Product Data Sheet
March 2021
00813-0100-4808, Rev HA

Rosemount™ 3051N Smart Pressure Transmitter

for Nuclear Service

CE

Industry leading performance

- Qualified per IEEE Std 344-1987 and IEEE Std 323-1983 (mild environment)
- Superior performance with ±0.075% accuracy
- 100:1 rangeability reduces inventory costs
- Non-interacting zero and span adjustment reduces calibration time
- Adjustable damping
- Internal diagnostics
- Coplanar sensor/process interface for maximum mounting flexibility

EMERSON

Results driven by proven measurement

Introduction

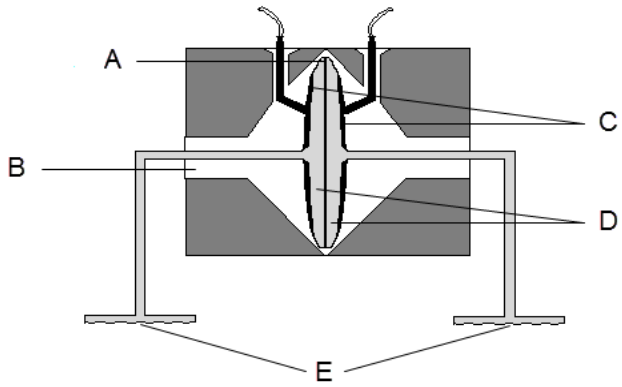
Rosemount 3051N Coplanar™ Smart Pressure Transmitters are designed for precision differential, gauge, and absolute pressure measurements requiring reliable performance and safety. These transmitters are seismically qualified for use in Class 1E safety related applications per IEEE Std 344-1987 at SSE response spectrum levels up to 16.5g's, and per IEEE Std 323-1983 (mild environment).

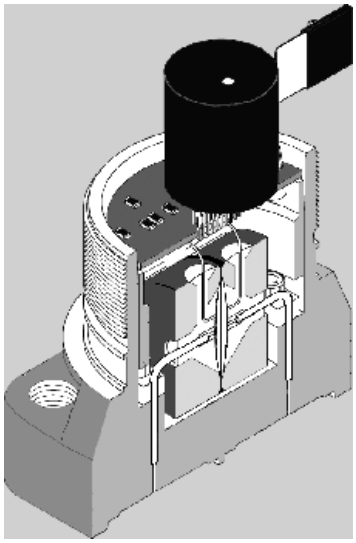
Transmitter functional operation and design

The Rosemount 3051N is designed with a unique patented coplanar sensor/process interface. Performance and reliability improvements over traditional designs are achieved by moving the transmitter sensor from the flange interface into the module neck, thereby reducing flange stress, thermal, and process interface effects. The coplanar sensor platform also allows greater flexibility in process interfaces and mounting configurations.

For differential and gauge pressure measurements, the Rosemount 3051N utilizes capacitance sensor technology similar to that of the Rosemount 3152N, 3153N, and 3154N Transmitters (see Figure 1). Rosemount capacitance technology delivers the highest inherent performance, stability and reliability in the process industry as proven in millions of installations worldwide.

Figure 1. Rosemount 3051ND/NG Sensor Module Typical Cut-away Diagrams





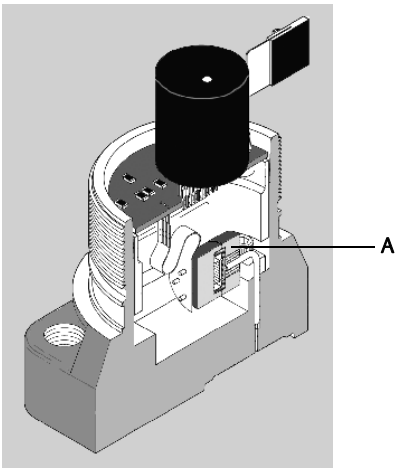
A. Center diaphragm
B. Rigid insulation
C. Capacitor plates
D. Silicone oil
E. Isolating diaphragms

Contents

During operation, process pressure is transmitted through isolating diaphragms and silicone oil fill fluid to a center diaphragm in the alpha-cell capacitance sensor (see Figure 1). The displacement of the center diaphragm is proportional to the pressure differential across it. The position of the center diaphragm is detected through differential capacitance between it and capacitor plates located on each side. The differential capacitance is processed electronically through a microprocessor to a 2 wire 4–20mA (digital) HART® (Highway Addressable Remote Transducer) output signal. Each unit completes a compensation and verification process during manufacturing where the unique sensor characteristics are measured over pressure and temperature and retained in the device to optimize performance over a wide operating range.

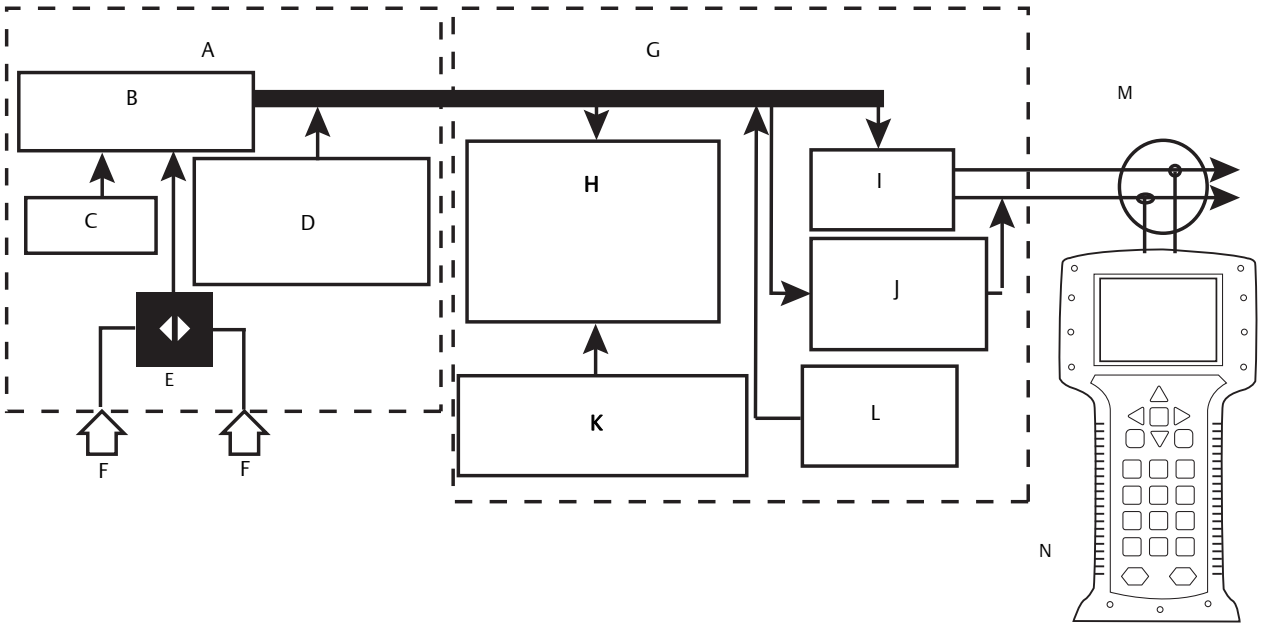
For absolute pressure measurements, the Rosemount 3051N utilizes piezoelectric silicon sensor technology designed and manufactured at the Rosemount Solid State Technology Center (see Figure 2).

