

Rosemount™ 751 Field Signal Indicator



- Compact, rugged, and designed for industrial environments
- Available with explosion-proof and intrinsic safety certifications
- Provides flexible mounting options

Features and benefits

Transcend integral meter display with Rosemount 751

The Rosemount 751 Field Signal Indicators provide a means of displaying important process variables. These devices operate with any two-wire transmitter that measures input variables such as pressure, flow, liquid level, or temperature. Rosemount indicators are ideal for installations where an integral meter would be difficult to view.

Rosemount 751 Indicators are designed for use in industrial environments where all-weather performance is necessary. These units are vibration- and corrosion-resistant, and can be ordered with explosion-proof or intrinsically safe certifications.

LCD display meter

The LCD display meter may be configured from a 4 mA point of -999 to a 20 mA point of 9999 with a linear or square-root response. A 20-segment bar graph at the bottom of the display directly represents the 4–20 mA signal.

Changing the 4 mA and 20 mA points is easy: just remove the housing and meter covers and press the meter faceplate buttons. The meter can be rotated in 90-degree increments within the enclosure for convenient viewing.

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Ordering information

CONFIGURE >
VIEW PRODUCT >

Specification and selection of product materials, options, or components must be made by the purchaser of the equipment.

Related information

[Material selection](#)

Online product configurator

Many products are configurable online using our Product Configurator. Select the **Configure** button or visit [Emerson.com/MeasurementInstrumentation](https://emerson.com/MeasurementInstrumentation) to start. With this tool's built-in logic and continuous validation, you can configure your products more quickly and accurately.

Model codes

Model codes contain the details related to each product. Exact model codes will vary. An example of a typical model code is shown in [Figure 1](#).

Figure 1: Model code example

3144P D1 A 1 NA M5 DA1 Q4
1 2

1. Required model components (choices available on most)
2. Additional options (variety of features and functions that may be added to products)

Specifications and options

The purchaser of the equipment must specify and select the product materials, options, or components.

Optimizing lead time

The starred offerings (★) represent the most common options and should be selected for the fastest delivery times. The non-starred offerings are subject to additional delivery lead time.

Required model components

Model

Code	Description
751	Remote Signal Indicator ★

Input signal

Code	Description	
A	4–20 mA dc	★

Meter scale

Code	Description	
M4 ⁽¹⁾	Linear LCD display meter, 0–100% Scale	★
M7 ⁽¹⁾	Special scale LCD display meter (specify range, mode, and engineering units)	★
M8 ⁽¹⁾	Square root LCD display meter, 0–100% Flow	★
M9 ⁽¹⁾	Square root LCD display meter, 0–10 sqr. root	★

(1) *May be reconfigured in the field.*

Product certificates

Code	Description	
A	4–20 mA dc	★
NA	No approval required	★
E2	INMETRO Flameproof	★
I2	INMETRO Intrinsic Safety	★
K2	INMETRO Flameproof, Intrinsic Safety	★
E3	NEPSI Flameproof	★
E5	FM Explosion-Proof	★
E6	CSA Explosion-Proof	★
E7	IECEX Flameproof	★
E8	ATEX Flameproof	★
I5	FM Intrinsic Safety and Non-incendive	★
I6	CSA Intrinsic Safety	★
I7	IECEX Intrinsic Safety	★
I8	ATEX Intrinsic Safety	★
N1	ATEX Type N Non-incendive	★
C6	CSA Intrinsic Safety, Non-incendive, and Explosion-proof approval combination	★
K5	FM Intrinsic Safety, Non-incendive, and Explosion-proof approval combination	★
KM	Technical Regulations Customs Union (EAC) Flameproof, Intrinsic Safety	★
IM	Technical Regulations Customs Union (EAC) Intrinsic Safety	★
EM	Technical Regulations Customs Union (EAC) Flameproof	★
EP	Korea Explosionproof/Flameproof	★

Additional options

Mounting bracket

Code	Description	
B	Mounting bracket for flat surface or 2-in. pipe	★

Reducer

Code	Description	
C	Stainless steel reducer $\frac{3}{4}$ - to $\frac{1}{2}$ -in. for conduit connection (see Figure 2 for reference)	★

Bar code tag

Code	Description	
BT	Customer specified barcode tag	★

Extended product warranty

Code	Description	
WR3	3-year limited warranty	★
WR5	5-year limited warranty	★

Typical model number: 751 A M4 NA BC

Specifications

Housing specifications

Physical specifications

Material selection

Emerson provides a variety of Rosemount products with various 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 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.

