# 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 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<sup> $^{\text{M}}$ </sup> digital plant architecture. Visit <u>Emerson.com/Plantweb</u> 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

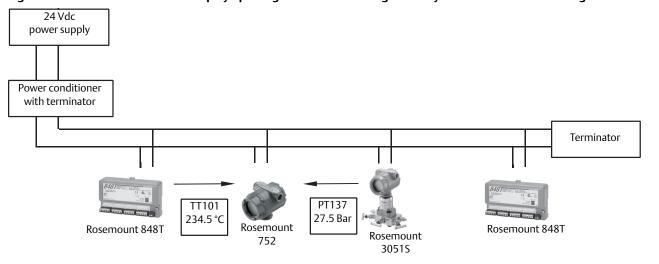


Figure 2. Rosemount 752 Display





Contents	
Ordering Information4	Product Certifications
Specifications 6	Dimensional Drawings10

# **Ordering Information**

Specification and selection of product materials, options, or components must be made by the purchaser of the equipment. See page 6 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.

to duditional delivery lead time.					
Model	Product type				
752	Fieldbus Remote Indicator				
Transmitte	Transmitter output				
F	FOUNDATION Fieldbus digital signal			*	
Housing style		Material	Conduit entry size		
1A	Plantweb Housing	Aluminum	<sup>1</sup> /2-14 NPT	*	
1B	Plantweb Housing	Aluminum	M20 × 1.5 (CM20)	*	
1C	Plantweb Housing	Aluminum	JIS G <sup>1</sup> / <sub>2</sub>	*	
1J	Plantweb Housing	SST	1/2-14 NPT	*	
1K	Plantweb Housing	SST	M20 × 1.5 (CM20)	*	
1L	Plantweb Housing	SST	JIS G <sup>1</sup> / <sub>2</sub>	*	

### **Options** (include with selected model number)

Plantw	eb control functionality	
A01	FOUNDATION Fieldbus Advanced Control Function Block Suite	*
Produc	t certifications	
E5	FM Explosion-Proof, Dust-Ignition-proof	*
15	FM Intrinsically Safe, Division 2	*
IE <sup>(1)</sup>	FM FISCO Intrinsically Safe	*
K5	FM Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination	*
E6	CSA Explosion-proof; Division 2; Dust Ignition-proof	*
16	CSA Intrinsically Safe	*
IF <sup>(1)</sup>	CSA FISCO Intrinsically Safe	*
K6	CSA Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination	*
E1	ATEX Flameproof	*
I1	ATEX Intrinsic Safety	*
IA <sup>(1)</sup>	ATEX FISCO Intrinsic Safety	*
N1	ATEX Type n	*
ND	ATEX Dust	*
K1	ATEX Flameproof; Intrinsic Safety; Type n; Dust Combination	*
17	IECEx Intrinsic Safety	*

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.

ECEx FISCO Intrinsically Safe	★	
	<u>      ^                              </u>	
IECEx Type n		
IECEx Flameproof		
NMETRO Intrinsic Safety	*	
INMETRO Flameproof		
CSA and ATEX: Flameproof; Intrinsically Safe; Division 2 Combination		
INMETRO Flame-proof; Intrinsic Safety Combination		
NMETRO FISCO Intriniscally Safe	*	
M and CSA: Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination	*	
FM and ATEX: Explosion-proof; Intrinsically Safe; Division 2 Combination		
Technical Regulations Customs Union (EAC) Flameproof, Intrinsic Safety		
Technical Regulations Customs Union (EAC) Intrinsic Safety		
Technical Regulations Customs Union (EAC) Flameproof		
Technical Regulations Customs Union (EAC) Type N		
otection		
Integral Transient Protector		
trical connector		
M12, 4-pin, Male Connector (eurofast®)		
A size Mini, 4-pin, Male Connector (minifast®)		
oduct warranty		
3-year limited warranty		
5-year limited warranty		
Typical model number: 752 F 1A A01 E1		
	CEx Flameproof  IMETRO Intrinsic Safety  IMETRO Flameproof; Intrinsically Safe; Division 2 Combination  IMETRO Flameproof; Intrinsic Safety Combination  IMETRO Flame-proof; Intrinsic Safety Combination  IMETRO Flame-proof; Intrinsically Safe  M and CSA: Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2 Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2 Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2 Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2 Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2 Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2 Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2 Combination  M and ATEX: Explosion-proof Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2 Combination  M and ATEX: Explosion-proof Combination  M and ATEX: Flameproof Combination  M and CSA: Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination  M and ATEX: Flameproof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination  M and ATEX: Flameproof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination  M and ATEX: Flameproof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Combination  M and ATEX: Explosion-proof; Intrinsically Safe; Division 2; Dust Ignition-proof Com	

