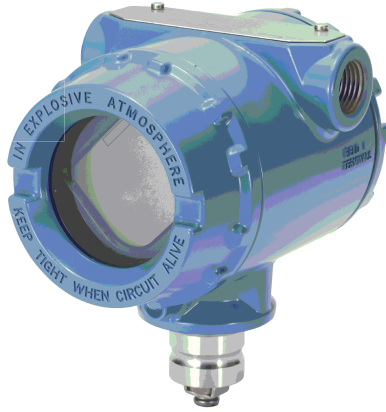


Rosemount™ 752 Remote Indicator

with FOUNDATION™ Fieldbus Protocol



Safety messages

This guide provides basic guidelines for the Rosemount 752 Remote Indicator. It does not provide instructions for configuration, diagnostics, maintenance, service, troubleshooting, explosion-proof, flameproof, or intrinsically safe (I.S.) installations. Refer to the Rosemount 752 [Reference Manual](#) for more instruction. This manual is also available electronically on www.Emerson.com.

⚠ WARNING

Explosions could result in death or serious injury.

Installation of this indicator in an explosive environment must be in accordance with the appropriate local, national, and international standards, codes, and practices. Review the Product Certifications section for any restrictions associated with a safe installation.

- Before connecting a handheld communicator in an explosive atmosphere, ensure the instruments in the segment are installed in accordance with intrinsically safe or non-incendive field wiring practices.
- In an explosion-proof/Flameproof installation, do not remove the indicator cover when power is applied to the unit.

Electrical shock can result in death or serious injury.

- Avoid contact with the leads and terminals. High voltage that may be present on leads can cause electrical shock.

Conduit/cables entries

- Unless marked, the conduit/cable entries in the housing use a ½-14 NPT thread form. Entries marked M20 are M20 × 1.5 thread form. On devices with multiple conduit entries, all entries will have the same thread form. Only use plugs, adapters, glands, or conduit with a compatible thread form when closing these entries.
- When installing in a hazardous location, use only appropriately listed or Ex-certified plugs, glands, or adapters in cable/conduit entries.

Physical access

- Unauthorized personnel may potentially cause significant damage to and/or misconfiguration of end users' equipment. This could be intentional or unintentional and needs to be protected against.
- Physical security is an important part of any security program and fundamental to protecting your system. Restrict physical access by unauthorized personnel to protect end users' assets. This is true for all systems used within the facility.

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1 Wiring connection

1.1 Wiring for FOUNDATION™ Fieldbus protocol

1. Remove the housing cover on terminal compartment side.

⚠ WARNING

Do not remove the cover in explosive atmospheres when the circuit is live. Signal wiring supplies all power to the indicator.

2. Connect the power leads to the terminals marked "FIELDBUS WIRING" as shown in [Figure 1-1](#).

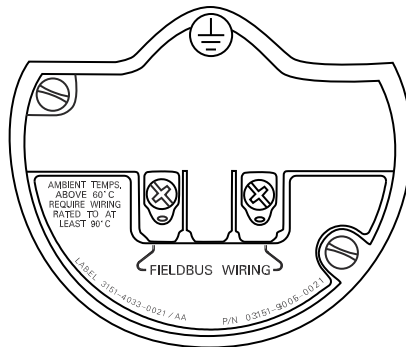
NOTICE

The power terminals are not polarity sensitive.

3. Plug and seal unused conduit connections on the indicator housing to avoid moisture accumulation in the terminal side.
 - a. If you do not seal unused connections, mount the indicator with the electrical housing positioned downward for drainage.
 - b. Install wiring with a drip loop.
 - c. Arrange the drip loop so the bottom is lower than the conduit connections and the indicator housing.

Note

Do not apply high voltage (e.g. AC line voltage) to the indicator terminals. Abnormally high voltage can damage the unit. Indicator terminals are rated to 32 Vdc.

Figure 1-1: Fieldbus Terminal Block

Electrical considerations

Proper electrical installation is necessary to prevent errors due to improper grounding and electrical noise. Shielded, twisted pair cable should be used for best results in electrically noisy environments. Cable type A is recommended by FOUNDATION™ Fieldbus protocol.

Power supply

The indicator requires between 9 and 32 Vdc (9 and 15 Vdc for FISCO) to operate and provide complete functionality. The dc power supply should provide power with less than two percent ripple.

Power conditioner

A Fieldbus segment requires a power conditioner to isolate the power supply, filter, and decouple the segment from other segments attached to the same power supply.