Figure 2. Rosemount 3051NA Sensor Module Typical Cut-away Diagram



A. Piezoelectric silicon sensor

Figure 3. Rosemount 3051N Differential Pressure Transmitter 4–20 mA Block Diagram



A. Sensor module
B. Signal processing
C. Temperature sensor
D. Sensor module memory
E. Capacitive sensor
F. Pressure
G. Electronics board
H. Microcomputer (sensor linearization, rerange, damping, diagnostics, engineering, communication)
I. Digital-to-analog signal
J. Digital communication
K. Module memory (rerange values, configuration)
L. Local span and zero adjustment
M. 4-20 mA signal to control system
N. HART Communicator 275, 375, or 475

Specifications

Nuclear specifications

Qualified for nuclear use per IEEE Std 344-1987 and IEEE Std 323-1983 (mild environment) as documented in Rosemount Report D2001019.

Seismic

Table 1. Seismic Specifications Summary

Model		Range code	During seismic accuracy[1]	Post seismic accuracy	Specified seismic maximum working pressure	Structural integrity
3051ND	Differential	0[2]	1.5% of URL (adjustable damping ≥ 3.2 s)	0.25% of URL	750 psi (5,2 MPa)	Maintained throughout specified seismic disturbance
		1[3]	0.75% of URL (adjustable damping ≥ 1.6 s)	0.25% of span	2000 psi (13,8 MPa)	
		2[3]	0.75% of URL (adjustable damping ≥ 0.8 s)		3000 psi (20,7 MPa) (glass-filled TFE O-ring) 2000 psi (13,8 MPa) (EPR O-ring)	
		3	0.75% of URL			
		4	0.25% of URL			
		5				
3051NG	Gauge	2[3]	0.75% of URL (adjustable damping ≥ 0.8 s)		Upper Range Limit	
		3	0.75% of URL			
		4	0.25% of URL			
		5				
3051NA	Absolute	1	not specified	not specified		
		2	0.25% of URL	0.25% of span		
		3				
		4			3000 psia (20,7 MPa) (glass-filled TFE O-ring) 2000 psi (13,8 MPa) (EPR O-ring)	

1. User-adjustable damping set at ≥0.4 s unless otherwise noted.
2. Mounting bracket Option Code BS required for Range 0 specified "During Seismic Accuracy" performance.
3. Mounting bracket (Option Code B2, BS, or PM) required for specified "During Seismic Accuracy" performance.

Environmental

Performance to normal operating limits as described in the Performance specifications and Functional specifications sections of this document.

Quality assurance program

In accordance with 10CFR50 Appendix B, ISO 9001:2008

Nuclear cleaning

To 1 ppm chloride content

Hydrostatic testing

Model	Range code	Hydrostatic test pressure[1]
3051ND	0 1 2–5	750 psi 2000 psi 4200 psi
3051NG	2–5	150% of maximum working pressure[2]
3051NA	1–4	

1. Process O-ring Code A (glass filled TFE).
2. Maximum working pressure equals upper range limit (URL).

Performance specifications

Based upon zero-based calibrations, reference conditions, 4–20mA analog output, and digital trim values equal to the span setpoints

Reference accuracy[1]

Includes hysteresis, terminal-based linearity, and repeatability

Rosemount 3051ND

Range code	Reference accuracy
0	± 0.10% calibrated span from 1:1 to 2:1 RDF ± 0.05% upper range limit from 2:1 to 30:1 RDF
1	± 0.10% calibrated span from 1:1 to 15:1 RDF ± (0.005% URL + 0.025% span) from 15:1 to 50:1 RDF
2 – 5	± 0.075% calibrated span from 1:1 to 10:1 RDF ± (0.005% URL + 0.025% span) from 10:1 to 100:1 RDF

Rosemount 3051NG

Range code	Reference accuracy
2 – 5	± 0.075% calibrated span from 1:1 to 10:1 RDF ± (0.005% URL + 0.025% span) from 10:1 to 100:1 RDF

Rosemount 3051NA

Range code	Reference accuracy
1 – 4	± 0.075% calibrated span from 1:1 to 10:1 RDF ± (0.0075% URL) from 10:1 to 100:1 RDF

Drift

Rosemount 3051ND, NG, NA

Range code	Drift
1	± (0.2% URL + 0.2% span) for 30 months
2 – 5	± 0.2% URL for 30 months

Ambient temperature effect[1][2]

Rosemount 3051ND/NG

Range code	Ambient temperature effect per 50° F (28° C)
0	± (0.25% URL + 0.05% span)
1	± (0.1% URL + 0.25% span) from 1:1 to 30:1 ± (0.14% URL + 0.15% span) from 30:1 to 50:1
2 – 5	± (0.0125% URL + 0.0625% span) from 1:1 to 5:1 ± (0.025% URL + 0.125% span) from 5:1 to 100:1

Rosemount 3051NA

Range code	Ambient temperature effect per 50° F (28° C)
1 – 4	± (0.025% URL + 0.125% span) from 1:1 to 30:1 ± (0.035% URL + 0.125% span) from 30:1 to 100:1

