Product Data Sheet
00813-0100-4738, Rev HA
Catalog 2008 - 2009

Rosemount 3095 *MultiVariable*™ Transmitter with *MODBUS*® Protocol

THE PROVEN LEADER IN MULTIVARIABLE MEASUREMENT.

- *Industry leading performance with ±0.05% of DP reading accuracy*
- *Ten year stability under actual process conditions*
- *Unprecedented reliability backed by a limited 12-year warranty*
- *Four outputs from one device including Mass Flow and advanced data logging*
- *Easy integration with MODBUS protocol*
- *Coplanar™ platform enables DP Flowmeters*

CE

Contents

The Leader in *MultiVariable* Measurement

Rosemount pressure products deliver a tradition of excellence and technology leadership, featuring the state-of-the-art *MultiVariable* transmitter. The 3095FB and 3095FC use *MODBUS* communication protocol to deliver unmatched performance of process variable measurements, mass flow, and data logging.

Industry leading performance with ±0.05% of DP reading accuracy

Enabled by superior sensor technology and engineered for optimal flow performance, the 3095FB delivers unprecedented reference accuracy with up to 100:1 rangeability. Superior performance results in increased measurement accuracy.

Ten year stability of 0.25%

Through aggressive testing, the 3095FB has proven its ability to maintain unprecedented performance under the most demanding conditions. Superior transmitter stability decreases calibration frequency for reduced maintenance and operation costs.

Unprecedented reliability backed by a limited 12-year warranty

Further enhance installation practices with the most reliable platform supported by a 12-year warranty.

Four outputs from one device

The advanced MultiVariable device measures three process variables simultaneously with optional calculated mass flow and advanced data logging capabilities. One device installation means reduced process penetrations, reduced inventory, and reduced installations costs.

Easily integrated with *MODBUS* communications

Designed for easy integration with Supervisory Control and Data Acquisition units (SCADA), Distributed Control Systems (DCS), Flow Computers or Programmable Logic Controllers (PLC) and capable of multidropping up to 32 transmitters on one RS-485 bus. Easy integration reduces engineering and installation costs.

Coplanar platform enables DP flowmeters

The flexible *coplanar* platform allows integration with the complete offering of Rosemount primary elements for any flow application. The solution arrives factory calibrated, pressure-tested, and ready to install right out of the box. Only Rosemount has a scalable *coplanar* transmitter design to reduce engineering and inventory costs.

Advanced *PlantWeb* functionality

From multiple process variable generation to advanced compensated Mass Flow functionality and highly integrated flowmeter solutions, the 3095 reduces operational and maintenance expenditures while improving throughput and utilities management.

Rosemount DP-Flow Solutions

Rosemount 3051S Series of Instrumentation
Scalable pressure, flow, and level measurement solutions improve installation and maintenance practices.

Rosemount 3095 Mass Flow Transmitter
Accurately measures differential pressure, static pressure, and process temperature to dynamically calculate fully compensated mass flow.

Rosemount 305, 306 and 304 Manifolds
Factory-assembled, calibrated, and seal-tested transmitter-to-manifold assemblies reduce on-site installation costs.

Rosemount 1495, 1496, 1497, and 1595 Orifice Plate Primary Element Systems
A comprehensive offering of orifice plates, flange unions and meter sections that is easy to specify and order. The 1595 Conditioning Orifice provides superior performance in tight fit applications.

Rosemount 3051SFA, 3095MFA, 485, and 285 Annubar® Series
The state-of-the-art, fifth generation Rosemount 485 Annubar combined with the 3051S or 3095 MultiVariable transmitter creates an accurate, repeatable and dependable insertion-type flowmeter. The Rosemount 285 provides a commercial product offering for your general purpose applications.

Rosemount 3051SFC, 3095MFC, and 405 Compact Orifice Series
Compact Orifice Flowmeters can be installed between existing flanges, up to a Class 600 (PN100) rating. In tight fit applications, a conditioning orifice plate version is available, requiring only two diameters of straight run upstream and two diameters downstream.

Rosemount 3051SFP, 3095MFP, and 1195 ProPlate® Series
These Integral Orifice Flowmeters eliminate the inaccuracies that become more pronounced in small orifice line installations. The completely assembled, ready to install flowmeters reduce cost and simplify installation.

Specifications

Functional Specifications

Service

3095FB

- Gas, Liquid, or Steam
- DP, P, and T with MODBUS output

3095FC

- AGA 8 Natural Gas, AGA 3 Orifice Plates
- Consult factory for other fluid and primary element combinations
- DP, P, T, mass flow, and API compliant data log with MODBUS output

Differential Sensor

Limits

- Range 2: –250 to 250 inH_2O (-62,2 to 62,2 kPa)
- Range 3: –1000 to 1000 inH_2O (-249 to 249 kPa)

Absolute Sensor

Limits

- Range 3: 0.5 to 800 psia (3,447 to 5516 kPa)
- Range 4: 0.5 to 3,626 psia (3,447 to 25000 kPa)

Gage Sensor

Limits

- Range C: 0 to 800 psig (0 to 5516 kPa)
- Range D: 0 to 3,626 psig (0 to 25000 kPa)

Over Pressure Limit

0.5 psia (3,447 kPa) to two times the absolute pressure sensor range up to a maximum of 3,626 psia (25000 kPa).

Static Pressure Limit

Operates within specifications between static line pressures of 0.5 psia (3,447 kPa) and the URL of the absolute pressure sensor.