Conformance to specifications [$\pm 3\sigma$ (Sigma)]

Technology leadership, advanced manufacturing techniques, and statistical process control ensure specification conformance to at least $\pm 3\sigma$.

Materials of construction

Enclosure	Low-copper aluminum
Paint	Polyurethane
O-rings	Buna N
Meter mounting materials	GE polyphenylene oxide plastic

Electrical connections

3-pole terminal block with 8–32 nickel-plated brass screw terminals, with $\frac{3}{4}$ -14 NPT conduit (stainless steel $\frac{3}{4}$ - to $\frac{1}{2}$ -in. reducer available as an option).

Enclosure rating

NEMA[®] Type 4x. CSA Type 4x. IP66

Weight

Indicator only:	1.8 kg (4 lb)
Indicator with optional mounting bracket:	2.27 kg (5 lb)

Tagging

The indicator will be tagged, at no charge, in accordance with customer requirements. All tags are stainless steel. The standard tag is permanently attached to the indicator. Tag character height is 1/16-in. (1.6 mm). A wired-on tag is available upon request.

LCD display meter specifications

Functional specifications

Input signal

4–20 mA dc

Display

4 mA point limits

-999 to 1000

Span limits

-999 to 9999

The sum of the 4 mA point and span must not exceed 9999. Adjustments are made using non-interactive zero and span buttons.

Display options

Standard display response is linear with mA input. Optional square root or filtered response may be selected.

Overload limitations

666 mA, maximum

Temperature limits

Storage -40 to 185 °F (-40 to 85 °C)

Operating -40 to 158 °F (-40 to 70 °C)⁽¹⁾

Humidity limitation

0 to 95 percent non-condensing relative humidity

Update period

750 ms

Response time

Responds to changes in input within a maximum of two update periods. If the filter is activated, then the display responds to the change within nine update periods.

Voltage drop

0.7 Vdc typical, 1.0 Vdc maximum

Performance specifications

Digital display resolution

0.05 percent of calibrated range \pm 1 digit

Analog bar graph resolution

5.0 percent of calibrated range

Indication accuracy

0.25 percent of calibrated range \pm 1 digit

Stability

0.1 percent calibrated range \pm 1 digit per six months

Temperature effect

0.01 percent of calibrated range per °C on zero

(1) For temperatures below -4 °F (-20 °C) or above 140 °F (60 °C), the LCD display may not be readable but the loop will remain intact and the LCD display will not be damaged.

0.02 percent of calibrated range per °C on span over the operating temperature range

Power interrupt

All calibration constants are stored in EEPROM memory and are not affected by power loss.

Failure mode

LCD display meter failure will not affect transmitter operation.

Under/Over range indication

Input current < 3.5 mA: Display blank

Input current > 22.0 mA: Display flashes 112.5 percent of full scale value or 9999, whichever is less

EMC performance

Meets all industrial environment requirements of EN61326. Analog performance will align with attached product EMC specification (e.g., <1% of span). Maximum deviation of display reading will be less than 15 percent of span during EMC disturbance.

Note

During a surge, burst, or ESD event, the display reading may exceed the maximum EMC deviation limit or reset; however, the device will self-recover and return to normal operation within specified start-up time.

Physical specifications

Meter size

2¼-in. diameter face with four ½-in. high characters

Product Certification

Rev 1.21

Related information

[Rosemount 751 Field Signal Indicator Quick Start Guide](#)

Declaration of Conformity Information

A copy of the EU/UK Declaration of Conformity can be found at the end of the Quick Start Guide.

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).