Overpressure effect

Maximum zero shift after overpressure of Maximum Working Pressure

Rosemount 3051ND

Range code	Overpressure effect
0 – 3	± 0.5% URL
4 – 5	± 3.0% URL

Rosemount 3051NG

Range code	Overpressure effect
2 – 4	± 0.25% URL
5	± 0.30% URL

Rosemount 3051NA

Range code	Overpressure effect
1 – 4	± 0.05% URL

1. *RDF = Range Down Factor = URL / Calibrated Span*

2. *Exposure of isolator diaphragms to process temperatures above 185 °F (85 °C) but below 250 °F (121 °C) produces a temperature effect of ±1.0% of calibrated span in addition to the effects listed.*

Static pressure effect

Rosemount 3051ND

Zero Error (can be calibrated out at line pressure)
Per 1000 psi (6,9 MPa) line pressure

Range code	Static pressure zero effect[1]
0[2]	± 0.125% URL for Ps ≤ 750 psi (5,2 MPa)
1	± 0.25% URL for Ps ≤ 2000 psi (13,8 MPa)
2, 3	± 0.05% URL for Ps ≤ 2000 psi (13,8 MPa) ± [0.1 + 0.1 (Ps-2000) / 1000]% URL for Ps > 2000 psi (13,8 MPa) ≤ 3626 psi (25 MPa)
4, 5	± 0.1% URL for Ps ≤ 2000 psi (13,8 MPa) ± [0.2 + 0.2 (Ps-2000) / 1000]% URL for Ps > 2000 psi (13,8 MPa) ≤ 3626 psi (25 MPa)

1. Ps equals static line pressure applied.
2. Specification for Rosemount 3051N Range 0 is expressed in [% per 100 psi (689 KPa)].

Rosemount 3051ND

Span Error
Per 1000 psi (6,9 MPa) line pressure

Range code	Static pressure span effect
0[1]	± 0.15% input reading
1	± 0.40% input reading
2, 3	± 0.10% input reading
4, 5	± 0.20% input reading (uncertainty after calibration correction for systematic effects)

1. Specification for Rosemount 3051N Range 0 is expressed in [% per 100 psi (689 KPa)] up to 750 psi (5 171 KPa).

Power supply effect

Less than ±0.005% of calibrated span per volt for RDF ≤ 10

Load effect

No load effect other than change in voltage supplied to the transmitter

Mounting position effect

Rosemount 3051ND/NG

Zero shifts up to ±1.25 inH_20 (0,31 KPa), which can be calibrated out; no span effect

Rosemount 3051NA

Zero shifts up to 2.5 inH_20 (63,5 mm), which can be calibrated out; no span effect

Functional specifications

Service

Liquid, gas, or vapor

Output

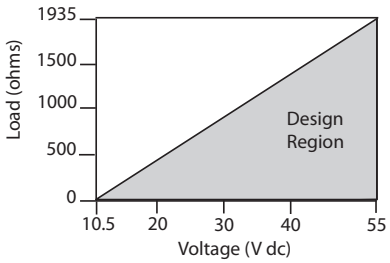
4–20 mA, user-selectable for linear or
square root output; digital signal based on HART protocol

Power supply

Load limitations

Maximum loop resistance is determined by the voltage level of the external power supply, as described by:

Max. Loop Resistance = 43.5 (Power Supply Voltage – 10.5) ohms



Communication requires a minimum loop resistance of 250 ohms.

Temperature limits

Ambient

0 to 185 °F (-18 to 85 °C)

with meter option:
0 to 175 °F (-18 to 80 °C)

Process[1][2][3]

0 to 250 °F (-18 to 121 °C) coplanar flange

0 to 300 °F (-18 to 149 °C) traditional flange

Storage

0 to 212 °F (-18 to 100 °C)

with meter option:
0 to 185 °F (-18 to 85 °C)

1. *Process temperatures above 185 °F (85 °C) require derating the ambient temperature limits by 1.5 °F per degree above 185 °F.*
2. *220 °F (104 °C) limit in vacuum service; 130 °F (54 °C) for pressures below 0.5 psia.*
3. *EPR process O-ring is limited to 150 °F (66 °C) process temperature..*

Span and zero, zero elevation, and suppression

Zero and span values can be set anywhere within the range limits stated in Table 2 and Table 3, providing sensor limits are not exceeded.

Span must be greater than or equal to the minimum span stated in Table 2 and Table 3.

Table 2. Rosemount 3051ND and 3051NG Range and Sensor Limits

Range	Minimum span	Range and sensor limits		
	Rosemount 3051ND/NG	Upper (URL)	Lower (LRL)	
			Rosemount 3051ND	Rosemount 3051NG
0	0.1 in$H_2$0 (25 Pa)	3.0 in$H_2$0 (750 Pa)	-3.0 in$H_2$0 (-750 Pa)	NA
1	0.5 in$H_2$0 (0,12 kPa)	25 in$H_2$0 (6,22 kPa)	-25 in$H_2$0 (-6,22 kPa)	NA
2	2.5 in$H_2$0 (0,62 kPa)	250 in$H_2$0 (62,2 kPa)	-250 in$H_2$0 (-62,2 kPa)	-250 in$H_2$0 (-62,2 kPa)
3	10 in$H_2$0 (2,48 kPa)	1000 in$H_2$0 (248 kPa)	-1000 in$H_2$0 (-248 kPa)	0.5 psia (3,5 kPa abs)
4	3 psi (20,7 kPa)	300 psi (2 070 kPa)	-300 psi (-2 070 kPa)	0.5 psia (3,5 kPa abs)
5	20 psi (138 kPa)	2000 psi (13 800 kPa)	-2000 psi (-13 800 kPa)	0.5 psia (3,5 kPa abs)

Table 3. Rosemount 3051NA Range and Sensor Limits

Range	Minimum span	Range and sensor limits	
		Upper (URL)	Lower (LRL)
1	0.3 psia (2,07 kPa abs)	30 psia (206,8 kPa abs)	0 psia (0 kPa abs)
2	1.5 psia (10,34 kPa abs)	150 psia (1 034,2 kPa abs)	0 psia (0 kPa abs)
3	8 psia (55,16 kPa abs)	800 psia (5 515,8 kPa abs)	0 psia (0 kPa abs)
4	40 psia (275,8 kPa abs)	4000 psia (27 580 kPa abs)	0 psia (0 kPa abs)

Humidity limits

0-100% relative humidity

Volumetric displacement

Less than 0.005 in^3 (0,08 cm^3)

Turn-on time

2 seconds maximum

Response time

Dead time (T_d)
Maximum dead time before analog output reacts to step change in input = 0.1 seconds