Power

3095FB

- Quiescent supply current 10 mA typical. Transmitting supply current not to exceed 100 mA.
- External power supply required
- Transmitter: operates on terminal voltage of 7.5 - 42 Vdc

3095FC

- Transmitter: operates on terminal voltage of 8 - 28 Vdc
- Input current: 5mA nominal, 9.5 mA at 100% duty cycle (battery charging not included)
- Internal battery: rechargeable, Nominal 6.2 Vdc (2.5 Amp/hr)
- Maximum power consumption: 19 watts
- Solar panel input: nominal 8 V to 200 mA
- Solar panel output: 2 watts, 9 V nominal
- External charging input: 12 Vdc max (8 - 10 Vdc nominal)

RS-485 Signal Wiring

2-wire half-duplex RS-485 *MODBUS* with 8 data bits, 1 stop bit, and no parity

Bus Terminations

Standard RS-485 bus terminations required per EIA-485.

Failure Mode Alarm

If self-diagnostics detect a gross transmitter failure, non-latched status bits are set in the transmitter alarm registers.

Humidity Limits

3095FB

- 0 – 100% relative humidity

3095FC

- 0 – 95%, non condensing

Communications

PC-Based User Interface Software

Baud Rate: 600 to 19.2 K User selectable

Host: 3095FB - RS485 (MODBUS)
3095FC - RS485 (MODBUS) or RS-232 Direct Connect

User Interface Software and Hardware Requirements:

3095FB

- IBM-compatible PC
- 10 MB of available hard drive space
- Microsoft® Windows® 98 or higher operating system
- CD-ROM drive
- 32 MB of RAM

3095FC

- IBM-compatible PC
- 1 MB of RAM
- Pentium-grade processor: 233 MHz or faster
- Microsoft Windows 98 or higher operating system
- CD-ROM drive

Temperature Limits

Process (at transmitter isolator flange for atmospheric pressures and above):

3095FB

- With standard Silicon Fill Sensor: –40 to 250 °F (–40 to 121 °C)
- Inert fill sensor: 0 to 185 °F (-18 to 85 °C).
- Process temperatures above 185 °F (85 °C) requires derating the ambient limits by a 1.5:1 ratio.

3095FC

- With standard Silicon Fill Sensor: –40 to 212 °F (–40 to 100 °C)
- Inert fill sensor: 0 to 185 °F (-18 to 85 °C).
- Process temperatures above 185 °F (85 °C) requires derating the ambient limits by a 1.5:1 ratio.

Ambient:

3095FB

- With Standard Silicon Fill Sensor: –40 to 185 °F (–40 to 85 °C)
- With LCD Display[1]: -40 to 175 °F (-40 to 80 °C)

3095FC

- –40 to 167 °F (–40 to 75 °C)
- With LCD Displayr: -4 to 167 °F (-20 to 75 °C)

Storage:

3095FB

- –50 to 212 °F (–46 to 100 °C)
- With LCD Display: -40 to 185 °F (-40 to 85 °C)

3095FC

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

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

Turn-on Time

Process variables will be within specifications less than 4 seconds after power is applied to transmitter.

Damping (3095FB only)

Response to step input change can be user-selectable from 0.1 to 30 seconds for one time constant. This is in addition to sensor response time of 0.2 seconds.

Filtering (3095FC only)

Response to step input change can be filtered by user entered percentage of add value to be used.

(Last Value X Entered %) + [New Value X (100 - Entered %)] = Filtered Value

Real Time Clock (3095FC only)

- Year / month / day / hour / minute / second
- Battery backed

Performance Specifications

(Zero-based spans, reference conditions, silicone oil fill, 316 SST isolating diaphragms, and digital trim values equal to the span end points.)

Specification Conformance

The Rosemount 3095 maintains a specification conformance of measured variables to at least 3σ.

Differential Pressure

Range 2

0–2.5 to 0–250 inH_2O (0–0,622 to 0–62,2 kPa)
(100:1 rangeability is allowed)

Range 3

0–10 to 0–1000 inH_2O(0–2,49 to 0–249 kPa)
(100:1 rangeability is allowed)

Accuracy (including Linearity, Hysteresis, Repeatability)

Range 2-3: 3095FB Ultra for Flow (Option U3)[1]

- ±0.05% of DP reading up to 3:1 DP turndown from URL
- For DP turndowns up to 100:1 from URL

$$\text{Accuracy} = \pm \left[0.05 + 0.0145\left(\frac{\text{URL}}{\text{DP Reading}}\right)\right] \text{ \% of DP Reading}$$

Range 2-3: 3095FB and 3095FC

- ±0.075% of span for spans from 1:1 to 10:1 URL
- For spans less than 10:1 rangedown

$$\text{Accuracy} = \pm\left[0.025 + 0.005\left(\frac{\text{URL}}{\text{Span}}\right)\right] \text{\% of span}$$

Ambient Temperature Effect per 50 °F (28 °C)

Range 2-3: 3095FB Ultra for Flow (Option U3)[1]

- ±0.130% of DP reading up to 3:1 DP turndown URL
- ±[0.05 + 0.0345 (URL/DP Reading)]% of DP Reading up to 100:1 DP turndown from URL

Range 2-3: 3095FB and 3095FC

- ±(0.025% URL + 0.125% span) spans from 1:1 to 30:1
- ±(0.035% URL + 0.175% span) spans from 30:1 to 100:1

Static Pressure Effects

- Zero error = ±0.05% of URL per 1000 psi (68,9 bar)
- Span error = ±0.20% of DP Reading per 1000 psi (68,9 bar)

Stability

Range 2-3: 3095FB Ultra for Flow (Option U3)[1]

- ±0.25% of URL for 10 years for ±50 °F (28 °C) temperature changes, and up to 1000 psi (68,9 bar) line pressure

Range 2-3: 3095FB and 3095FC

- ±0.125% of URL for five years for ±50 °F (28 °C) ambient temperature changes, and up to 1000 psi (68,9 bar) line pressure.

(1) Ultra for Flow (Option U3) applicable for 3095FB DP ranges 2 and 3 with SST isolator material and silicone fill fluid only.