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 USA Explosion-proof

Certificate	0T2H8.AE
Standards	FM Class 3600: 1989, FM Class 3615: 1989
Markings	XP CL I, DIV 1, GP B, C, D; DIP CL II/III, DIV 1, GP E, F, G; $-40^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$; Type 4X

I5 USA Intrinsically Safe; Nonincendive

Certificate	0T9H2AX
Standards	FM Class 3600: 2011, FM Class 3610: 2010, FM Class 3611: 2004, FM Class 3810: 1989, NEMA-250: 1991, ANSI/ISA 60079-0: 2009, ANSI/ISA 60079-11: 2009
Markings	IS CL I / II / III, DIV 1, GP A, B, C, D, E, F, G; T5; IS CL I, Zone 0, AEx ia IIC T5; NI CL I, DIV 2, GP A, B, C, D T5; $(-60^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C})$; when installed per 00751-0074; Type 4X

Special Conditions for Safe Use (X):

1. The apparatus enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

Canada

E6 Canada Explosion-proof

Certificate 1718395

Standards CSA Std C22.2 No. 25-1966; CSA Std C22.2 No. 30-M1986; CAN/CSA-C22.2 No. 94-M91; CSA Std C22.2 No. 142-M1987

Markings Explosion-proof for CL I, DIV 1, GP C, D; CL II, DIV 1, GP E, F, G; CL III; DIV 1; CL I DIV 2, GP A, B, C, D; Type 4

I6 Canada Intrinsically Safe

Certificate 1718395

Standards CSA Std C22.2 No. 25-1966; CSA Std C22.2 No. 30-M1986; CAN/CSA-C22.2 No. 94-M91; CSA Std C22.2 No. 142-M1987; CAN/CSA-C22.2 No. 157-92; CSA Std C22.2 No. 213-M1987

Markings Intrinsically Safe for CL I DIV 1; when installed per 00751-0068; Type 4X

Europe

E8 ATEX/UKEX Flameproof

Certificate ATEX Certificate: DEMKO 18 ATEX 1958X
UKEX Certificate: UL21UKEX2050X

Standards EN IEC 60079-0:2018; EN 60079-1:2014

Markings Ⓢ II 2 G Ex db IIC T5/T6 Gb, T6(-40 °C ≤ T_a ≤ +40 °C), T5(-40 °C ≤ T_a ≤ +70 °C) V_{max} = 60 Vdc; I_{max} = 50 mA; P_{max}=1.5 W

Installation Instructions

1. Only use plugs, adapters, glands, or conduit with a compatible thread form when closing conduit entries.
2. The 751 may be provided with a ¾NPT to ½NPT thread adapter. This thread adapter has not been assessed under DEMKO 18 ATEX 1958X. When installing this thread adapter, refer to manufacturer's installation instructions.

Special Conditions for Safe Use (X):

1. Flameproof joints are not intended for repair.
2. Painted enclosures may cause risk from electrostatic discharge. Avoid installation that could cause electrostatic build-up on painted surfaces, and only clean the painted surfaces with a damp cloth.

I8 ATEX/UKEX Intrinsic Safety

Certificate ATEX Certificate: Baseefa03ATEX0448X
UKEX Certificate: BAS21UKEX0737X

Standards EN IEC 60079-0:2018, EN 60079-11:2012

Markings Ⓢ II 1 G Ex ia IIC T5/T6 Ga; T6(-60 °C ≤ T_a ≤ +40 °C), T5(-60 °C ≤ T_a ≤ +80 °C)

Special Condition for Safe Use (X):

1. The enclosure may be made from aluminum alloy and given a protective polyurethane or epoxy polyester paint finish; however, care should be taken to protect it from impact or abrasion if located in a zone 0 environment.

N1 ATEX/UKEX Zone 2

Certificate	ATEX Certificate: Baseefa03ATEX0454 UKEX Certificate: BAS21UKEX0738
Standards	EN IEC 60079-0:2018; EN 60079-15:2010
Markings	⊕ II 3 G Ex nA IIC T6 Gc; (-40 °C ≤ T _a ≤ +70 °C)

International**E7 IECEx Flameproof**

Certificate	IECEX UL 18.0040X
Standards	EC 60079-0:2017; IEC 60079-1:2014-06
Markings	Ex db IIC T5/T6 Gb, T6(-40 °C ≤ T _a ≤ +40 °C), T5(-40 °C ≤ T _a ≤ +70 °C) V _{max} = 60 Vdc; I _{max} = 50 mA; P _{max} =1.5 W

Installation Instructions

1. Only use plugs, adapters, glands, or conduit with a compatible thread form when closing conduit entries.
2. The 751 may be provided with a ¾ NPT to ½ NPT thread adapter. This thread adapter has not been assessed under IECEX UL 18.0040X. When installing this thread adapter, refer to manufacturer's installation instructions.

