Rosemount™ 752 FOUNDATION™ Fieldbus Remote Indicator

- Two-wire segment powered device
- Displays up to eight values
- Link Master Capability
- Optional PID, Characterizer, Arithmetic, and Integrator Function Blocks
- ITK6 Certified
Display data wherever needed with the Rosemount 752 Remote Fieldbus Indicator

The Rosemount 752 Foundation Fieldbus Remote Indicator is useful for displaying the value of a controlled variable next to a final control device or for displaying information from transmitters mounted in inaccessible locations. The indicator can be located anywhere along the segment to allow information to be displayed wherever it is needed.

The Rosemount 752 Remote Indicator can display a function block output from any device on the Foundation Fieldbus H1 segment. Up to eight values can be configured with Tag and engineering units. The data is scrolled sequentially in three-second increments. In addition to displaying values from fieldbus devices, the Rosemount 752 Remote Indicator can provide advanced calculations and control capability through the optional function block suite. Function blocks provided include Input Selector, Input Characterizer, Arithmetic, Integrator, and PID with autotune.

The Rosemount 752 is a core component of the Plantweb™ digital plant architecture. Visit Emerson.com/Plantweb to learn how to get the most out of any Fieldbus project.

Figure 1: The Rosemount 752 can Display up to Eight Variables Coming from any Device on the Fieldbus Segment

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Figure 2: Rosemount 752 Display

Ordering Information

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

Table 1: Rosemount 752 Fieldbus Remote Indicator Ordering Information

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

<table>
<thead>
<tr>
<th>Model</th>
<th>Product Type</th>
</tr>
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<tbody>
<tr>
<td>752</td>
<td>Fieldbus Remote Indicator</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Transmitter Output</th>
<th>Foundation Fieldbus digital signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>★</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Housing Style</th>
<th>Material</th>
<th>Conduit Entry Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>Plantweb Housing</td>
<td>Aluminum</td>
</tr>
<tr>
<td>1B</td>
<td>Plantweb Housing</td>
<td>Aluminum</td>
</tr>
<tr>
<td>1C</td>
<td>Plantweb Housing</td>
<td>Aluminum</td>
</tr>
<tr>
<td>1J</td>
<td>Plantweb Housing</td>
<td>SST</td>
</tr>
<tr>
<td>1K</td>
<td>Plantweb Housing</td>
<td>SST</td>
</tr>
<tr>
<td>1L</td>
<td>Plantweb Housing</td>
<td>SST</td>
</tr>
</tbody>
</table>

Table 2: Options (include with selected model number)