Absolute/Gage Pressure

Absolute (100:1 rangeability allowed)

Range 3

0.5–8 to 0.5–800 psia (3,447–55,16 to 3,447–5516 kPa)

Range 4

0.5–36.26 to 0.5–3,626 psia (3,447–250 to 3,447–25000 kPa)

Gage (100:1 rangeability allowed)

Range C

0–8 to 0–800 psig (0–55,16 to 0–5516 kPa)

Range D

0–36.26 to 0–3,626 psig (0–250 to 0–25000 kPa)

Ambient Temperature Effect per 50 °F (28 °C)

- ±(0.05% URL + 0.125% of span) spans from 1:1 to 30:1
  ±(0.06% URL – 0.175% of span) spans from 30:1 to 100:1

Stability

±0.125% of URL for five years for ±50 °F (28 °C) ambient temperature changes.

Accuracy (including Linearity, Hysteresis, Repeatability)

- ±0.075% of span for spans from 1:1 to 10:1 of URL
- For spans less than 10:1 rangedown,

$$\text{Accuracy} = \pm\left[0.03 + 0.0075\left(\frac{\text{URL}}{\text{Span}}\right)\right]\% \text{ of span}$$

Process Temperature (RTD)

Specification for process temperature is for the transmitter portion only. Sensor errors caused by the RTD are not included. The transmitter is compatible with any PT100 RTD conforming to IEC 751 Class B, which has a nominal resistance of 100 ohms at 0 °C and $\propto$ = 0.00385. Examples of compatible RTDs include the Rosemount Series 68 and 78 RTD Temperature Sensors.

Sensing Range

3095FB

- –300 to 1500 °F (–184 to 816 °C)

3095FC

- –40 to 464 °F (–40 to 240 °C)

Accuracy (including Linearity, Hysteresis, Repeatability)

±1.0 °F (0.56 °C)

Ambient Temperature Effects per 50 °F (28 °C)

3095FB

- ±0.72 °F (0.40 °C) for process temperatures from –40 to 185 °F (–40 to 85°C)
- (±1.28 °F (0.72 °C) + 0.16% of reading) for process temperatures from 185 to 1200 °F (85 to 649 °C)

3095FC

- ±0.90 °F (0.50 °C) for process temperatures from –40 to 464°F (–40 to 240°C)

Stability

±1.0 °F (0.56 °C) for one year

Physical Specifications

Electrical Connections

- ½–14 NPT, M20 x 1.5 (CM20), PG-13.5
- $^3/_4$–14 NPT (3095FC only)

RTD Process Temperature Input:

100-ohm platinum RTD per IEC-751 Class B

Process Connections

- Transmitter: ¼–18 NPT on 2$^1/_8$-in. centers
- RTD: RTD dependent (see ordering information)

Radiated/Conducted Transmissions

Meets requirements of IEC 61326

Process Wetted Parts

Isolating Diaphragms

- 316L SST or Hastelloy C-276®

Drain/Vent Valves

- 316 SST or Hastelloy C-276®

Flanges

- Plated carbon steel, 316 SST, or Hastelloy C-276

Wetted O-rings

- Glass-Filled PTFE

Non-Wetted Parts

Electronics Housing

- Low copper aluminum

Bolts

- Plated carbon steel per ASTM A449, Grade 5; or austenitic 316 SST

Fill Fluid

- Silicone oil
- Inert oil (available for gage pressure ranges only)

Paint

- Polyurethane

O-rings

- Buna-N

Battery (3095FC only)

- Lead-acid, rechargeable

Weight

Components	Weight in lb. (kg)	
	3095FB	3095FC
3095 Transmitter	6.0 (2.7)	11.5 (5.2)
LCD Meter	0.5 (0.2)	0.6 (0.3)
SST Mounting Bracket	1.0 (0.5)	1.0 (0.5)
12 ft. (3.66 m) RTD Shielded Cable	0.5 (0.2)	user provided
12 ft. (3.66 m) RTD Armored Cable	1.1 (0.5)	user provided
24 ft. (7.32 m) RTD Shielded Cable	1.0 (0.5)	user provided
24 ft. (7.32 m) RTD Armored Cable	2.2 (1.0)	user provided
Battery / Solar panel	–	2.0 (0.9)
Battery Backup	–	1.3 (0.6)

3095FC Memory Specifications

Programmable Memory

2 MB x 8 flash EPROM

Data Memory

512 kB SRAM

Boot Memory

128 kB flash EPROM

History Database

The history database archives measured and calculated values for on-demand viewing or saving to a file. Each point in the historical database can be configured to archive the current value, average value, totalized value, or accumulated value.

Up to 35 standard history points provided, with archiving of min/max (for today and yesterday), minute (for last 60 minutes), hourly and daily values (for last 35 days). The first 8 of these are non-configurable.

Up to 15 extended history points provided with archiving of up to 5040 entries at 1, 2, 3, 4, 5, 10, 12, 15, 20, 30, or 60 minute intervals.

Memory Logging

- 240 alarms before rollover
- 240 events before rollover

3095FC Flow Specifications

Flow Calculation:

- Computed in accordance with ANSI/API 2530-92 (AGA 3, 1992), API 14.2 (AGA 8, 1992), and API 21.1. Detail, Gross I, Gross II.

Product Certifications

Approved Manufacturing Locations

Rosemount Inc. — Chanhassen, Minnesota USA

European Directive Information

The EC declaration of conformity for all applicable European directives for this product can be found on the Rosemount website at www.rosemount.com. A hard copy may be obtained by contacting our local sales office.

ATEX Directive (94/9/EC)

Emerson Process Management complies with the ATEX Directive.