Update rate
20 times per second minimum

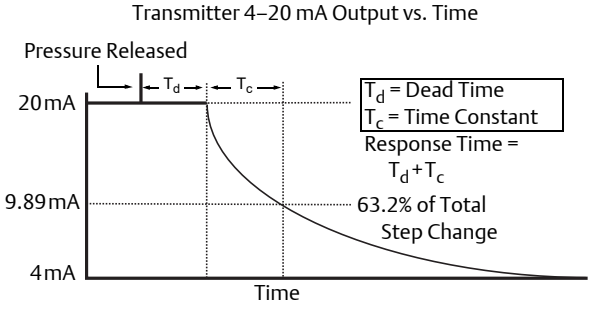
Minimum time constant (T_c)

At 70 °F, with minimum damping setting

Range code	Minimum time constant (T_c) including dead time (T_d)
0	≤ 1.0 seconds
1	≤ 0.5 seconds
2 - 5	≤ 0.2 seconds

Adjustable damping
Time constant on analog output is incrementally adjustable from the minimum values stated above to 25.6 seconds nominal.

Figure 4. Typical Smart Transmitter Response Time



Maximum working pressure[1][2]

Rosemount 3051ND
Static pressure limit

Rosemount 3051NG and 3051NA
Upper range limit

1. *EPR process O-ring (Code B) is limited to 2000 psi maximum working pressure.*
2. *See Table 1 for specified Seismic Maximum Working Pressure.*

Static pressure limits

Operates within specifications between static line pressures stated below:

Rosemount 3051ND only

Range code	Static pressure limits
0	0.5 psia to 750 psig (3,4 kPa abs to 5,2 MPa)
1	0.5 psia to 2000 psig (3,4 kPa abs to 13,8 MPa)
2 – 5[1]	0.5 psia to 3626 psig (3,4 kPa abs to 25 MPa)

1. EPR process O-ring (Code B) is limited to 2000 psi maximum working pressure.

Overpressure limits

Transmitters withstand the following overpressure without damage:

Rosemount 3051ND/NG

Range code	Overpressure limits
0	750 psig (5,2 MPa)
1	2000 psig (13,8 MPa)
2 – 5[1]	3626 psig (25 MPa)

1. EPR process O-ring (Code B) is limited to 2000 psi maximum working pressure.

Rosemount 3051NA

Range code	Overpressure limits
1	120 psia (827 kPa)
2	300 psia (2 070 kPa)
3	1600 psia (11 030 kPa)
4[1]	6000 psia (41 370 kPa)

1. EPR process O-ring (Code B) is limited to 2000 psi maximum working pressure

Burst pressure

Minimum burst pressure is 10,000 psig (69 MPa)

Physical specifications

Materials of construction

Isolating diaphragms
316L SST

Drain/vent valves
316 SST

Process flanges
CF-8M (cast version of 316 SST)

Process O-rings
Glass-filled TFE, Ethylene propylene (optional)

Fill fluid
Silicone oil

Flange bolts
Plated carbon steel, per ASTM A449, Type 1 or SAE J492 Grade 5 (austenitic 316 SST per ASTM F593 for the Rosemount 3051N Range Code 0)

Electronics housing
Low-copper aluminum with polyurethane paint, or CF-8M (cast version of 316 SST)

Non-wetted O-rings
Ethylene propylene elastomer

Sensor module housing
CF-3M (cast version of 316L SST per ASTM-A743)

Mounting bracket
AISI 1010 steel or JIS G3131 SPHC P/O steel with polyurethane paint (Option Code B2), 304 SST per ASTM 554 (Option Code B4), 316L SST (Option Code BS), or SST (Option Code PM)

Mounting bolts (bracket-to-transmitter)
Carbon steel, per ASTM A449, Type 1 or SAE J429 Grade 5 (Option Code B2, BS, PM), 316 SST per ASTM F-593 (Option Code B4)