<sup>1.</sup> 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.

<sup>2.</sup> 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**

 $^{1}/_{2}$  - 14 NPT, G  $^{1}/_{2}$ , and M20 imes 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 [ $\pm 3\sigma$ (Sigma)]

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

#### 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 1.12

## **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

Standards: FM 3600:2011, FM 3615:2006, FM

3616:2011, FM 3810:2005, ANSI/NEMA®-250:2003

Markings: XP CL I, DIV 1, GP B, C, D T5; DIP CL II DIV 1 GP

E, F, G; CL III;  $(-20 \,^{\circ}\text{C} \le T_a \le 80 \,^{\circ}\text{C})$ ; SEAL NOT

REQUIRED; TYPE 4X

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

Certificate: 3017198

Standards: FM 3600:2011, FM 3610:2010, FM

3611:2004, FM 3810:2005, ANSI/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 T4; IS

CL I, ZONE 0, AEx ia IIC T4;

 $(-20 \,{}^{\circ}\text{C} \le T_a \le 60 \,{}^{\circ}\text{C})$ ; NI CL I, DIV 2, GP A, B, C,

D T4;  $(-20 \,^{\circ}\text{C} \le \text{T}_a \le 60 \,^{\circ}\text{C})$ ; 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;

 $(-20 \text{ °C} \le T_a \le 60 \text{ °C})$ ; INSTALL PER

00752-1010; TYPE 4X

#### Canada

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

Certificate: 1563767

Standards: CSA C22.2 No. 25-1966, CSA C22.2 No.

30-M1986, CAN/CSA C22.2 No. 94-M91, CSA C22.2 No. 142-M1987, CAN/CSA C22.2 No.

157-92, CSA C22.2 No. 213-M1987

Markings: CL I, DIV 1, GP B, C, D; CL II, DIV 1, GP E,F,G;

CL III;  $(-50 \,^{\circ}\text{C} \le \text{T}_a \le 80 \,^{\circ}\text{C})$ ; CL I, DIV 2 GP A, B, C, D T3C;  $(-20 \,^{\circ}\text{C} \le \text{T}_a \le 40 \,^{\circ}\text{C})$ ; Seal not

required; TYPE 4X

16/IF CSA Intrinsically Safe / FISCO Intrinsically Safe

Certificate: 1563767

Standards: CSA C22.2 No. 25-1966, CSA C22.2 No.

30-M1986, CAN/CSA C22.2 No. 94-M91, CSA C22.2 No. 142-M1987, CAN/CSA C22.2 No.

157-92, CSA C22.2 No. 213-M1987

Markings: CLI, DIV 1, GPA, B, C, DT3C ( $-20 \,^{\circ}\text{C} \le T_a \le$ 

40 °C); INSTALL PER 00752-1020; TYPE 4X FISCO FIELD DEVICE; CL I, DIV 1, GP A, B, C, D

T3C ( $-20 \,^{\circ}\text{C} \le T_a \le 40 \,^{\circ}\text{C}$ ); INSTALL PER

00752-1020; TYPE 4X

## **Europe**

**E1** ATEX Flameproof

Certificate: KEMA03ATEX2476X

Standards: EN 60079-0:2012+A11:2013, EN

60079-1:2014

Markings: B II 2 G; Ex db IIC T6...T5 Gb, T5(-60 °C  $\leq$  T<sub>a</sub>

 $\leq$  80 °C), T6(-60 °C  $\leq$  T<sub>a</sub>  $\leq$  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 Standards: EN 60079-0:2012+A11:2013.