European Pressure Equipment Directive (PED) (97/23/EC)

3095F_2/3,4/D Flow Transmitters — QS Certificate of Assessment - EC No. PED-H-100 Module H Conformity Assessment

All other 3095_ Transmitters/Level Controller — Sound Engineering Practice

Transmitter Attachments: Process Flange - Manifold — Sound Engineering Practice

Electro Magnetic Compatibility (EMC) (2004/108/EC)

3095F Flow Transmitters - EN 61326-1:1997 - A1, A2, and A3

Ordinary Location Certification for Factory Mutual

As standard, the Rosemount 3095FB transmitter has been examined and tested to determine that the design meets basic electrical, mechanical, and fire protection requirements by FM, a nationally recognized testing laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

Hazardous Locations Certifications

North American Certifications

FM Approvals

A 3095FB
Explosion Proof for Class I, Division 1, Groups B, C, and D. Dust-Ignition Proof for Class II/III, Division 1, Groups E, F, and G, hazardous locations. Factory Sealed. Provides non-incendive RTD connections for Class I, Division 2, Groups A, B, C, and D. Install per Rosemount drawing 03095-1025. Enclosure Type 4X.

Canadian Standards Association (CSA) - Canada only

C 3095FB
Explosion-Proof for Class I, Division 1, Groups B, C, and D. Dust-Ignition Proof for Class II/III, Division 1, Groups E, F, and G, hazardous locations. CSA enclosure Type 4X. Factory Sealed. Provides a non-incendive RTD Connection for Class I, Division 2, Groups A, B, C, and D. Suitable for use in Class I, Division 2, Groups A, B, C, and D. Install in accordance with Rosemount Drawing 03095-1024.

Canadian Standards Association (CSA) - U.S. and Canada

M 3095FC
Explosion-Proof for Class I, Division 1, Groups C and D including optional solar panel: mast option: Suitable for use in Class I, Division 2, Groups A, B, C, D, and T3. CSA Enclosure Type 4.

European Certifications

H **ATEX Flameproof**
3095FB
Certificate Number: KEMA02ATEX2320X ⟨Ex⟩ II 1/2 G
EEx d IIC T5 (-50°C ≤ T_{amb} ≤ 80°C)
T6 (-50°C ≤ T_{amb} ≤ 65°C)
V_{max} = 55V dc
CE 1180
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.

3095FC
Certificate Number: LCIE05ATEX6057X ⟨Ex⟩ II 2 G
EEx d IIB T5
V_{max} = 28V dc
IP66
CE 1180
Special Conditions for Safe Use (x):
Operating ambient temperature: -40°C to 75°C
The users have to make sure that the thermal fluid transfer doesn't overheat the equipment to a temperature corresponding to the spontaneous combustion temperature of surrounding gas.

P **ATEX Dust**
3095FB
Certificate Number: KEMA02ATEX2321 ⟨Ex⟩ II 1 D T90°C
Ambient Temp (-50°C ≤ T_{amb} ≤ 80°C)
V = 55 Vdc MAX
I = 23 mA MAX
IP66
CE 1180

