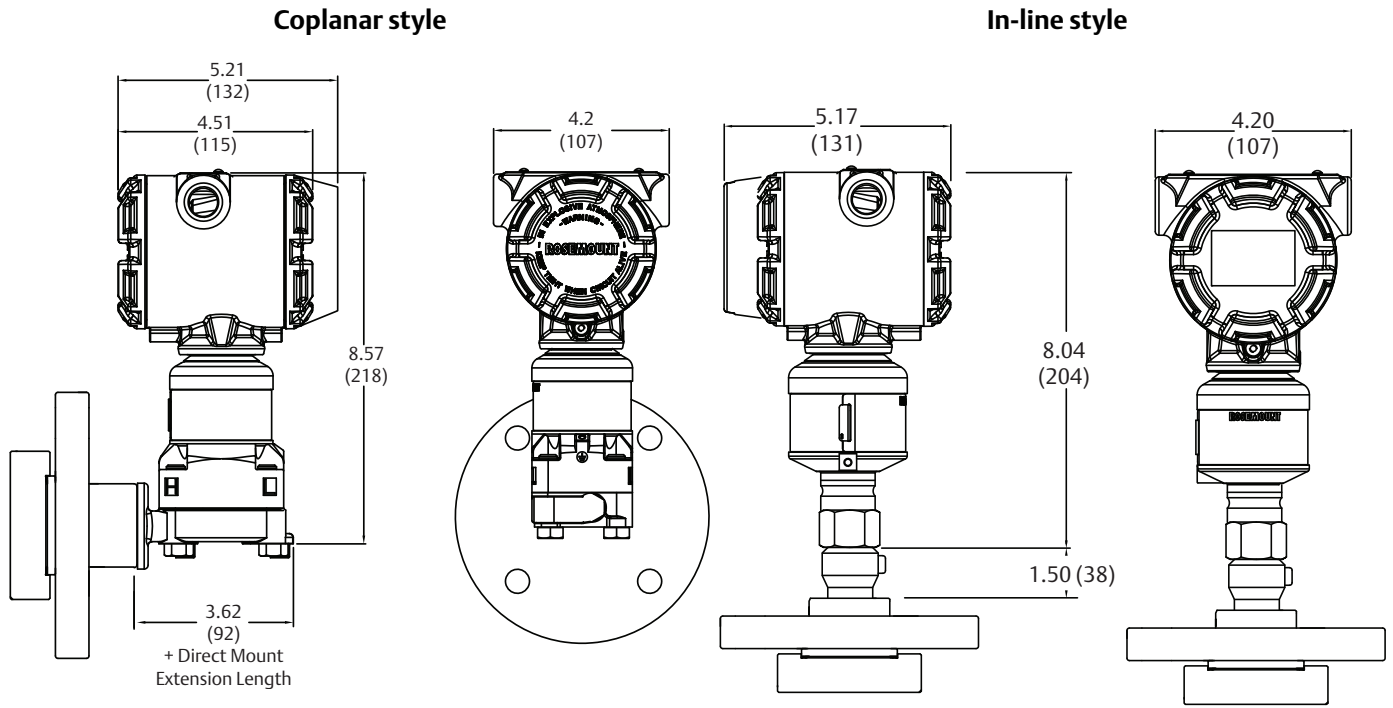


Figure 9. Rosemount 3051SMV Scalable Transmitter with EF Seal⁽³⁾



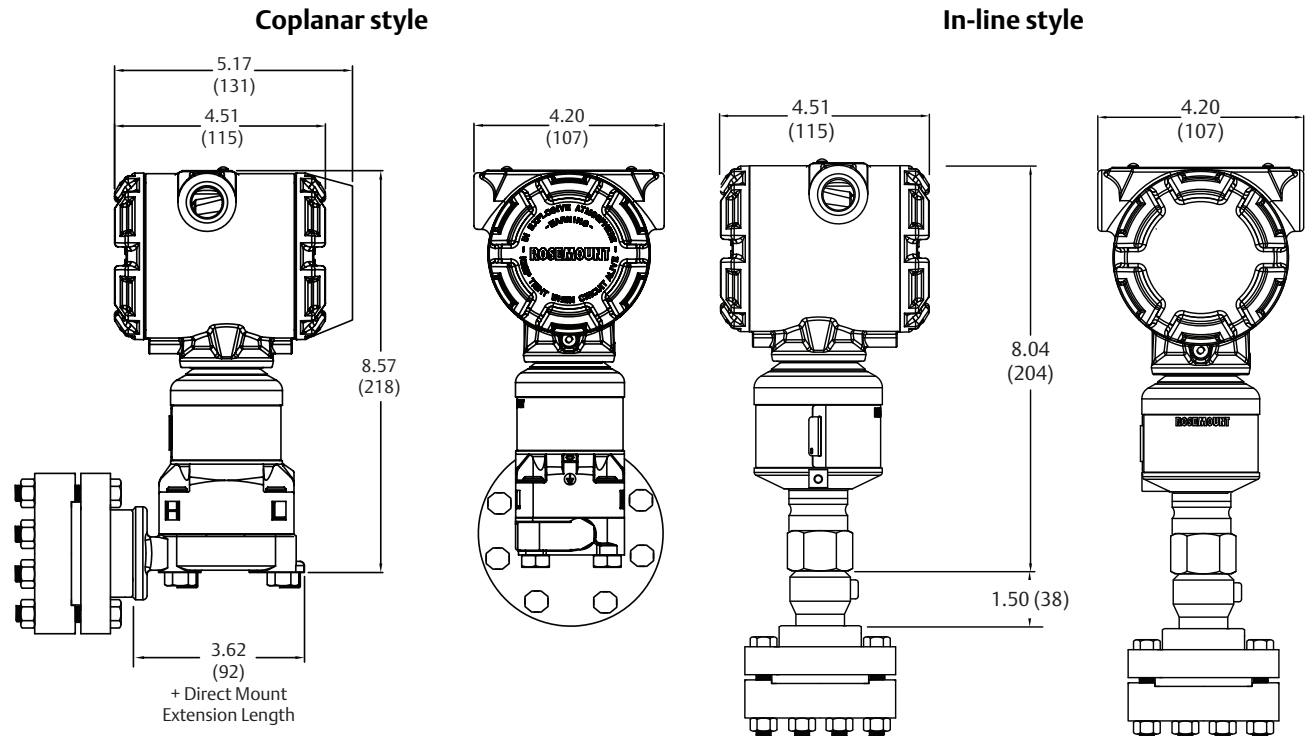
1. FF (FFW) seal dimensions and pressure ratings can be found in the Rosemount DP Level Transmitters and 1199 Remote Seals [Product Data Sheet](#).
2. Lower housing (flushing ring) is available with FFW style flange.