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

<table>
<thead>
<tr>
<th>Plantweb Control Functionality</th>
<th>Foundation Fieldbus Advanced Control Function Block Suite</th>
<th>★</th>
</tr>
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<tbody>
<tr>
<td>Product Certifications</td>
<td>FM Explosion-Proof, Dust-Ignition-proof</td>
<td>★</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>I5</td>
<td>FM Intrinsically Safe, Division 2</td>
<td>★</td>
</tr>
<tr>
<td>IE(1)</td>
<td>FM FISCO Intrinsically Safe</td>
<td>★</td>
</tr>
<tr>
<td>K5</td>
<td>FM Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination</td>
<td>★</td>
</tr>
<tr>
<td>E6</td>
<td>CSA Explosion-proof; Division 2; Dust Ignition-proof</td>
<td>★</td>
</tr>
<tr>
<td>I6</td>
<td>CSA Intrinsically Safe</td>
<td>★</td>
</tr>
<tr>
<td>IF(1)</td>
<td>CSA FISCO Intrinsically Safe</td>
<td>★</td>
</tr>
<tr>
<td>K6</td>
<td>CSA Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination</td>
<td>★</td>
</tr>
<tr>
<td>E1</td>
<td>ATEX Flameproof</td>
<td>★</td>
</tr>
<tr>
<td>I1</td>
<td>ATEX Intrinsic Safety</td>
<td>★</td>
</tr>
<tr>
<td>IA(1)</td>
<td>ATEX FISCO Intrinsic Safety</td>
<td>★</td>
</tr>
<tr>
<td>N1</td>
<td>ATEX Type n</td>
<td>★</td>
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<tr>
<td>ND</td>
<td>ATEX Dust</td>
<td>★</td>
</tr>
<tr>
<td>K1</td>
<td>ATEX Flameproof; Intrinsic Safety; Type n; Dust Combination</td>
<td>★</td>
</tr>
<tr>
<td>I7</td>
<td>IECEx Intrinsic Safety</td>
<td>★</td>
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<tr>
<td>IG(1)</td>
<td>IECEx FISCO Intrinsically Safe</td>
<td>★</td>
</tr>
<tr>
<td>N7</td>
<td>IECEx Type n</td>
<td>★</td>
</tr>
<tr>
<td>E7</td>
<td>IECEx Flameproof</td>
<td>★</td>
</tr>
<tr>
<td>I2</td>
<td>INMETRO Intrinsic Safety</td>
<td>★</td>
</tr>
<tr>
<td>E2</td>
<td>INMETRO Flameproof</td>
<td>★</td>
</tr>
<tr>
<td>KA</td>
<td>CSA and ATEX: Flameproof; Intrinsically Safe; Division 2 Combination</td>
<td>★</td>
</tr>
<tr>
<td>K2</td>
<td>INMETRO Flame-proof; Intrinsic Safety Combination</td>
<td>★</td>
</tr>
<tr>
<td>IB</td>
<td>INMETRO FISCO Intrinsically Safe</td>
<td>★</td>
</tr>
<tr>
<td>KB</td>
<td>FM and CSA: Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination</td>
<td>★</td>
</tr>
<tr>
<td>KC</td>
<td>FM and ATEX: Explosion-proof; Intrinsically Safe; Division 2 Combination</td>
<td>★</td>
</tr>
<tr>
<td>KM</td>
<td>Technical Regulations Customs Union (EAC) Flameproof, Intrinsic Safety</td>
<td>★</td>
</tr>
<tr>
<td>IM</td>
<td>Technical Regulations Customs Union (EAC) Intrinsic Safety</td>
<td>★</td>
</tr>
<tr>
<td>EM</td>
<td>Technical Regulations Customs Union (EAC) Flameproof</td>
<td>★</td>
</tr>
<tr>
<td>NM</td>
<td>Technical Regulations Customs Union (EAC) Type N</td>
<td>★</td>
</tr>
<tr>
<td><strong>Transient Protection</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T1(1)</td>
<td>Integral Transient Protector</td>
<td>★</td>
</tr>
<tr>
<td><strong>Conduit Electrical Connector</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GE(2)</td>
<td>M12, 4-pin, Male Connector (eurofast®)</td>
<td>★</td>
</tr>
<tr>
<td>GM(2)</td>
<td>A size Mini, 4-pin, Male Connector (minifast®)</td>
<td>★</td>
</tr>
<tr>
<td><strong>Extended Product warranty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WR3</td>
<td>3-year limited warranty</td>
<td>★</td>
</tr>
<tr>
<td>WR5</td>
<td>5-year limited warranty</td>
<td>★</td>
</tr>
</tbody>
</table>
Table 2: Options (include with selected model number) (continued)

<table>
<thead>
<tr>
<th>Typical Model Number: 752 F 1A A01 E1</th>
</tr>
</thead>
</table>

1. The T1 option is not needed with FISCO product certifications, transient protection is included in the FISCO product certification codes IA, IE, IF, and IG.
2. Not available with certain hazardous location certifications. Contact your local Emerson™ representative for details.

Specifications

Functional specifications

Current consumption
17.5 mA

Power requirements
External power required; operates a 9.0–32.0 Vdc on a Fieldbus terminated segment

Temperature limits
–4 to 175 °F (–20 to 80 °C)

Ambient storage
–40 to 185 °F (–40 to 85 °C)

Humidity limits
0 – 100 percent relative humidity

Electrical connections
–14 NPT, G, and M20 × 1.5 (CM20) conduit

Performance specifications
Configurable to display up to eight function block output values.
Display sequences through configured variables at three-second intervals.
Conformance to specifications \(±3\sigma\) (Sigma)]
Technology leadership, advanced manufacturing techniques, and statistical process control ensure specification conformance to at least \(±3\sigma\).

Software upgrade in the field
Software for the Rosemount 752 with Foundation Fieldbus is easy to upgrade in the field using the Foundation Fieldbus Common Device Software Download procedure.