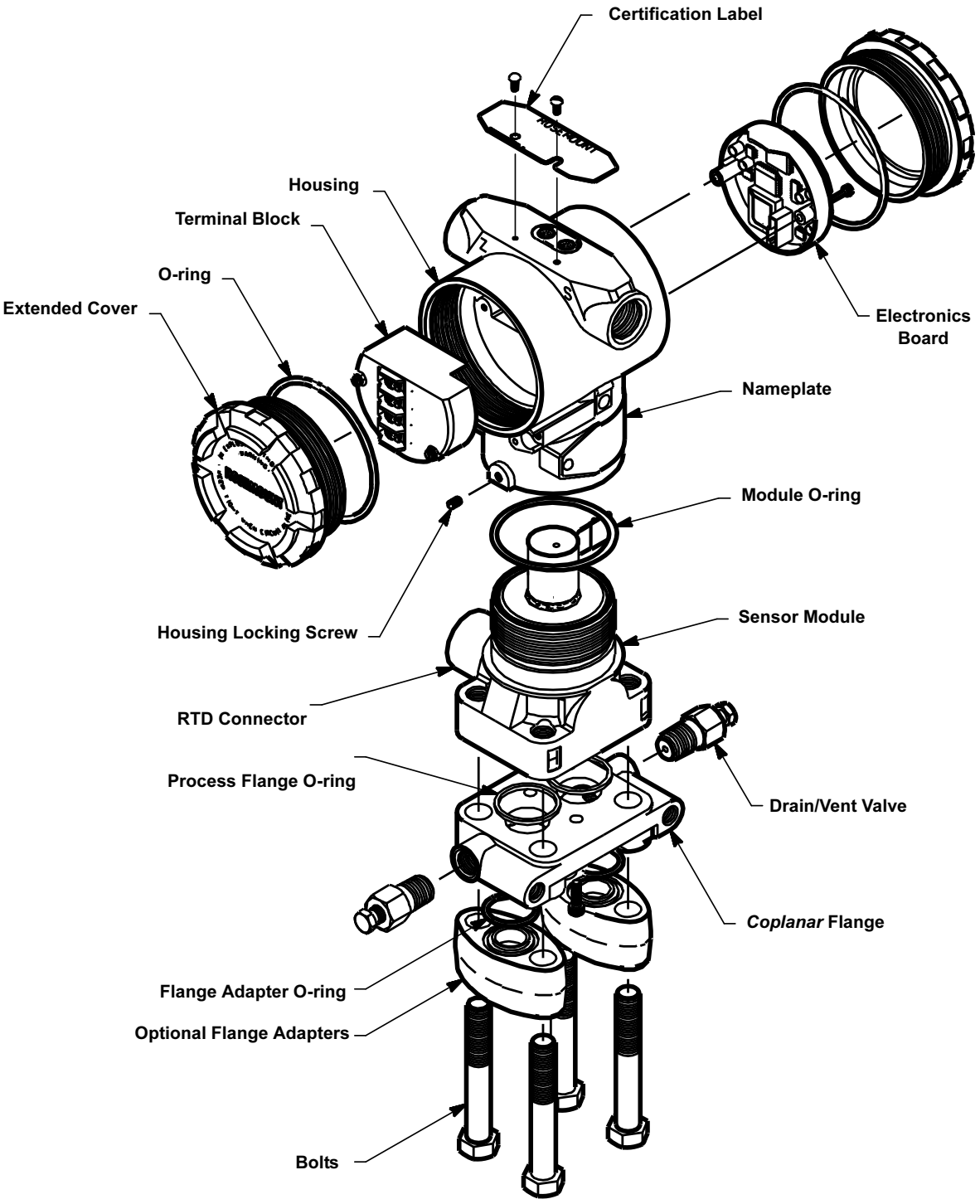
IECEx Certifications

7 **IECEx Flameproof**
3095FB
Certificate Number: IECEx KEM 06.0018
Zone 0/1 Ex d IIC T6 (-20°C ≤ T_a ≤ 65°C)
Zone 0/1 Ex d IIC T5 (-20°C ≤ T_a ≤ 80°C)
V_{max} = 55 Vdc
I_{max} = 23 mAdc

8 **IECEx Dust**
3095FB
Certificate Number: IECEx KEM 06.0018
Ex tD A22 T90°C
IP66

Dimensional Drawings

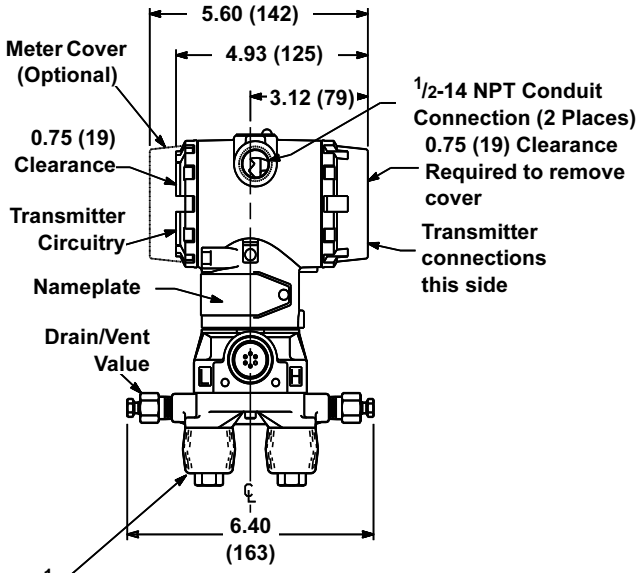
Exploded View of 3095FB Transmitter



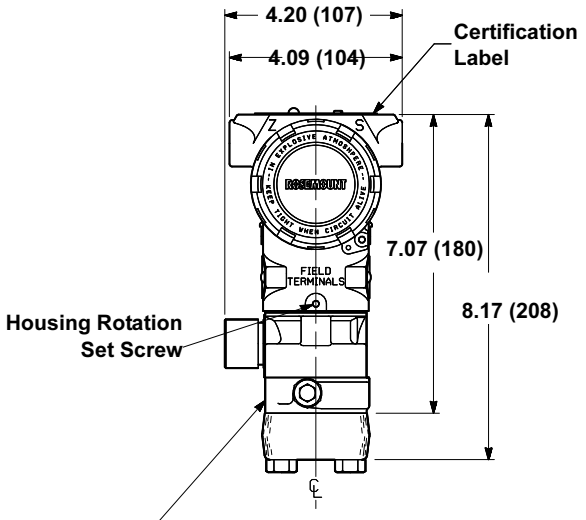
Dimensions are in inches (millimeters)

3095FB

Side View



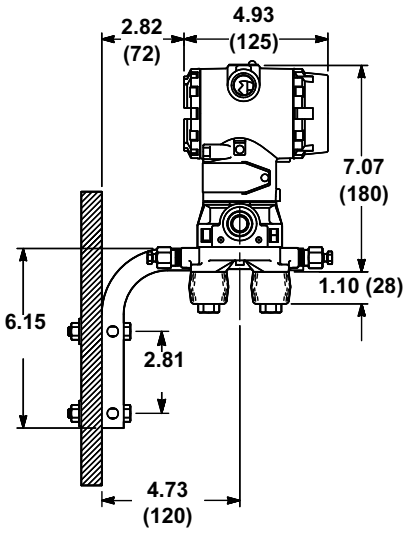
Front View



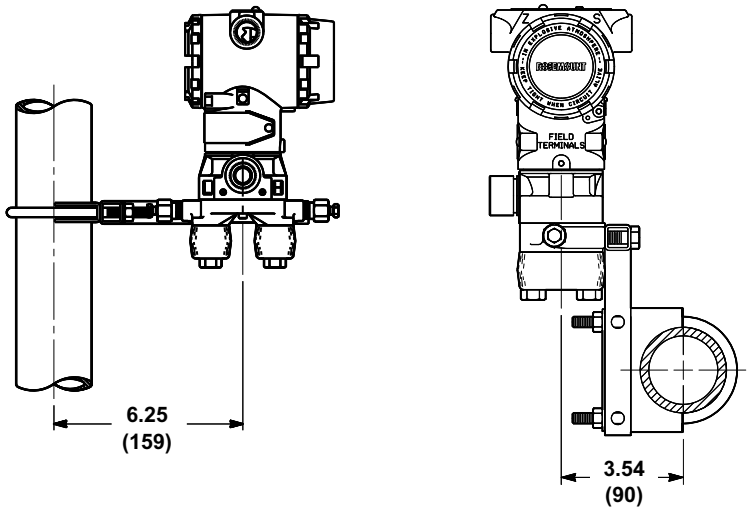
Dimensions are in inches (millimeters)