Special Conditions for Safe Use (X):

1. Flameproof joints are not intended for repair.
2. Painted enclosures may cause risk from electrostatic discharge. Avoid installations that could cause electrostatic build-up on painted surfaces, and only clean the painted surfaces with a damp cloth.

I7 IECEx Intrinsic Safety

Certificate	IECEX BAS 11.0064X
Standards	IEC 60079-0: 2017; IEC 60079-11: 2011
Markings	Ex ia IIC T5/T6 Ga; T6(-60 °C ≤ T _a ≤ +40 °C), T5(-60 °C ≤ T _a ≤ +80 °C)

Special Condition for Safe Use (X):

1. The enclosure may be made of aluminum alloy and given a protective polyurethane or epoxy polyester paint finish; however, care should be taken to protect it from impact or abrasion if located in a Zone 0 environment.

Brazil**E2 Brazil Flameproof**

Certificate	UL-BR 16.0054X
Standards	ABNT NBR IEC 60079-0:2020, ABNT NBR IEC 60079-1:2016

Markings Ex db IIC T5/T6 Gb; T6(-40 °C ≤ T_a ≤ +40 °C), T5(-40 °C ≤ T_a ≤ +70 °C)

Special Condition for Safe Use (X):

1. Flameproof joints are not intended for repair.
2. Painted enclosures may cause risk from electrostatic discharge. Avoid installations that could cause electrostatic build-up on painted surfaces, and only clean the painted surfaces with a damp cloth.

I2 Brazil Intrinsic Safety

Certificate UL-BR 15.1094X

Standards ABNT NBR IEC 60079-0:2008 + Errata 1:2011 ABNT NBR IEC 60079-11:2009

Markings Ex ia IIC T5/T6 Ga; T6(-60 °C ≤ T_a ≤ +40 °C), T5(-60 °C ≤ T_a ≤ +80 °C)

Special Condition for Safe Use (X):

1. The enclosure may be made of aluminum alloy and given a protective polyurethane or epoxy polyester paint finish; however, care should be taken to protect it from impact or abrasion if located in places where EPL Ga is required.

China

E3 China Flameproof

Certificate GYJ21.3427X (CCC 认证)

Standards GB/T 3836.1-2021, GB/T 3836.2-2021

Markings Ex db IIC T5...T6 Gb

产品安全使用特殊条件:

1. 产品使用环境温度范围:

温度组别	环境温度
T6	-40°C ≤ T _a ≤ +40°C
T5	-40°C ≤ T _a ≤ +70°C

2. 涉及隔爆结合面的维修须联系产品制造商。
3. 产品外壳涂层可能造成静电放电危险；为避免可能引起静电积累，设备只能用湿布清洁外壳涂层表面。
4. 产品使用注意事项:
5. 产品外壳设有接地端子，用户在使用时应可靠接地。
6. 安装现场应不存在对产品外壳有腐蚀作用的有害气体。
7. 现场安装时，电缆引入口须选用经国家指定的防爆检验机构检验认可、具有 Ex db IIC Gb 防爆等级的电缆引入装置或堵封件，冗余电缆引入口须用堵封件有效密封。
8. 用于爆炸性气体环境中，现场安装、使用和维护必须严格遵守“断电后开盖！”的警告语。
9. 用户不得自行更换该产品的零部件，应会同产品制造商共同解决运行中出现的故障，以杜绝损坏现象的发生。

10. 产品的安装、使用和维护应同时遵守产品使用说明书、GB/T3836.13-2021“爆炸性环境 第 13 部分：设备的修理、检修、修复和改造”、GB/T3836.15-2017“爆炸性环境 第 15 部分：电气装置的设计、选型和安装”、GB/T3836.16-2017“爆炸性环境 第 16 部分：电气装置的检查与维护”和 GB50257-2014“电气装置安装工程爆炸的有关规定”。

I3 China Intrinsic Safety (Special Y0052)

Certificate:	GYJ19.1331X (CCC 认证)
Standards:	GB/T 3836.1-2021、GB/T 3836.4-2021
Markings:	Ex ia IIC T5…T6 Ga; T5(-60°C~+80°C), T6(-60°C~+40°C)