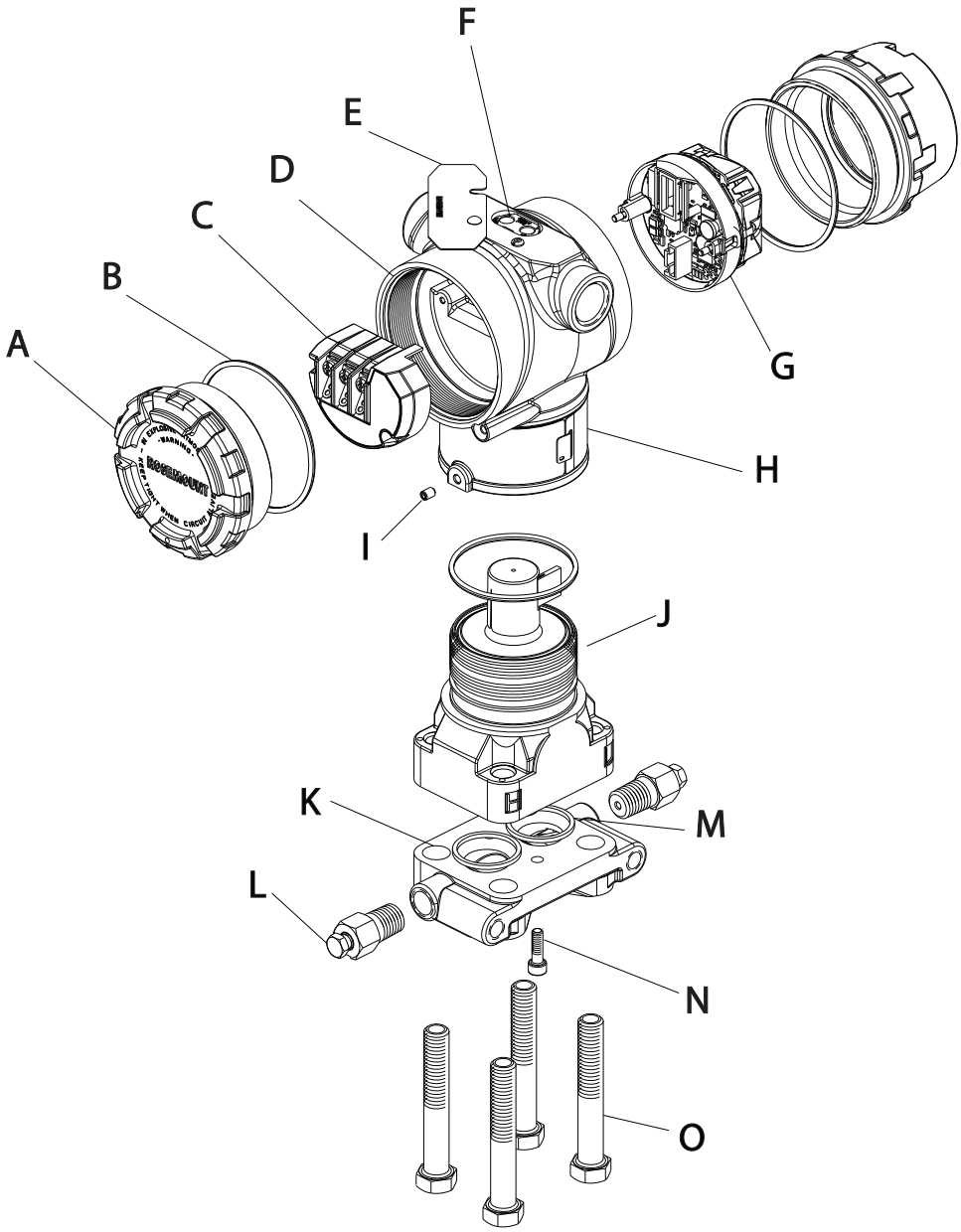
Process connections
1/4-18 NPT

Electrical connections
1/2-14 NPT conduit with screw terminals

Weight
Transmitter without options: 6.0 lb (2,7 kg) (see table below for additional weights)

Option code	Description	Add:
J	Stainless steel housing	3.1 lb (1,4 kg)
H2	Traditional flange	2.4 lb (1,1 kg)
M5	LCD display meter for aluminum housing	0.5 lb (0,2 kg)
M6	LCD display meter for sst housing	1.25 lb (0,6 kg)
B2	Carbon steel panel mounting bracket for traditional flange	2.3 lb (1,0 kg)
B4	SST mounting bracket for coplanar flange	1.0 lb (0,5 kg)
BS	Universal SST panel bracket for traditional flange	3.4 lb (1,5 kg)
PM	2-in. pipe mount assembly for traditional flange	6.8 lb (3.0 kg)

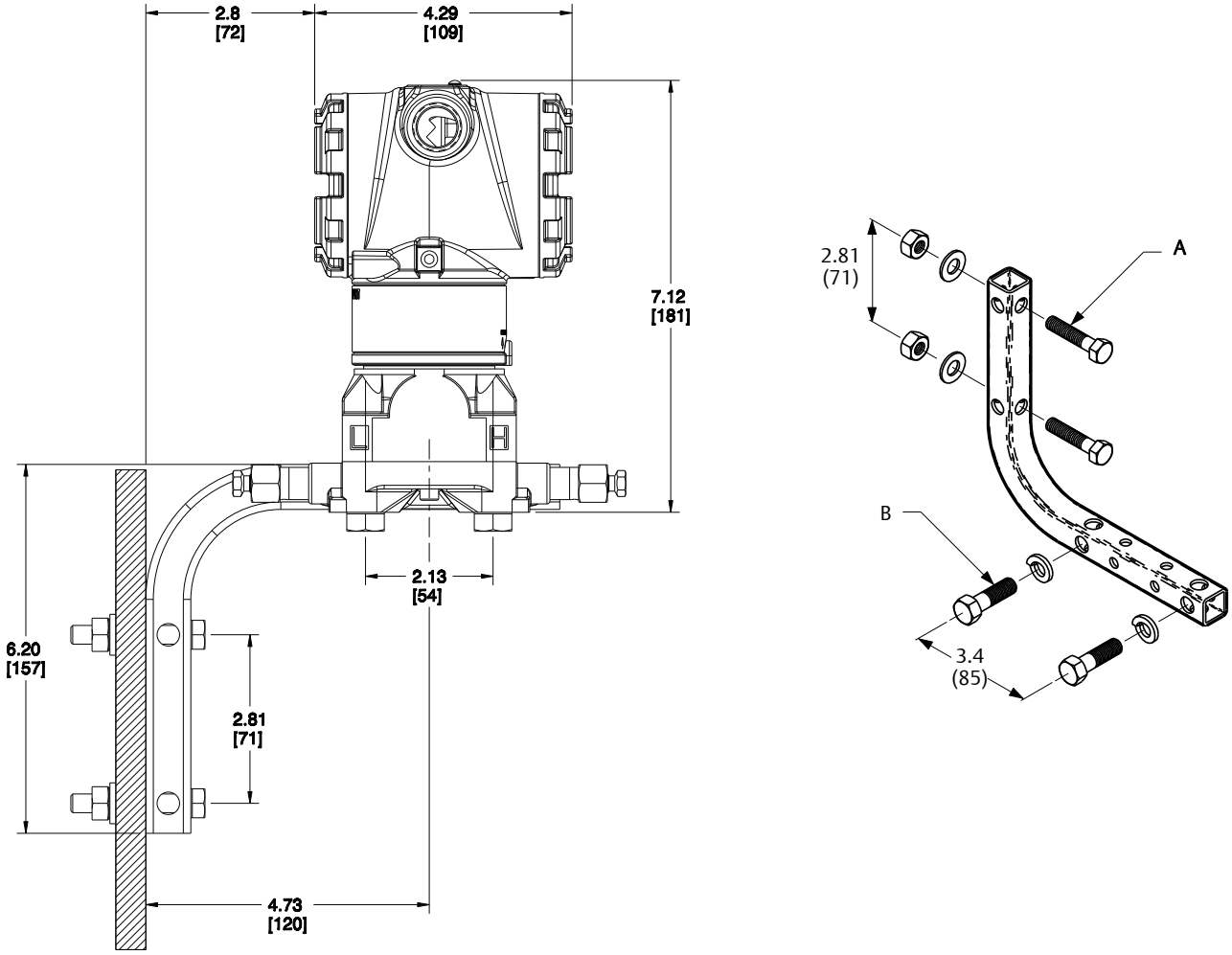
Figure 5. Rosemount 3051N Exploded View (with Coplanar Process Flange)