Mounting Configurations for 3095FB Transmitter

Panel Mount



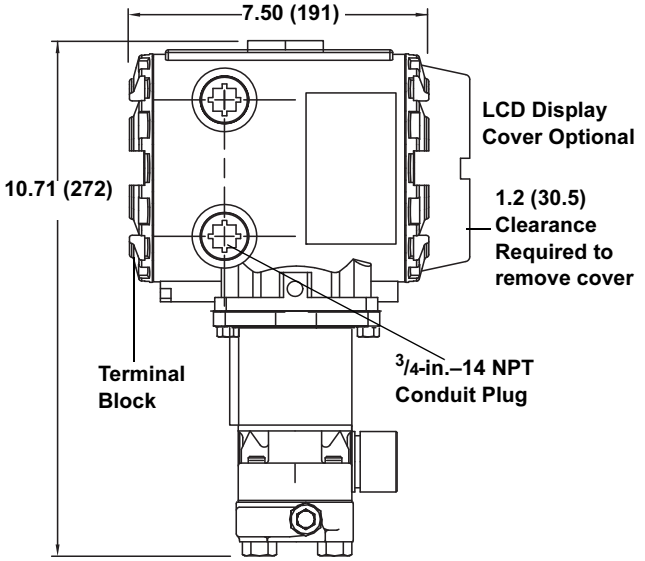
Pipe Mount



Dimensions are in inches (millimeters)

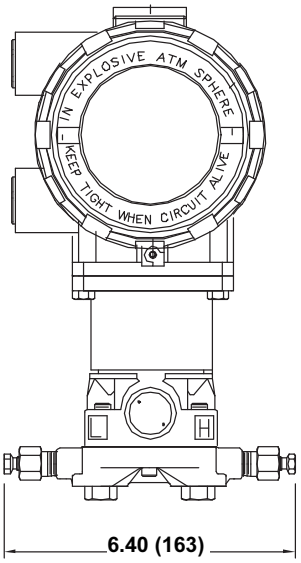
3095FC

Side View

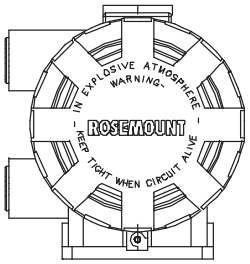


Front View

With LCD Display



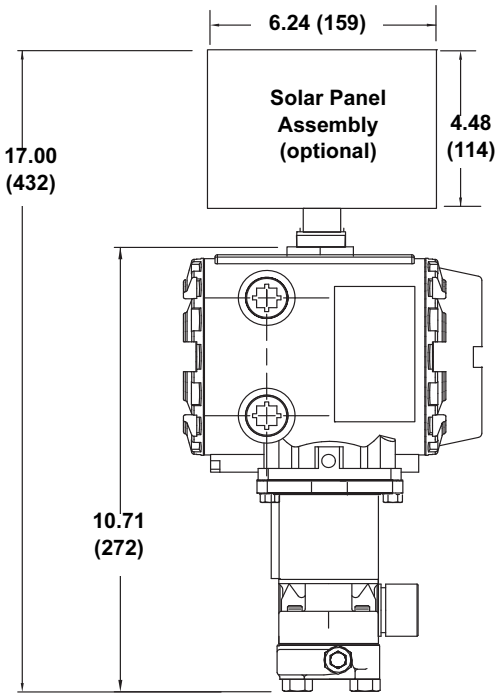
Without LCD Display



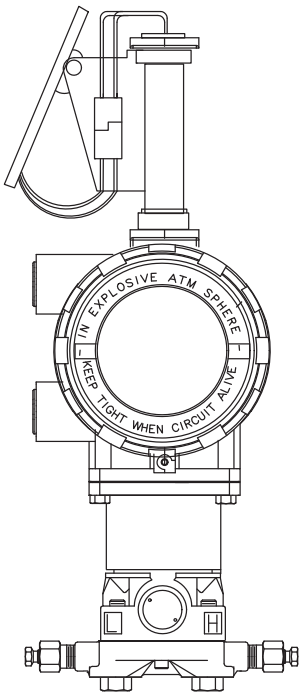
Dimensions are in inches (millimeters)

3095FC with Solar Panel Assembly

Side View



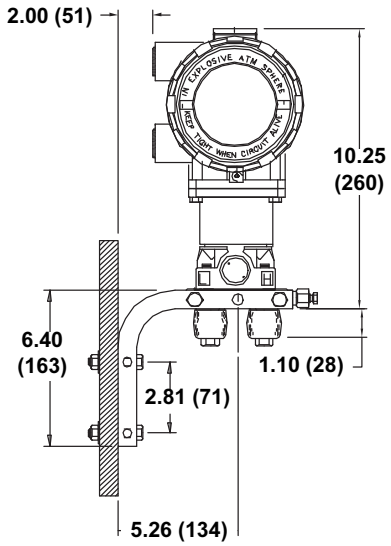
Front View



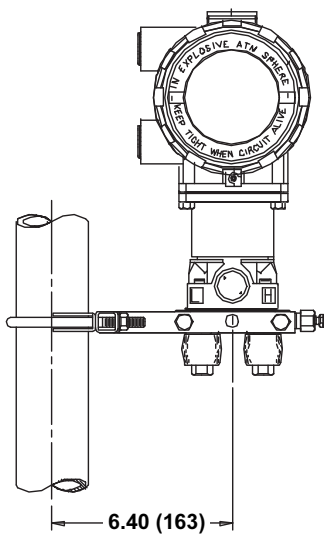
Dimensions are in inches (millimeters)