3. EF (EFW) seal dimensions and pressure ratings can be found in the Rosemount DP Level Transmitters and 1199 Remote Seals [Product Data Sheet](#).

Figure 10. Rosemount 3051SMV Scalable Transmitter with RF Seal⁽¹⁾



Dimensions are in inches (millimeters).

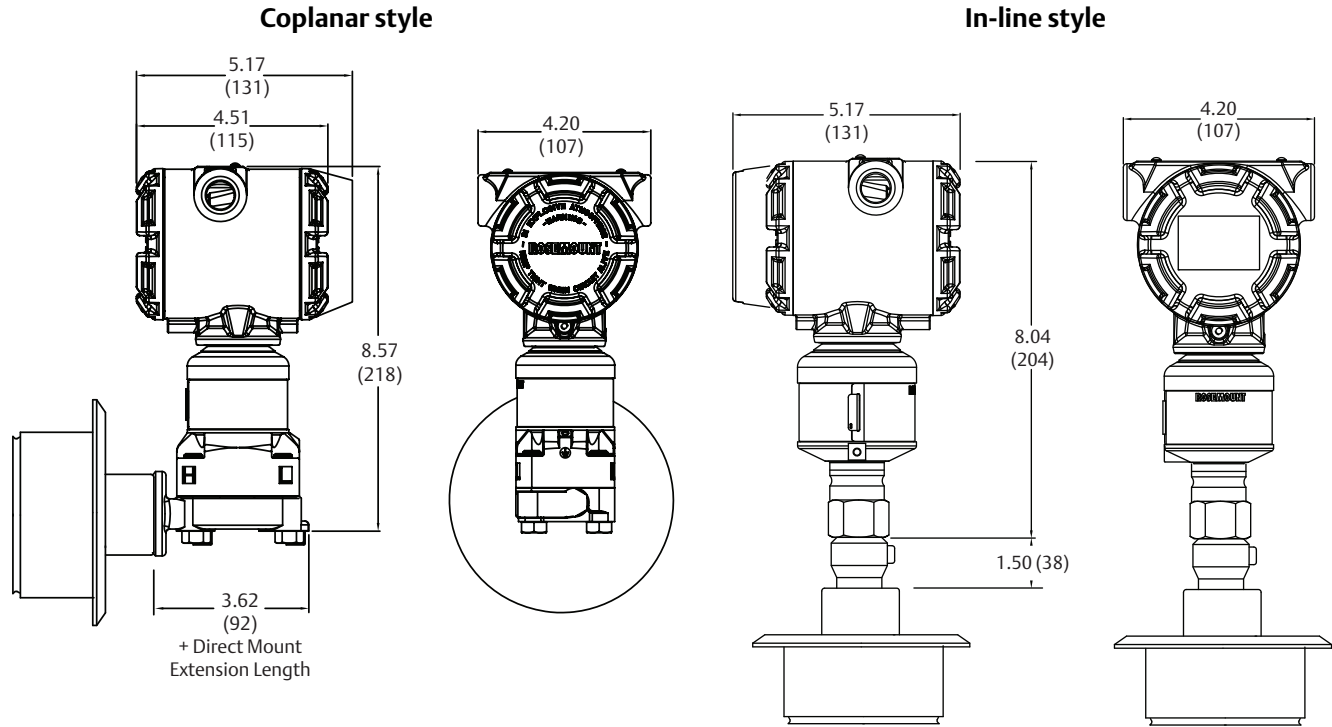
Figure 11. Rosemount 3051SMV Scalable Transmitter with RT Seal⁽²⁾



Dimensions are in inches (millimeters).