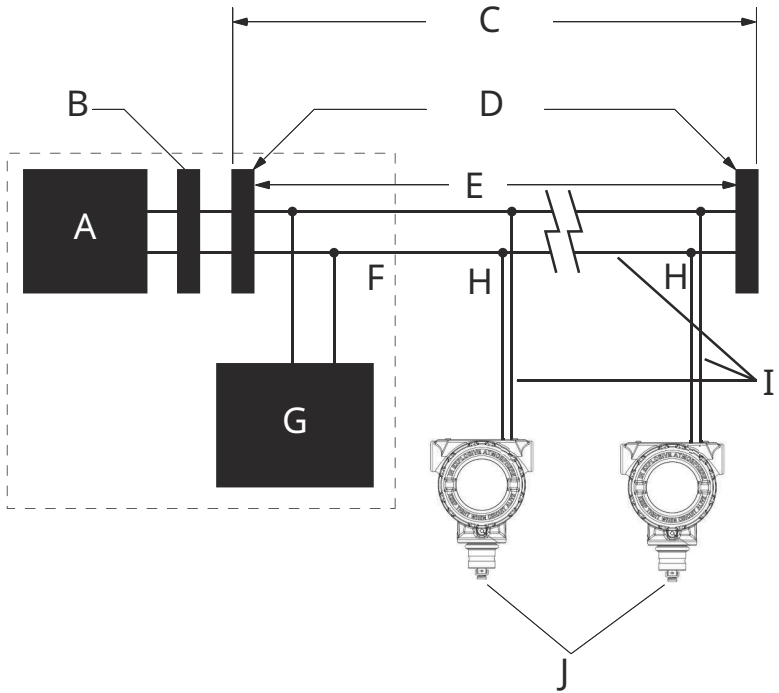
Grounding

Signal wiring of the Fieldbus segment cannot be grounded. Grounding out one of the signal wires will shut down the entire FOUNDATION™ Fieldbus segment.

Shield wire ground

To protect the Fieldbus segment from noise, grounding techniques for shield wire usually require a single grounding point for shield wire to avoid creating a ground loop. The ground point is typically at the power supply.

Figure 1-2: FOUNDATION Fieldbus Indicator Field Wiring



Intrinsically safe installations may allow fewer devices per I.S. barrier due to current limitations.

- A. Power supply
- B. Integrated power conditioner and filter
- C. 6234 ft. (1900 m) max (depending upon cable characteristics)
- D. Terminators
- E. Fieldbus segment
- F. Trunk⁽¹⁾
- G. FOUNDATION™ Fieldbus configuration tool
- H. Spur
- I. Signal wiring
- J. Fieldbus devices on segment

⁽¹⁾ The power supply, filter, first terminator, and configuration tool are typically located in the control room.

Surges/transients

The indicator will withstand electrical transients of the energy level usually encountered in static discharges or induced switching transients. However, high-energy transients, such as those induced in wiring from nearby lightning strikes, can damage the indicator.

Optional transient protection terminal block

The transient protection terminal block can be ordered as an installed option (option code **T1** in the indicator model number) or as a spare part. The spare part number is **03151-4131-0002**. The lightning bolt symbol shown identifies it as a transient protection terminal block.


Note

The Fieldbus physical layer specification requires indicator communication during extreme operating conditions of 250 Vrms common mode signal. The transient terminal block was designed to limit common mode voltages to 90 V and cannot be used in these extreme operating conditions.

1.2 Grounding the indicator case

Always ground the indicator case in accordance with national and local electrical codes. The most effective indicator case grounding method is a direct connection to earth ground with minimal impedance. Methods for grounding the indicator case include:

Internal ground connection

The internal ground connection screw is inside the terminal side of the electronics housing. The screw is identified by a ground symbol () , and is standard on the Rosemount 752 Remote Indicators.

External ground assembly

Ground screw is located at the bottom of the mounting bracket.

Note

Grounding the indicator case using the threaded conduit connection may not provide a sufficient ground. The transient protection terminal block (option code **T1**) will not provide transient protection unless the indicator case is properly grounded. Use the above guidelines to ground the indicator case. Do not run transient protection ground wire with signal wiring; the ground wire may carry excessive current if a lightning strike occurs.

2 Configure the transducer block

The LCD display transducer block can be configured to sequence eight different process variables. If a function block is scheduled in the Rosemount 752 that links a process variable from another device on the segment, that process variable can be displayed on the LCD display.

To configure the Rosemount 752 Fieldbus Indicator, use any FOUNDATION™ Fieldbus configuration tool to modify the configuration parameters for each value that is to be displayed.

2.1 Configuration parameters

Note

Some host systems may ask for the device's capability level during commissioning. If prompted, the correct value to enter for the Rosemount 752 is **1**.

DISPLAY_PARAM_SEL

The DISPLAY_PARAM_SEL parameter specifies how many process variables will be displayed. Select up to eight display parameters.