Block execution times
- PID: 10 ms
- Arithmetic: 10 ms
- Input selection: 10 ms
- Signal characterizer: 10 ms
- Integrator: 10 ms

Advanced Control Function Block Suite (Option code A01)
- **Input selector block**
  Selects between inputs and generates an output using specific selection strategies such as minimum, maximum, midpoint, average, or first “good.”
- **Arithmetic block**
  Provides pre-defined application-based equations including flow with partial density compensation, electronic remote sensors, hydrostatic tank gauging, ratio control, and others.
- **Signal characterizer block**
  Characterizes or approximates any function that defines an input/output relationship by configuring up to twenty X, Y coordinates. The block interpolates an output value for a given input value using the curve defined by the configured coordinates.
- **Integrator block**
  Compares the integrated or accumulated value from one or two variables to pre-trip and trip limits and generates discrete output signals when the limits are reached. This block is useful for calculating total flow, total mass, or volume over time.

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 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.
Weight
2.5 lb (1.1 kg)

Product Certifications

Rev 1.16

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 Emerson.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).

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 FM Explosion-proof and Dust-Ignition proof

Certificate:  FM16US0090
Markings:  XP CL I, DIV 1, GP B, C, D T5; DIP CL II DIV 1 GP E, F, G; CL III; (–20 °C ≤ T_a ≤ 80 °C); Seal not required; Type 4X

I5/IE FM Intrinsically Safe, Division 2/FISCO Intrinsically Safe

Certificate:  FM17US0348X
Markings:  IS CL I, II, III, DIV 1, GP A, B, C, D, E, F, G T4; IS CL I, ZONE 0, AEx ia IIC T4; (–20 °C ≤ T_a ≤ 60 °C); NI CL I, DIV 2, GP A, B, C, D T4; (–20 °C ≤ T_a ≤ 60 °C); Install per 00752-1010; Type 4X FISCO Field Device; IS CL I, II, III, DIV 1, GP A, B, C, D, E, F, G T4; IS CL I, ZONE 0, AEx ia IIC T4; (–20 °C ≤ T_a ≤ 60 °C); Install per 00752-1010; Type 4X
Canada

E6 CSA Explosion-proof and Dust-Ignition proof, Division 2

Certificate: 1563767


Markings: CL I, DIV 1, GP B, C, D; CL II, DIV 1, GP E,F,G; CL III; (–50 °C ≤ T_a ≤ 80 °C); CL I, DIV 2 GP A, B, C, D T3C; (–20 °C ≤ T_a ≤ 40 °C); Seal not required; Type 4X

I6/IF CSA Intrinsically Safe / FISCO Intrinsically Safe

Certificate: 1563767


Markings: CL I, DIV 1, GP A, B, C, D T3C (–20 °C ≤ T_a ≤ 40 °C); Install per 00752-1020; Type 4X FISCO field device; CL I, DIV 1, GP A, B, C, D T3C (–20 °C ≤ T_a ≤ 40 °C); Install per 00752-1020; Type 4X

Europe

E1 ATEX Flameproof

Certificate: KEMA03ATEX2476X


Markings: II 2 G; Ex db IIC T6…T5 Gb, T5(–60 °C ≤ T_a ≤ 80 °C), T6(–60 °C ≤ T_a ≤ 70 °C); IP66

Special Conditions for Safe Use (X):
1. Flameproof joints are not intended for repair.
2. Non-standard paint options 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.

I1/IA ATEX Intrinsic Safety/FISCO Intrinsic Safety

Certificate: Baseefa03ATEX0239X


Markings: II 1 G, Ex ia IIC T4 Ga; (–20 °C ≤ T_a ≤ +60 °C); IP66
See Table 3 for Entity Parameters.

Special Conditions for Safe Use (X):
1. When fitted with the transient protection option, the apparatus is not capable of withstanding the 500 V test as defined in Clause 6.3.13 of EN 60079-11:2012. This must be taken into account during installation.
2. The Rosemount 752 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 area.

N1 ATEX Type n

Certificate: Baseefa03ATEX0240X


Markings: II 3 G; Ex nA IIC T5 Gc (–20 °C ≤ T_a ≤ 70 °C); IP66
Special Condition for Safe Use (X):

1. The equipment is not capable of withstanding the 500 V insulation test required by Clause 6.5 of EN 60079-15:2010. This must be taken into account when installing the apparatus.

ND ATEX Dust

Certificate: KEMA03ATEX2476X
Markings: © II 2 D; Ex tb IIIC T105 °C Db (−60 °C ≤ T_a ≤ 80 °C); IP66

Special Conditions for Safe Use (X):

1. Flameproof joints are not intended for repair.
2. Non-standard paint options 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.