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

Dimensional Drawings

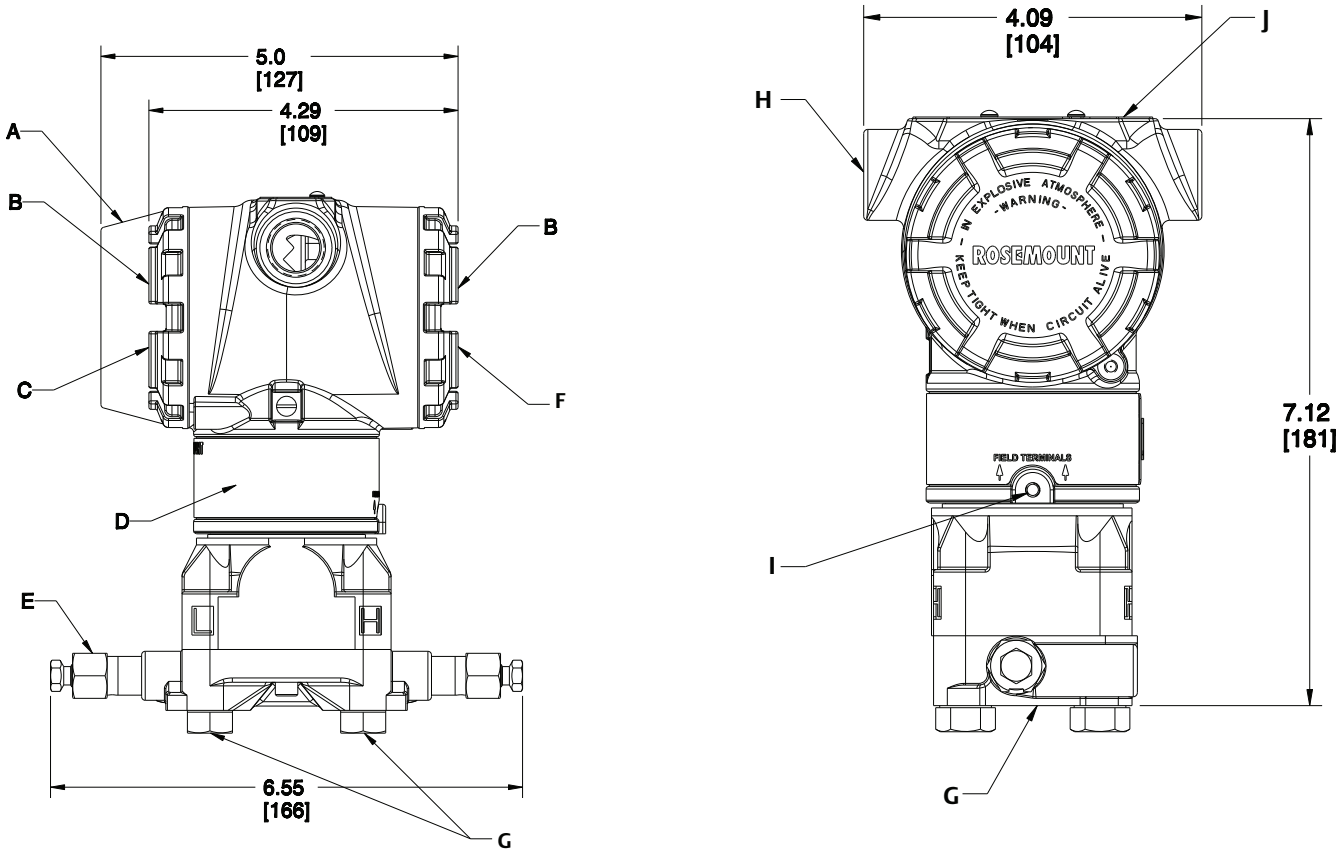
Figure 6. Coplanar Flange Mounting Configurations with Optional Bracket (Code B4) for Panel Mounting



Note: Dimensions are nominal in inches (millimeters).

A. 5/16-in. bolts for panel mounting (not supplied)
B. 3/8-16 x 1 1/4-in. bolts for mounting to transmitter

Figure 7. Rosemount 3051N Coplanar Flange Dimensional Drawing (Differential Pressure Transmitter Shown)

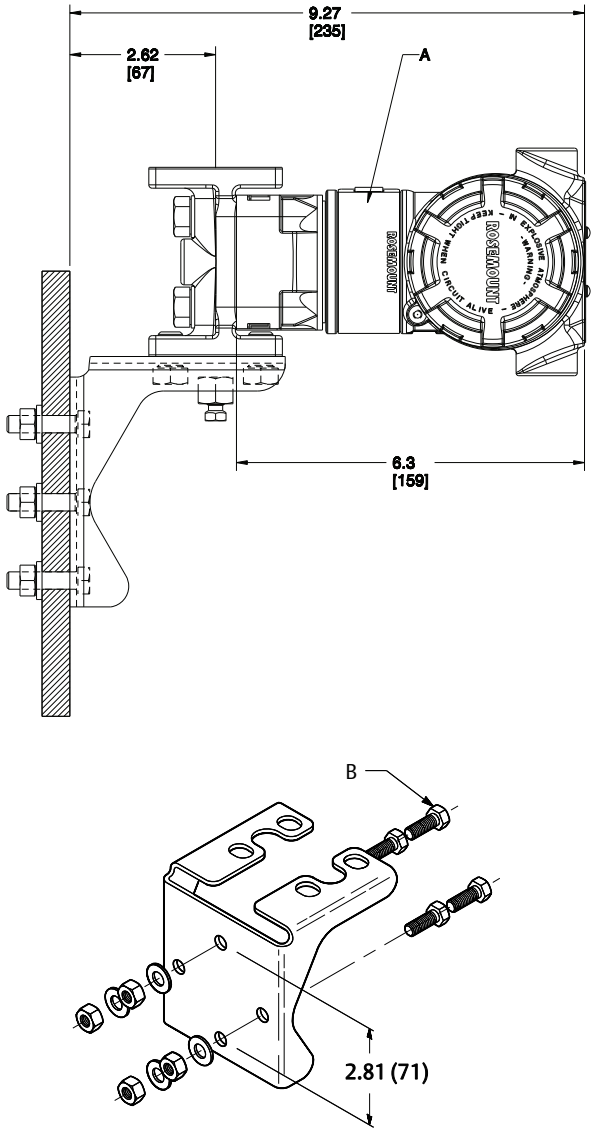


A. Meter cover (optional)
B. 0.75 (20) clearance for cover removal
C. Transmitter circuitry
D. Nameplate
E. Drain/vent valve
F. Terminal connections
G. 1/4 - 18 NPT on coplanar flange for process connection
H. 1/2 - 14 NPT conduit connection (two places)
I. Housing rotation set screw
J. Label