一、产品安全使用特殊条件

产品防爆合格证号后缀“X”代表产品安全使用有特殊条件：

1. 产品使用环境温度与温度组别的关系为：

温度组别	环境温度
T6	$-60^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$
T5	$-60^{\circ}\text{C} \leq T_a \leq +80^{\circ}\text{C}$

2. 当产品外壳为铸铝材质且带有聚氨酯或聚酯纤维涂层时，在 0 区使用应注意防止产品受到冲击或摩擦，以防静电积累危险。

二、产品使用注意事项

- a. 本安电气参数：

最高输入电压 U_i (V)	最大输入电流 I_i (mA)	最大内部等效参数	
		C_i (nF)	L_i (mH)
60	200	0	0

- b. 该产品必须与已通过防爆认证的关联设备配套共同组成本安防爆系统方可使用于爆炸性气体环境。其系统接线必须同时遵守本产品 and 所配关联设备的使用说明书要求，接线端子不得接错。
- c. 用户不得自行更换该产品的零部件，应会同产品制造商共同解决运行中出现的故障，以杜绝损坏现象的发生。
- d. 产品的安装、使用和维护应同时遵守产品使用说明书、GB/T3836.13-2021“爆炸性环境 第 13 部分：设备的修理、检修、修复和改造”、GB/T3836.15-2017“爆炸性环境 第 15 部分：电气装置的设计、选型和安装”、GB/T3836.16-2017“爆炸性环境 第 16 部分：电气装置的检查与维护”、GB/T3836.18-2017“爆炸性环境 第 18 部分：本质安全电气系统”、GB50257-2014“电气装置安装工程爆炸和火灾危险环境电力装置施工及验收规范”的有关规定。

Japan

E4 Japan Flameproof

Certificate:	CML 18JPN1417X
Standards:	Ex db IIC T6/T5 Gb, T6(-40°C ≤ T _a ≤ +40°C), T5(-40°C ≤ T _a ≤ +70°C)

Special Condition for Safe Use (X):

1. Flameproof joints are not intended for repair.

2. Optional paint may cause risk from electrostatic discharge. Avoid installations that could cause electrostatic build-up on painted surfaces, and only clean the painted surfaces with a damp cloth. If paint is ordered through a special option code, contact the manufacturer for more information.

EAC - Belarus, Kazakhstan, Russia

EM Technical Regulation Customs Union TR CU 012/2011 (EAC) Flameproof

Markings 1Ex db IIC T6...T5 Gb X; T5 (-40°C ≤ T_a ≤ +70°C); T6 (-40°C ≤ T_a ≤ +40°C);
See certificate for Special Conditions for Safe Use.

IM Technical Regulation Customs Union TR CU 012/2011 (EAC) Intrinsic Safety

Markings 0Ex ia IIC T6...T5 Ga X; T5 (-60°C ≤ T_a ≤ +80°C); T6 (-60°C ≤ T_a ≤ +40°C);
See certificate for Special Conditions for Safe Use.

Korea

EP 20-KA4BO-0120X; 20-KA4BO-0437X; 20-KA4BO-0438X

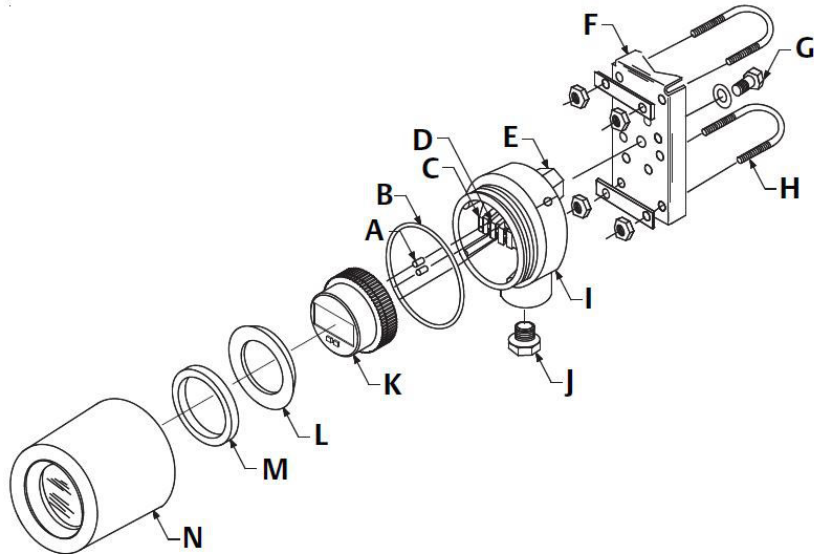
Markings: Ex d IIC T6/T5; (-40°C ≤ T_a ≤ +40°C) (T6); (-40°C ≤ T_a ≤ +70°C) (T5);
See certificate for Special Conditions for Safe Use.