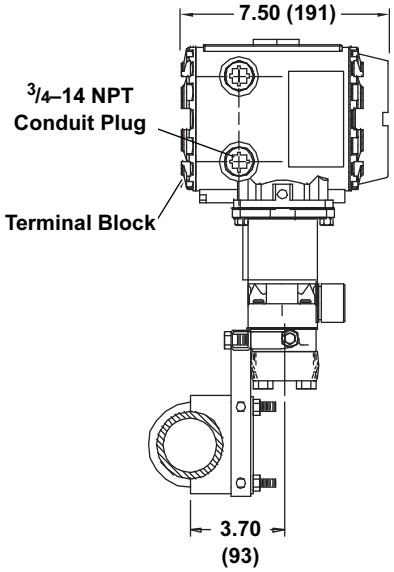
Mounting Configurations for 3095FC Transmitter

Panel Mount



Pipe Mount





Dimensions are in inches (millimeters)

Ordering Information

• Available — Not available

Code	Product Description		3095FB	3095FC
3095F	*MultiVariable* Transmitter		•	•
Code	**Output**			
B	Process Variable Measurement: *Modbus* RS-485		•	—
C	Process Variable Measurement: Mass Flow and Data Logging, *Modbus* RS-485		—	•
Code	**Differential Pressure Ranges**			
2	0–2.5 to 0–250 inH_2O (0–0,622 to 0–62,2 kPa)		•	•
3	0–10 to 0–1000 inH_2O (0–2,49 to 0–249 kPa)		•	•
Code	**Absolute/Gage Pressure Ranges**			
3	0.5–8 to 0.5–800 psia (3,447–55,16 to 3,447–5516 kPa)		•	•
4	0.5–36.26 to 0.5–3,626 psia (3,447-250 to 3,447–25000 kPa)		•	•
C	0–8 to 0–800 psig (0–55,16 to 0–5516 kPa)		•	•
D	0–36.26 to 0–3,626 psig (0-250 to 0–25000 kPa)		•	•
Code	**Isolator Material**	**Fill Fluid**		
A	316L SST	Silicone	•	•
B(1)	Hastelloy C-276	Silicone	•	•
F	Gold Plated SST	Silicone	•	•
D	Tantalum	Silicone	•	—
J(2)	316L SST	Inert	•	•
K(1)(2)	Hastelloy C-276	Inert	•	•
L(2)	Tantalum	Inert	•	—
Code	**Flange Style**	**Material**		
A	*Coplanar*	CS	•	•
B	*Coplanar*	SST	•	•
C	*Coplanar*	Hastelloy C-276(1)	•	•
J	DIN Compliant Traditional Flange	SST, 7/16 - 20 Bolting	•	•
0	None (Required for Option Codes S3 or S5)		•	•
Code	**Drain/Vent Material**			
A	SST		•	•
C(1)	Hastelloy C-276		•	•
0	None (Required for Option Codes S3 or S5)		•	•
Code	**O-ring**			
1	Glass-filled PTFE		•	•
Code	**Process Temperature Input (RTD ordered separately)**			
0	No RTD Cable (required for 3095FC)		•	•
1	RTD Input with 12 ft. (3,66 m) of Shielded Cable (intended for use with conduit)		•	—
2	RTD Input with 24 ft. (7,32 m) of Shielded Cable (intended for use with conduit)		•	—
3	RTD Input with 12 ft. (3,66 m) of Armored, Shielded Cable		•	—
4	RTD Input with 24 ft. (7,32 m) of Armored, Shielded Cable		•	—
7	RTD Input with 75 ft. (22,86 m) of Shielded Cable (intended for use with conduit)		•	—
8	RTD Input with 75 ft. (22,86 m) of Armored, Shielded Cable		•	—
A	RTD Input with 12 ft. (3,66 m) of ATEX/IECEx Flameproof Cable		•	—
B	RTD Input with 24 ft. (7,32 m) of ATEX/IECEx Flameproof Cable		•	—
C	RTD Input with 75 ft. (22,86 m) of ATEX/IECEx Flameproof Cable		•	—
Code	**Transmitter Housing Material**	**Conduit**		
A	Polyurethane-covered Aluminum	1/2–14 NPT	•	Adapter
E	Polyurethane-covered Aluminum	3/4–14 NPT	—	•
B	Polyurethane-covered Aluminum	M20 x 1.5 (CM20)	Adapter	Adapter
C	Polyurethane-covered Aluminum	PG 13.5	Adapter	Adapter
J	SST	1/2–14 NPT	•	—
K	SST	M20 x 1.5 (CM20)	Adapter	—
L	SST	PG 13.5	Adapter	—