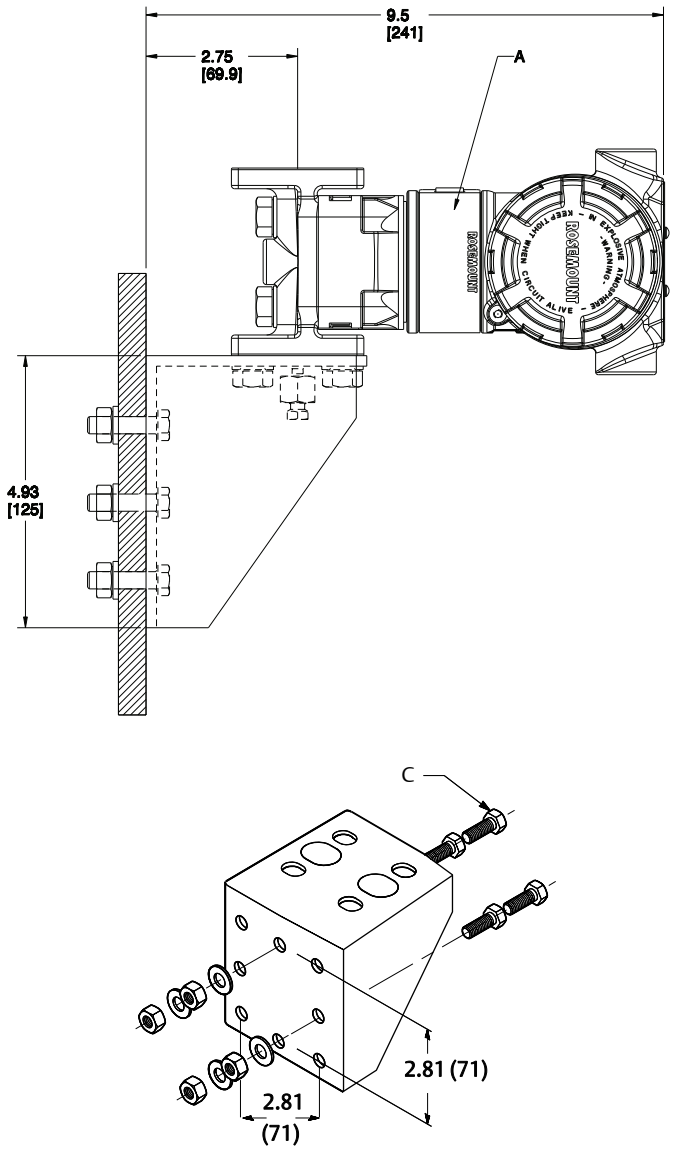
Note: Dimensions are nominal in inches (millimeters).

Figure 8. Traditional Flange Mounting Configurations with Optional Brackets for Panel Mounting

Option Code B2:
Traditional flange panel mounting bracket (painted carbon steel)



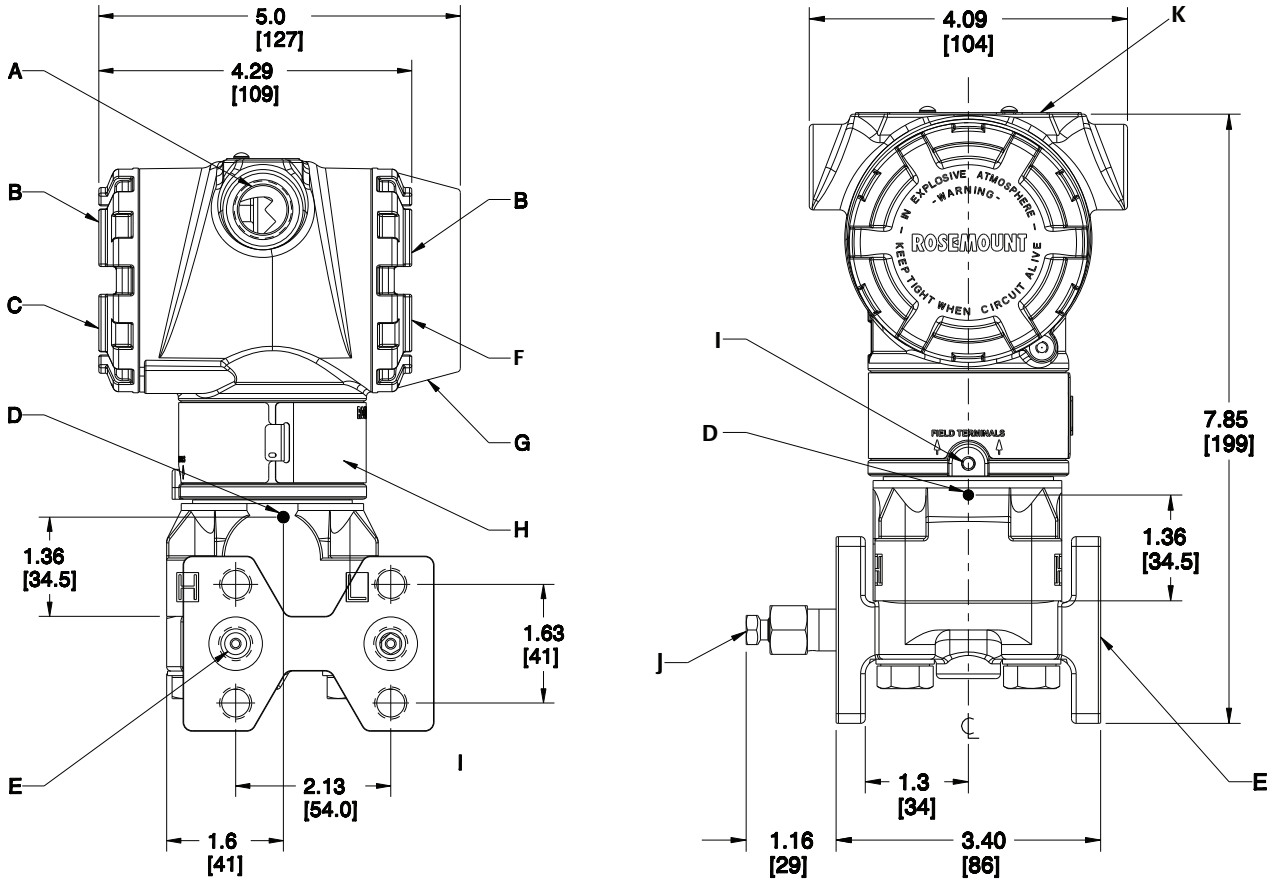
Option Code BS:
Traditional flange universal panel mounting bracket (stainless steel)



A. Nameplate
B. 5/16-in. bolts for panel mounting (not supplied)
C. 3/8-in. bolts for panel mounting (not supplied)

Note: Dimensions are nominal in inches (millimeters).