Combinations

K2 Combination of E2 and I2
K5 Combination of E5 and I5
C6 Combination of E6 and I6
KM Combination of EM and IM

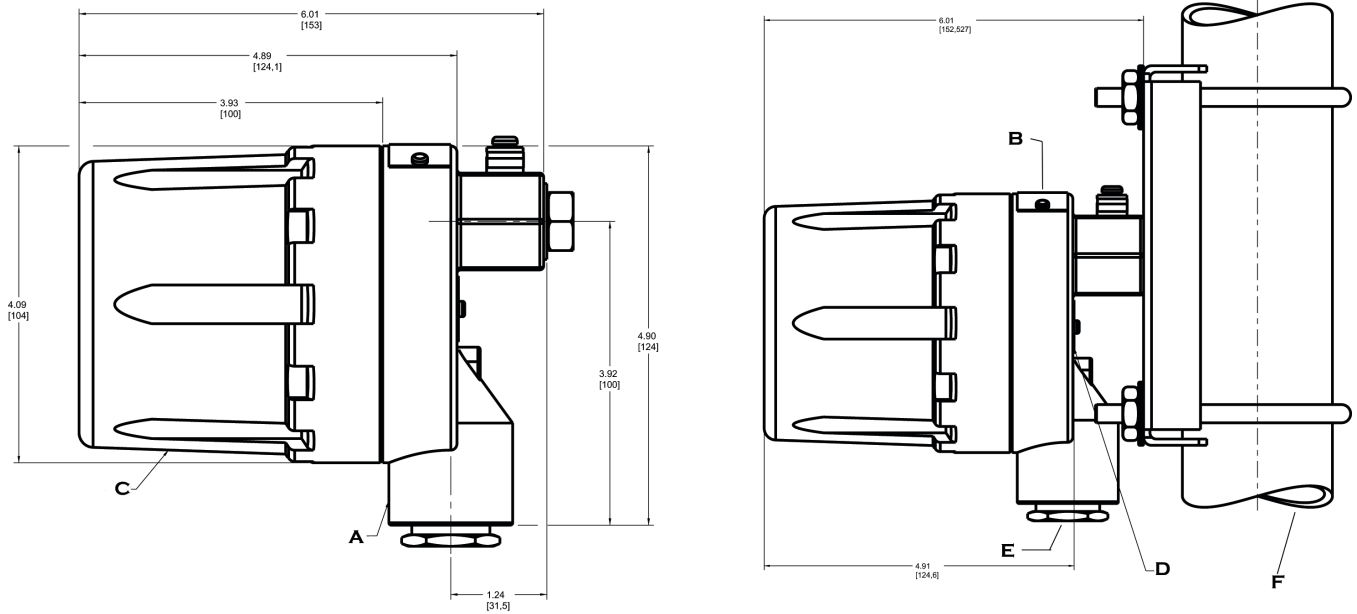
Dimensional drawings

Figure 2: Rosemount 751 Exploded View



- A. Terminal screws
- B. Housing O-ring
- C. Field wiring terminals
- D. Loop protection diode
- E. Tapped mounting boss
- F. Optional mounting bracket
- G. Mounting bolt with washer
- H. U-bolt for 2-in. pipe
- I. Housing
- J. Optional $\frac{3}{4}$ - to $\frac{1}{2}$ -in. conduit reducing bushing (if required)
- K. Meter
- L. Bushing
- M. Foam spacer
- N. Housing cover

Figure 3: Rosemount 751 Dimensional Drawing



- A. Optional mounting bracket
- B. Permanent tag
- C. 0.37-in. (9.4 mm) diameter holes (typically four places)
- D. FM or CSA tag (if required)
- E. 3/4-14 NPT conduit connection
- F. 2-in. pipe

Note

Dimensions are in inches (millimeters).

For more information: [Emerson.com/global](https://emerson.com/global)

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ROSEMOUNT™