EN 60079-0.2012 ATT.2013

Markings: a II 1 G, Ex ia IIC T4 Ga; (-20 °C  $\leq$  T<sub>a</sub>  $\leq$ 

+60 °C); IP66

See Table 2 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

Standards: EN 60079-0:2012+A11:2013, EN

60079-15:2010

Markings: B II 3 G; Ex nA IIC T5 Gc (-20 °C  $\leq$  T<sub>a</sub>  $\leq$  70 °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

Standards: EN 60079-0:2012+A11:2013, EN

60079-31:2014

Markings: B II 2 D; Ex tb IIIC T105 °C Db (-60 °C  $\leq$  T<sub>a</sub>  $\leq$ 

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

Standards: IEC 60079-0:2011, IEC 60079-1:2014-06 Markings: Ex db IIC T6...T5 Gb, T5( $-60 \,^{\circ}\text{C} \le T_a \le 80 \,^{\circ}\text{C}$ ),

 $T6(-60 \text{ °C} \le T_a \le 70 \text{ °C})$ ; IP66

#### Special Condition for Safe Use (X):

1. Flameproof joints are not intended for repair.

 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. **17/IG** IECEx Intrinsic Safety / FISCO Intrinsic Safety

Certificate: IECEx BAS 04.0029X

Standards: IEC 60079-0:2011, IEC 60079-11:2011 Markings: Ex ia IIC T4 Ga; T4(-20 °C  $\leq T_a \leq 60$  °C) IP66

See Table 2 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.
- 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

Standards: IEC 60079-0:2011, IEC 60079-15:2010 Markings: Ex nA IIC T5 Gc ( $-40 \,^{\circ}\text{C} \le T_a \le 70 \,^{\circ}\text{C}$ ); 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

Standards: IEC 60079-0:2011, EN 60079-31:2013 Markings: Ex tb IIIC T105 °C Db (-60 °C  $\leq T_a \leq 80$  °C);

IP66

#### Special Conditions for Safe Use (X):

- 1. Flameproof joints are not intended for repair.
- 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

Standards: ABNT NBR IEC 60079-0:2008 + corrigendum

1:2011, ABNT NBR IEC 60079-1:2009 + corrigendum 1:2011, ABNT NBR IEC

60079-31:2011

Markings: Ex d IIC T6 Gb ( $-60 \,^{\circ}\text{C} \le T_{amb} \le +70 \,^{\circ}\text{C}$ ); Ex d

IIC T5 Gb ( $-60 \, ^{\circ}\text{C} \le T_{amb} \le +80 \, ^{\circ}\text{C}$ )

12/IB INMETRO Intrinsic Safety/FISCO Intrinsic Safety

Certificate: UL-BR 16.0078X

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

ABNT NBR IEC 60079-11:2009, ABNT NBR IEC

60079-26:2008 + Errata 1:2008

Markings: Ex ia IIC T4 ( $-20 \,^{\circ}\text{C} \le T_a \le +60 \,^{\circ}\text{C}$ ) Ga; IP66