Figure 9. Traditional Flange (Option Code H2) Dimensional Drawing



A. 1/2 - 14 NPT conduit connection (two places)
B. 0.75 (20) clearance for cover removal
C. Terminal connections
D. Center of gravity (aluminum housing without meter)
E. 1/4 - 18 NPT on traditional flange for process connection
F. Transmitter circuitry
G. Meter cover (optional)
H. Nameplate
I. Housing rotation set screw
J. Drain/vent valve
K. Label
Dimensions are nominal in inches (millimeters).

Ordering Information

Table 4. Rosemount 3051N[1] Differential, Gage, and Absolute Pressure Transmitters

— = Not Applicable • = Applicable

Model	Transmitter type (select one)			ND	NG	NA
3051ND	Differential Pressure Transmitter			•	—	—
3051NG	Gage Pressure Transmitter			—	•	—
3051NA	Absolute Pressure Transmitter			—	—	•
Code	**Pressure ranges (RANGE/MIN. SPAN)**					
	Rosemount 3051ND	**Rosemount 3051NG**	**Rosemount 3051NA**	**ND**	**NG**	**NA**
0[2]	–3 to 3 inH_2O/0.1 inH_2O (–747 to 747 Pa/25 Pa)	Not Applicable	Not Applicable	•	—	—
1	–25 to 25 inH_2O/0.5 inH_2O (–6,22 to 6,22 kPa/0,12 kPa)	Not Applicable	0 to 30 psia/0.3 psia (0 to 207 kPa/2,1 kPa)	•	—	•
2	–250 to 250 inH_2O/2.5 inH_2O (–62,2 to 62,2 kPa/0,6 kPa)	–250 to 250 inH_2O/2.5 inH_2O (–62,2 to 62,2 kPa/0,6 kPa)	0 to 150 psia/1.5 psia (0 to 1 034 kPa/10,34 kPa)	•	•	•
3	–1000 to 1000 inH_2O/10 inH_2O (–248 to 248 kPa/2,5 kPa)	–393 to 1000 inH_2O/10inH_2O (–101 to 249 kPa/2,5 kPa)	0 to 800 psia/8 psia (0 to 5 516 kPa/55,16 kPa)	•	•	•
4	–300 to 300 psi/3 psi (–2 070 to 2 070 kPa/20,7 kPa)	–14.2 to 300 psig/3 psi (–101 to 2 070 kPa/20,7 kPa)	0 to 4000 psia/40 psia (0 to 27 580 kPa/276 kPa)	•	•	•
5	–2000 to 2000 psi/20 psi (–13 800 to 13 800 kPa/138 kPa)	–14.2 to 2000 psig/20 psi (–101 to 13 800 kPa/138 kPa)	Not Applicable	•	•	—
Note: Rosemount 3051NG lower range limit varies with atmospheric pressure.						
Code	**Output**					
A	4–20 mA with Digital Signal Based on HART Protocol			•	•	•
Code	**Materials of construction**					
	Process flange type	**Flange material**	**Drain/vent**	**ND**	**NG**	**NA**
2	Coplanar	SST	SST	•	•	•
0	Alternate Flange – See Option Code H2			•	•	•
Code	**Isolating diaphragm**					
2	316L SST			•	•	•
Code	**Process O-ring**					
A	Glass-filled TFE			•	•	•
B[3]	Ethylene Propylene (EPR)			•	•	•
Code	**Fill fluid**					
1	Silicone oil			•	•	•

Table 4. Rosemount 3051N[(1)] Differential, Gage, and Absolute Pressure Transmitters

— = Not Applicable • = Applicable

Code	Housing material	Conduit entry size	ND	NG	NA
A	Polyurethane-covered Aluminum	½–14 NPT	•	•	•
J	SST	½–14 NPT	•	•	•
Code	**Alternate flange options (requires materials of construction Code 0)**				
H2	Traditional Flange, 316 SST, SST Drain/Vent		•	•	•
Code	**Mounting bracket options**				
B2	Traditional Flange Bracket for panel mounting, CS bolts		•	•	•
B4	Coplanar Flange Bracket for panel mounting, all SST		•	•	•
BS	Universal Traditional Flange Bracket for panel mounting (SST), CS bolts		•	•	•
PM	Traditional Flange Bracket for 2-in. pipe mounting, all SST		•	•	•
Code	**Meters (optional)**				
M5	LCD Display Meter for Aluminum Housing (Housing Material Code A only)		•	•	•
M6	LCD Display Meter for SST Housing (Housing Material Code J only)		•	•	•
Typical model number: 3051ND 2 A 2 2 A 1 A B4					

1. All Rosemount 3051N Transmitters are provided as standard with transient protection terminal block (T1) and cleaning for < 1 PPM chloride.
2. Rosemount 3051ND0 is available only with Process Flange Code 0 (Alternate Flange H2), O-ring Code A, and stainless steel process flange bolting.
3. EPR process O-ring is limited to 2000 psi maximum working pressure and 150 °F (66 °C) process temperature.

Note
Mounting bracket option code must be specified last in the Rosemount model number even if optional meter is ordered.

Revision Status (changes from Rev. GA to Rev. HA)

Page (old)	Page (new)	Changes
Front cover, throughout	Front cover, throughout	Document revision from GA to HA and implementation date from October 2016 to March 2021
4	4	Specified during and post seismic accuracy for range 0 differential transmitters, added related footnote
Back cover	Back cover	Updated telephone contact information

Note
The above revision status list summarizes the changes made. Refer to both Product Data Sheets for complete comparison details.

North America Regional Office

Emerson Process Management
Rosemount Nuclear Instruments, Inc
8200 Market Blvd.
Chanhassen, MN 55317, USA
+1 952 949-5200
+1 952 949-5201
RNII.info@Emerson.com