• Available — Not available

Code		3095FB	3095FC
Code	**Terminal Block**		
A	Standard	•	—
B	With Integral Transient Protection	•	•
C	CE MARK/ Compliant with EMC - Transient Protection Included	•	—
Code	**Display**		
0	None	•	•
1	LCD Display	•	•
Code	**Bracket**		
0	None (required for option code S3 or S5)	•	•
1	*Coplanar* SST Flange Bracket for 2-in. Pipe or Panel Mount, SST Bolts	•	•
2	Traditional Flange Bracket for 2-in. Pipe Mounting, CS Bolts	•	•
3	Traditional Flange Bracket for Panel Mounting, CS Bolts	•	•
4	Traditional Flange Flat Bracket for 2-in. Pipe Mounting, CS Bolts	•	•
5	Traditional Flange Bracket for 2-in. Pipe Mounting, 300 Series, SST Bolts	•	•
6	Traditional Flange Bracket for Panel Mounting, 300 Series, SST Bolts	•	•
7	Traditional Flange Flat Bracket for 2-in. Pipe Mounting, 300 Series, SST Bolts	•	•
8	SST Traditional Flange Bracket for 2-in. Pipe Mounting, 300 Series, SST Bolts	•	•
9	SST Traditional Flange Flat Bracket for 2-in. Pipe Mounting, 300 Series, SST Bolts	•	•
Code	**Bolts**		
0	CS bolts	•	•
1	Austenitic 316 SST bolts	•	•
N	None (required for Options codes S3 or S5)	•	•
Code	**Product Certifications**		
0	None	•	•
A	FM Explosion-proof, Dust Ignition-proof	•	—
C	CSA Explosion-proof, Dust Ignition-proof, Division 2	•	—
H	ATEX Flameproof	•	•
M	CSA Explosion-proof (US and Canada)	—	•
P	ATEX Dust	•	—
7	IECEx Flameproof	•	—
8	IECEx Dust	•	—
Code	**Engineered Measurement Solution (EMS)**		
N	Process Variable Measurement: *MODBUS*	•	—
C	Mass Flow with Process Variable Measurement and Data Logging: *MODBUS* (required for 3095FC)	—	•
Code	**Options**		
Performance Class			
U3[3]	Ultra for Flow: ±0.05% DP reading accuracy, up to 100:1 rangedown, 10 year stability, limited 12 year warranty	•	—
S3[4]	Assemble to Rosemount 405 Compact Orifice	•	—
S4[4][5]	Assemble to Rosemount *Annubar* Averaging Pitot Tubes or 1195 Integral Orifice Plates	•	—
S5[4]	Assemble to Rosemount 305 Integral Manifold	•	•
C1[6]	Custom Flow Configuration (requires completed Configuration Data Sheet)	•	•
A3	Mast with Solar Panel Assembly and 12 Vdc Batteries	—	•
P1	Hydrostatic testing with certificate	•	•
P2	Cleaning for Special Services	•	•
Q4	Calibration Certificate	•	•
Q8	Material Traceability Certification per EN 10204 3.1B	•	•
DF[7]	Flange Adapters — Adapter Type Determined by Selected Flange Material: Plated CS, SST, Hastelloy C-276	•	•
A1	Additional RS-232 Communication Board	—	•
A2	12 Vdc System with Batteries	—	•

Typical Model Number: 3095F B 2 3 A B A 1 1 A B 0 1 0 A N

(1) 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.

(2) Only available with C or D Gage Sensor Modules.
(3) Ultra for Flow (Option U3) applicable for 3095FB DP ranges 2 and 3 with SST isolator material and silicone fill fluid only.
(4) "Assemble-to" items are specified separately and require a completed model number.
(5) With a primary element installed, the maximum operating pressure will be the lesser of either the transmitter or the primary element.
(6) 3095FC only allows all English or all Metric units.
(7) Not available with S4 option.

OPTIONS

Standard Configuration

Unless otherwise specified, the transmitter is shipped as follows:
Engineering units:

Differential	inH_2O
Absolute/gage	psi
Output:	*MODBUS* RTU protocol signal
Flange type:	Specified model code option
Flange material:	Specified model code option
O-ring material:	Specified model code option
Drain/vent:	Specified model code option
Flow Configuration Parameters:	Factory default
Software tag:	(Blank)

Custom Configuration (Option Code C1)(1)

If Option Code C1 is ordered, the user-specified information and standard configuration parameters are factory configured. Unspecified parameters will remain at the factory default settings.

(1) 3095FC only allows all English or all Metric units.

Tagging

Three customer tagging options are available:

- Standard SST tag is wired to the transmitter. Tag character height is 0.125 in. (3.18 mm), 85 characters maximum.
- Tag may be permanently marked on transmitter nameplate upon request.
  Tag character height is 0.0625 in. (1.59 mm), 65 characters maximum.
- Tag may be stored in transmitter memory. Software tag is left blank unless specified.
- Software tag is left blank unless specified.

Optional 305 Integral Manifolds

The Rosemount MultiVariable transmitters with 305R Integral Manifold are fully assembled, calibrated, and seal tested by the factory. Refer to PDS 00813-0100-4733 for additional information.

ACCESSORIES

3095 User Interface Software Packages

The User Interface software package is available with or without the converter and connecting cables. All configurations are packaged separately.

Windows 98 or higher

3095FB

- Part Number 03095-5130-0003: Windows User Interface Software–Single PC License, Converter, and Cable.
- Part Number 03095-5125-0004: Windows User Interface Software–Single PC License.
- Part Number 03095-5125-0005: Windows User Interface Software– Site License.
- Part Number 03095-5106-0002: RS-485 Converter and Cable.

3095FC

- Part Number 03095-5136-0001: Windows User Interface Software–Single PC License, and Cable.
- Part Number 03095-5135-0001: Windows User Interface Software–Single PC License.
- Part Number 03095-5135-0002: Windows User Interface Software– Site License.
- Part Number 03095-5106-0003: 10 foot (3.05 m) 9-pin Serial Cable (For direct connect method)

Additional Information

Rosemount transmitters are available as fully assembled and factory calibrated flowmeters. Flowmeter Product Data Sheets are listed below:

- *Annubar* Flowmeter Series:00813-0100-4809
  Rosemount 3051SFA *ProBar*
  Rosemount 3095MFA Mass *ProBar*
  Rosemount 485 *Annubar* Primary Element
- *Proplate* Flowmeter Series: 00813-0100-4686
  Rosemount 3051SFP *Proplate*
  Rosemount 3095MFP Mass *Proplate*
  Rosemount 1195 Integral Orifice Primary Element
- Compact Orifice Flowmeter Series: 00813-0100-4810
  Rosemount 3051SFC Flowmeter
  Rosemount 3095MFC Mass Flowmeter
  Rosemount 405 Compact Orifice Primary
- Orifice Plate Primary Element Systems: 00813-0100-4792
  Rosemount 1495 Orifice Plate
  Rosemount 1496 Flange Union
  Rosemount 1497 Meter Section

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