#### **EAC**

EM Technical Regulation Customs Union (EAC) Flameproof

Certificate: RU C-US.Gb05.B.00285 Markings: 1Ex d IIC T5...T6 X; IP65

IM Technical Regulation Customs Union (EAC) Intrinsic Safety

Certificate: RU C-US.Gb05.B.00285 Markings: 0Ex ia IIC T4 X; IP65

NM Technical Regulation Customs Union (EAC) Type n

Certificate: RU C-US.Gb05.B.00285 Markings: Ex nA IIC T5 X; IP65

### **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

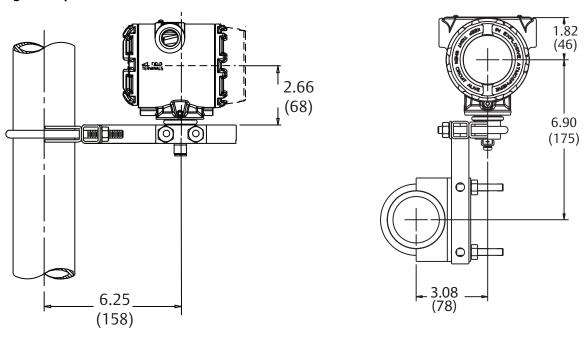
KM Combination of EM, IM, and NM

#### **Table 2. Entity Parameters**

Parameters	Fieldbus	FISCO
U <sub>i</sub> (V)	30	17.5
I <sub>i</sub> (mA)	300	380
P <sub>i</sub> (W)	1.3	5.32
C <sub>i</sub> (F)	0	0
L <sub>i</sub> (H)	0	0

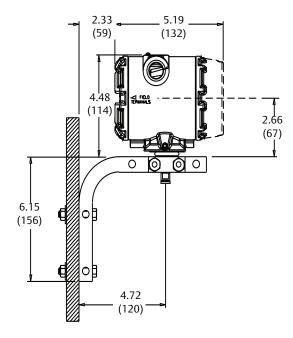
# **Dimensional Drawings**

Figure 3. Pipe Mount Installations



Dimensions are in inches (millimeters).

**Figure 4. Panel Mount Installations** 



Dimensions are in inches (millimeters).

#### **Global Headquarters**

#### **Emerson Automation Solutions**

6021 Innovation Blvd. Shakopee, MN 55379, USA

+1 800 999 9307 or +1 952 906 8888

+1 952 949 7001

RFQ.RMD-RCC@Emerson.com

#### **North America Regional Office**

#### **Emerson Automation Solutions**

8200 Market Blvd. Chanhassen, MN 55317, USA

+1 800 999 9307 or +1 952 906 8888

+1 952 949 7001

RMT-NA.RCCRFQ@Emerson.com

#### **Latin America Regional Office**

#### **Emerson Automation Solutions**

1300 Concord Terrace, Suite 400 Sunrise, FL 33323, USA

+1 954 846 5030

+1 954 846 5121

RFQ.RMD-RCC@Emerson.com

#### **Europe Regional Office**

#### **Emerson Automation Solutions Europe GmbH**

Neuhofstrasse 19a P.O. Box 1046 CH 6340 Baar Switzerland

+41 (0) 41 768 6111

+41 (0) 41 768 6300

RFQ.RMD-RCC@Emerson.com

#### **Asia Pacific Regional Office**

#### **Emerson Automation Solutions**

1 Pandan Crescent Singapore 128461

+65 6777 8211

Enquiries@AP.Emerson.com

#### Middle East and Africa Regional Office

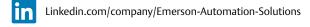
#### **Emerson Automation Solutions**

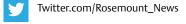
Emerson FZE P.O. Box 17033 Jebel Ali Free Zone - South 2 Dubai, United Arab Emirates

+971 4 8118100

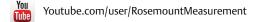
+971 4 8865465

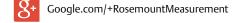
RFQ.RMTMEA@Emerson.com











Standard Terms and Conditions of Sale can be found on the <u>Terms and Conditions of Sale page</u>.

The Emerson logo is a trademark and service mark of Emerson Electric Co.

Plantweb, Rosemount, and Rosemount logotype are trademarks of

eurofast and minifast are registered trademarks of TURCK. National Electrical Code is a registered trademark of National Fire Protection Association, Inc.

NEMA is a registered trademark and service mark of the National Electrical Manufacturers Association

All other marks are the property of their respective owners.

© 2017 Emerson. All rights reserved.