BLK_TAG_#

Enter the Block Tag of the function block that contains the parameter to be displayed. The default function block tags from the factory are:

- PID_1200_XXXX
- ISEL_1300_XXXX
- CHAR_1400_XXXX
- ARITH_1500_XXXX
- INTEG_1600_XXXX

Note

XXXX represents the last four digits of the device ID.

BLK_TYPE_#

Enter the Block Type of the function block that contains the parameter to be displayed. (e.g. ISEL PID, etc.)

PARAM_INDEX_#

Choose the parameter to be displayed.

CUSTOM_TAG_#

The **CUSTOM_TAG_#** is an optional user-specified tag identifier that can be configured to be displayed with the parameter in place of the block tag. Enter a tag of up to five characters.

UNITS_TYPE_#

The **UNITS_TYPE_#** parameter is generally selected via a drop-down menu with three options: **AUTO**, **CUSTOM**, or **NONE**. Select **CUSTOM** and configure the **CUSTOM_UNITS_#** parameter. Select **NONE** to display the parameter without associated units.

CUSTOM_UNITS_#

Specify custom units to be displayed with the parameter. Enter up to six characters. To display Custom Units, the **UNITS_TYPE_#** must be set to **CUSTOM**.

Note

_# represents the specified parameter number.

3 Product Certifications

3.1 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](https://www.emerson.com/Rosemount).

3.2 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).

3.3 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.

3.4 USA

E5 USA 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;
($-20\text{ °C} \leq T_a \leq 80\text{ °C}$); Seal not required; Type 4X

I5/IE USA 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; ($-20\text{ °C} \leq T_a \leq 60\text{ °C}$); NI CL I, DIV 2, GP A, B, C, D T4; ($-20\text{ °C} \leq T_a \leq 60\text{ °C}$); 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; ($-20\text{ °C} \leq T_a \leq 60\text{ °C}$); Install per 00752-1010; Type 4X

3.5 Canada

E6 Canada 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; ($-50\text{ °C} \leq T_a \leq 80\text{ °C}$); CL I, DIV 2 GP A, B, C, D T3C; ($-20\text{ °C} \leq T_a \leq 40\text{ °C}$); Seal not required; Type 4X

I6/IF Canada Intrinsically Safe/FISCO Intrinsically Safe

Certificate: 1563767

Markings: CL I, DIV 1, GP A, B, C, D T3C ($-20\text{ °C} \leq T_a \leq 40\text{ °C}$); Install per 00752-1020; Type 4X FISCO field device; CL I, DIV 1, GP A, B, C, D T3C ($-20\text{ °C} \leq T_a \leq 40\text{ °C}$); Install per 00752-1020; Type 4X

3.6 Europe

E1 ATEX Flameproof

Certificate: KEMA03ATEX2476X

Markings: ⚡ II 2 G; Ex db IIC T6...T5 Gb, T5 ($-60\text{ °C} \leq T_a \leq 80\text{ °C}$), T6 ($-60\text{ °C} \leq T_a \leq 70\text{ °C}$); 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; ($-20\text{ °C} \leq T_a \leq +60\text{ °C}$); IP66
See [Table 3-1](#) 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 ($-20\text{ °C} \leq T_a \leq 70\text{ °C}$); IP66

Special Condition for Safe Use (X):

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 ($-60\text{ °C} \leq T_a \leq 80\text{ °C}$); 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.

3.7 International

E7 IECEx Flameproof

Certificate: IECEx KEM 10.0066X

Markings: Ex db IIC T6...T5 Gb, T5 ($-60\text{ °C} \leq T_a \leq 80\text{ °C}$), T6 ($-60\text{ °C} \leq T_a \leq 70\text{ °C}$); 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.

I7/IG 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 3-1](#) 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):

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 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.

3.8 Brazil

E2 Brazil Flameproof

Certificate: UL-BR 15.1054X

Markings: Ex db IIC T6... T5 Gb; T6 ($-60\text{ °C} \leq T_{amb} \leq +70\text{ °C}$); T5 ($-60\text{ °C} \leq T_{amb} \leq +80\text{ °C}$)

Special Condition for Safe Use (X):

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

I2/IB Brazil Intrinsic Safety/FISCO Intrinsic Safety

Certificate: UL-BR 16.0078X

Markings: Ex ia IIC T4 ($-20\text{ °C} \leq T_a \leq +60\text{ °C}$) Ga; IP66

3.9 EAC

EM EAC Flameproof

Certificate: EAEC KZ 7500525.01.01.01600

Markings: 1Ex db IIC T6...T5 Gb X; IP66; T5($-60\text{ °C} \leq T_a \leq +80\text{ °C}$), T6($-60\text{ °C} \leq T_a \leq +70\text{ °C}$)