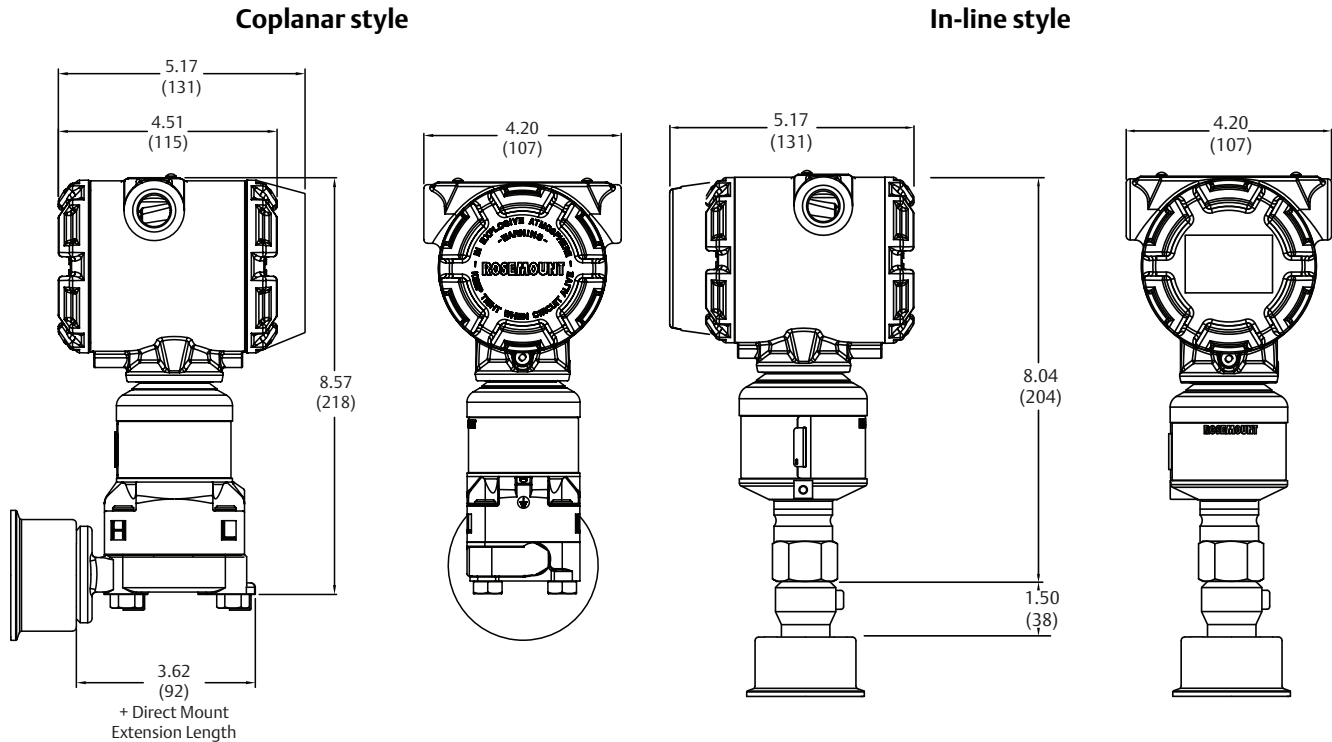
1. RF (RFW) seal dimensions and pressure ratings can be found in the Rosemount DP Level Transmitters and 1199 Remote Seals [Product Data Sheet](#).
 2. RT (RTW) seal dimensions can be found in the Rosemount DP Level Transmitters and 1199 Remote Seals [Product Data Sheet](#).

Figure 12. Rosemount 3051SMV Scalable Transmitter with SS Seal⁽¹⁾



Dimensions are in inches (millimeters).

Figure 13. Rosemount 3051SMV Scalable Transmitter with SC Seal⁽²⁾



Dimensions are in inches (millimeters).

1. SS (SSW) seal dimensions and pressure ratings can be found in the Rosemount DP Level Transmitters and 1199 Remote Seals [Product Data Sheet](#).

2. SC (SCW) seal dimensions and pressure ratings can be found in the Rosemount DP Level Transmitters and 1199 Remote Seals [Product Data Sheet](#).

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