International

E7 IECEx Flameproof

Certificate: IECEx KEM 10.0066X
Markings: Ex db IIC T6...T5 Gb, T5(−60 °C ≤ T_a ≤ 80 °C), T6(−60 °C ≤ T_a ≤ 70 °C); IP66

Special Condition for Safe Use (X):

1. Flameproof joints are not intended for repair.
2. Non-standard paint options 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.

I7/I8 IECEx Intrinsic Safety / FISCO Intrinsic Safety

Certificate: IECEx BAS 04.0029X
Markings: Ex ia IIC T4 Ga; T4(−20 °C ≤ T_a ≤ 60 °C) IP66 See Table 3 for entity parameters.

Special Conditions for Safe Use (X):

1. When fitted with the transient option, the apparatus is not capable of withstanding the 500 V test as defined in Clause 6.3.13 of IEC 60079-11:2011. This must be taken into account during installation.
2. The Rosemount 752 enclosure may be made of aluminum alloy and given a protective polyurethane paint finish; however, care should be taken to protect it from impact of abrasion if located in a zone 0 area.

N7 IECEx Type n

Certificate: IECEx BAS 04.0030X
Markings: Ex nA IIC T5 Gc (−40 °C ≤ T_a ≤ 70 °C); IP66
Special Condition for Safe Use (X):

1. When fitted with the transient option, the apparatus is not capable of withstanding the 500 V test as defined in Clause 6.5 of IEC 60079-15:2010. This must be taken into account during installation.

NF IECEx Dust

Certificate: IECEx KEM 10.0066X
Markings: Ex tb IIIb T105 °C Db (–60 °C ≤ T_a ≤ 80 °C); IP66

Special Conditions for Safe Use (X):

1. Flameproof joints are not intended for repair.
2. Non-standard paint options 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.

Brazil

E2 INMETRO Flameproof

Certificate: UL-BR 15.1054X
Markings: Ex db IIIC T6... T5 Gb; T6 (–60 °C ≤ T_amb ≤ +70 °C); T5 (–60 °C ≤ T_amb ≤ +80 °C)

Special Condition for Safe Use (X):

1. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.

I2/IB INMETRO Intrinsic Safety/FISCO Intrinsic Safety

Certificate: UL-BR 16.0078X
Markings: Ex ia IIIC T4 (–20 °C ≤ T_a ≤ +60 °C) Ga; IP66

EAC

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

Markings: 1Ex db IIIC T6... T5 Gb X; IP66; T5 (–60 °C ≤ T_a ≤ +80 °C), T6 (–60 °C ≤ T_amb ≤ +70 °C)
See certificate for special conditions of safe use.

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

Markings: 0Ex ia IIIC T4 Ga X; IP66; T4 (–20 °C ≤ T_a ≤ +60 °C)
See certificate for special conditions of safe use.

NM Technical Regulation Customs Union TR CU 012/2011 (EAC) (EAC) Type n

Markings: 2Ex nA IIIC T5 Gc X; IP66; T5 (–40 °C ≤ T_a ≤ +70 °C)
See certificate for special conditions of safe use.

**KM Technical Regulation Customs Union TR CU 012/2011 (EAC) (EAC) Flameproof, Intrinsic Safety, Type n, and Dust-Ignitionproof**

**Markings:** Ex tb IIIC T105 °C Db X along with markings for EM, IM, and NM above
See certificate for special conditions for safe use.

**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**
- **KA Combination of E1, E6, I1, and I6**
- **KB Combination of E5, E6, I5, and I6**
- **KC Combination of E5, E1, I5, and I1**
- **KM Combination of EM, IM, and NM**

**Table 3: Entity Parameters**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Fieldbus</th>
<th>FISCO</th>
</tr>
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<tbody>
<tr>
<td>$U_i$ (V)</td>
<td>30</td>
<td>17.5</td>
</tr>
<tr>
<td>$I_i$ (mA)</td>
<td>300</td>
<td>380</td>
</tr>
<tr>
<td>$P_i$ (W)</td>
<td>1.3</td>
<td>5.32</td>
</tr>
<tr>
<td>$C_i$ (F)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>$L_i$ (H)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Dimensional Drawings

**Figure 3: Pipe Mount Installations**

Dimensions are in inches (millimeters).

**Figure 4: Panel Mount Installations**

Dimensions are in inches (millimeters).