See certificate for Special Conditions for Safe Use

IM EAC Intrinsic Safety

Certificate: EAEC KZ 7500525.01.01.01600

Markings: 0Ex ia IIC T4 Ga X; IP66; T4($-20\text{ °C} \leq T_a \leq +60\text{ °C}$)

See certificate for Special Conditions for Safe Use

IN EAC Intrinsic Safety (FISCO)

Certificate: EAEC KZ 7500525.01.01.01600

Markings: 0Ex ia IIC T4 Ga X; IP66; T4($-20\text{ °C} \leq T_a \leq +60\text{ °C}$)

See certificate for Special Conditions for Safe Use

NM EAC Type n

Certificate: EAEC KZ 7500525.01.01.01600

Markings: 2Ex nA IIC T5 Gc X; IP66; T5($-40\text{ °C} \leq T_a \leq +70\text{ °C}$)

See certificate for Special Conditions for Safe Use

KM EAC Flameproof, Intrinsic Safety, Type n, and Dust Ignition-proof

Certificate: EAEC KZ 7500525.01.01.01600

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

3.10 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 3-1: Entity Parameters

Parameters	Fieldbus	FISCO
U_i	30 V	17.5 V
I_i	300 mA	380 mA
P_i	1.3 W	5.32 W
C_i	0 nF	0 nF
L_i	0 μ H	0 μ H

4 Declaration of Conformity



EU DECLARATION OF CONFORMITY



This declaration of conformity is issued under the sole responsibility of

Rosemount Inc.
6021 Innovation Blvd
Shakopee, MN 55379
USA

that the following products,

Rosemount™ 752 Fieldbus Remote Indicator

comply with the provisions of the European Union Directives, including the latest amendments, valid at the time this declaration was signed.

 (signature & date of issue)	<u>August 21, 2024</u> (signature & date of issue)	Mark Lee (name)	Vice President, Quality (function)	Boulder, CO, USA (place of issue)
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Regulatory Compliance Shared Services Department
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Netherlands Netherlands

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Finland

ATEX Notified Body for Quality Assurance:
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Finland



EU DECLARATION OF CONFORMITY



EMC Directive (2014/30/EU)

Harmonized Standards:
EN 61326-1: 2013
EN 61326-2-5: 2013

ATEX Directive (2014/34/EU)

Baseefa03ATEX0239X

Equipment protection by intrinsic safety "i"
Equipment Group II 1 G (Ex ia IIC T4 Ga)
Harmonized Standards:
EN IEC 60079-0: 2018
EN 60079-11: 2012

Baseefa03ATEX0240X

Equipment protection by type of protection "n"
Equipment Group II 3 G (Ex nA IIC T5 Gc)
Harmonized Standards:
EN IEC 60079-0: 2018
EN 60079-15: 2010

Equipment protection by increased safety "e"

Equipment Group II 3 G (Ex ec IIC T5 Gc)
Harmonized Standards:
EN IEC 60079-0: 2018
EN IEC 60079-7: 2015+A1: 2018

KEMA 03ATEX2476 X

Equipment protection by flameproof enclosures "d"
Equipment Group II 2 G (Ex db IIC T6 or T5 Gb)
Harmonized Standards:
EN IEC 60079-0: 2018
EN 60079-1: 2014

Equipment dust ignition protection by enclosure "t"

Equipment Group II 2 D (Ex tb IIIC T105°C Db)
Harmonized Standards:
EN IEC 60079-0: 2018
EN 60079-31: 2014

5 China RoHS

含有 China RoHS 管控物质超过最大浓度限值的部件型号列表 Rosemount 752
List of Rosemount 752 Parts with China RoHS Concentration above MCVs

部件名称 Part Name	有害物质 / Hazardous Substances					
	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr +6)	多溴联苯 Polybrominated biphenyls (PBB)	多溴联苯醚 Polybrominated diphenyl ethers (PBDE)
电子组件 Electronics Assembly	X	O	O	O	O	O
壳体组件 Housing Assembly	O	O	O	O	O	O
传感器组件 Sensor Assembly	X	O	O	O	O	O

本表格系依据 SJ/T11364 的规定而制作。

This table is proposed in accordance with the provision of SJ/T11364.

O: 意为该部件的所有均质材料中该有害物质的含量均低于 GB/T 26572 所规定的限量要求。

O: Indicate that said hazardous substance in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.

X: 意为在该部件所使用的的所有均质材料里，至少有一类均质材料中该有害物质的含量高于 GB/T 26572 所规定的限量要求。

X: Indicate that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.



Quick Start Guide
00825-0100-4377, Rev. FC
August 2024

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

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ROSEMOUNT™

