

# 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

Rosemount 751 Field Signal Indicators are durable, configurable LCD devices designed to display critical process variables from any two wire transmitter.

## Transcend integral meter display with 751

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.

Emerson designed 751 Indicators 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 (IS) certifications.

## LCD display meter

You may configure the LCD display meter 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.

To change the 4 mA and 20 mA points, remove the housing and meter covers and press the meter faceplate buttons. You can rotate the meter in 90-degree increments within the enclosure for convenient viewing.

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# Ordering information

[CONFIGURE >](#)[VIEW PRODUCT >](#)

## Online product configurator

Many products are configurable online using our product configurator.

Select the **Configure** button or visit [www.Emerson.com](http://www.Emerson.com) 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**

<u>3144P D1 A 1 NA</u>	<u>M5 DA1 Q4</u>
1	2

1. Required model components <sup>(1)</sup>
2. Additional options <sup>(2)</sup>

## Specifications and options

Specification and selection of product materials, options, and/or components must be made by the purchaser of the equipment. See *Material selection* for more information.

### Related information

[Material selection](#)

## 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.

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(1) Choices available on most.

(2) Variety of features and functions that may be added to products.

## Required model components

### Model

Code	Description	
751	Remote Signal Indicator	★

### Input signal

Code	Description	
A	4-20 mA DC	★

### Meter scale

Code	Description	
M4 <sup>(1)</sup>	Linear LCD display meter, 0-100% scale	★
M7 <sup>(1)</sup>	Special scale LCD display meter (specify range, mode, and engineering units)	★
M8 <sup>(1)</sup>	Square root LCD display meter, 0-100% flow	★
M9 <sup>(1)</sup>	Square root LCD display meter, 0-10 square root	★

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

### Product certificates

Code	Description	
NA	No approval required	★
E2	Brazil Flameproof	★
I2	Brazil Intrinsic Safety	★
K2	Brazil Flameproof, Intrinsic Safety	★
E3	China Flameproof	★
E5	USA Explosion-Proof	★
E6	Canada Explosion-Proof	★
E7	IECEX Flameproof	★
E8	ATEX Flameproof	★
I5	USA Intrinsic Safety and Non-incendive	★
I6	Canada Intrinsic Safety	★
I7	IECEX Intrinsic Safety	★
I8	ATEX Intrinsic Safety	★
N1	ATEX Type N Non-incendive	★
C6	Canada Intrinsic Safety, Non-incendive, and Explosion-proof approval combination	★
K5	USA Intrinsic Safety, Non-incendive, and Explosion-proof approval combination	★
KM	Technical Regulations Customs Union (EAC) Flameproof, Intrinsic Safety	★

Code	Description	
IM	Technical Regulations Customs Union (EAC) Intrinsic Safety	★
EM	Technical Regulations Customs Union (EAC) Flameproof	★

## Additional options

### Mounting bracket

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

### Reducer

Code	Description	
C	Stainless steel reducer $\frac{3}{4}$ to $\frac{1}{2}$ in. for conduit connection (See <a href="#">Figure 2</a> for reference.)	★

### Bar code tag

Code	Description	
BT	Customer-specified bar code tag	★

### Extended product warranty

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

<b>Typical model number:</b> 751 A M4 NA BC
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# 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

<b>Enclosure</b>	Low-copper aluminum
<b>Paint</b>	Polyurethane
<b>Housing O-ring</b>	Buna-N
<b>LCD cover O-ring</b>	FKM
<b>Meter mounting materials</b>	Plastic

#### Electrical connections

3-pole terminal block with 8-32 nickel-plated brass screw terminals, with  $\frac{3}{4}$ -14 NPT conduit <sup>(3)</sup>

#### Enclosure rating

NEMA<sup>®</sup> Type 4x. CSA Type 4x. IP66

#### Weight

<b>Indicator only:</b>	1.8 kg (4 lb.)
<b>Indicator with optional mounting bracket:</b>	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.

(3) Stainless steel  $\frac{3}{4}$ - to  $\frac{1}{2}$ -in. reducer is an available option.

## 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

<b>Storage</b>	–40 to 185 °F (–40 to 85 °C)
<b>Operating</b>	–40 to 158 °F (–40 to 70 °C) <sup>(4)</sup>

#### 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

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(4) 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.

**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

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**

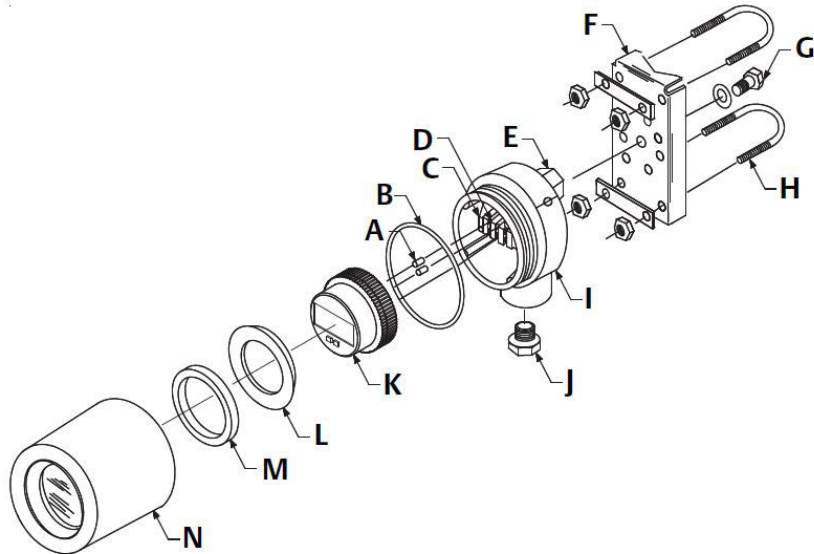
2 ¼-in. diameter face with four ½-in. high characters

## Product certifications

For product certifications, see the [Rosemount 751 Field Signal Indicator Quick Start Guide](#).

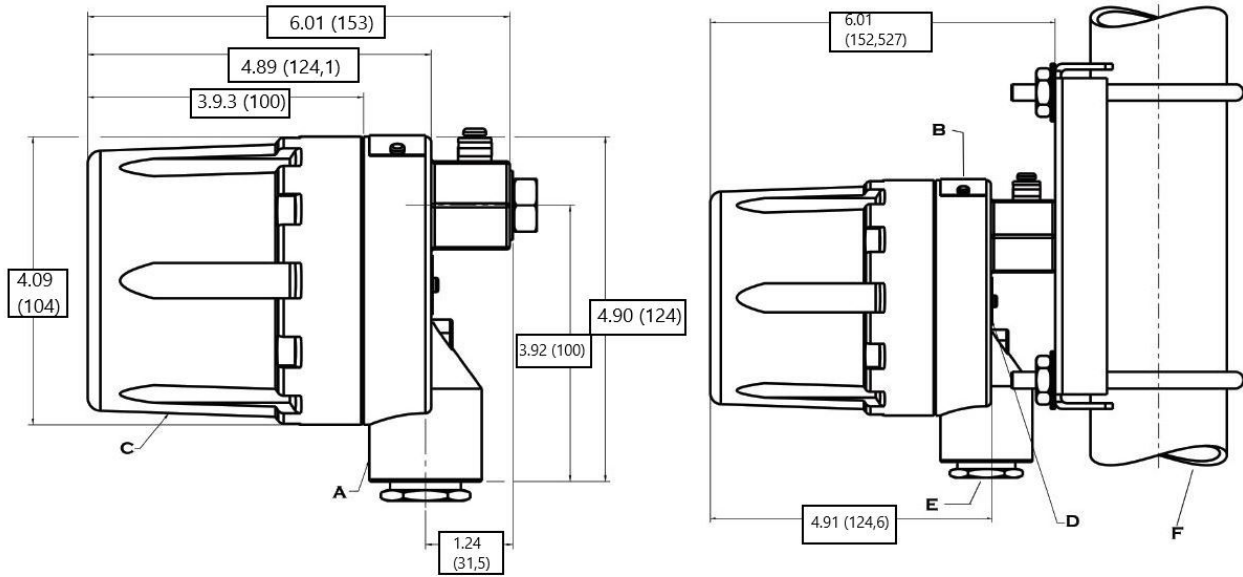
# Dimensional drawings

**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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