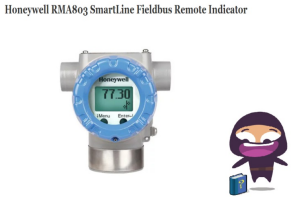


Honeywell RMA803 SmartLine Fieldbus Remote Indicator Installation Guide

Contents

Honeywell RMA803 SmartLine Fieldbus Remote Indicator

Product Information

Specifications

- Product Name: SmartLine RMA803 Fieldbus Remote Indicator Assembly
- Model Number: 34-ST-25-52
- Revision: 8
- Release Date: September 2022

The SmartLine Remote Indicator is a configurable intelligent field device that serves as an output and status indicator for any Foundation Fieldbus device on the same H1 link. It offers various protocols, human interface (HMI), materials, approvals, and mounting bracket options.

- For comprehensive information on protocols, user interface (HMI) operation, installation, configuration, calibration, maintenance, parts, safety, and approvals, please refer to the respective manuals provided.
-

Documentation

To access complete documentation, including language variants:

- Scan the QR code below using your smartphone or QR code scanner.
- Go to the APP store for your free Smartphone QR scanner.
- Follow the URL **https://hwll.co/SmartLineHUB** to access the online SmartLine HUB page.

QR Code QR Code for documentation access

Product Usage Instructions

Installation and Startup

- Installation Site Evaluation

  Prior to installation, evaluate the site to ensure it meets the necessary requirements for the SmartLine Remote Indicator.
- Display Installation Precautions

  Take the following precautions during the display installation process:
  - Handle the display with care to avoid damage.
  - Ensure proper grounding to prevent electrical hazards.
  - Follow all safety guidelines provided in the manuals.
- Mounting Remote Indicator
- Follow the steps below to mount the remote indicator:
  - Select a suitable location for mounting.
  - Refer to the mounting dimensions provided in the manual.
  - Securely mount the indicator using the appropriate bracket option.
  - Use Figure 1 as a reference for typical bracket mounted installations.

Figure 1: Typical Bracket Mounted Installations Figure 1: Typical Bracket Mounted Installations

Wiring a Remote Indicator
Follow the wiring procedure below to connect the remote indicator:

1. Refer to Figure 3 for a visual representation of the FF terminal block.

Figure 3: Two Position FF Terminal Block
Figure 3: Two Position FF Terminal Block

1. Ensure proper wiring connections according to the provided wiring procedure.
2. Take necessary precautions for fieldbus network wiring and lightning protection.
3. Refer to the manual for supply voltage limiting requirements.
4. For explosion-proof installations, use the designated conduit seal.
5. Refer to Figure 4 for the location of the write protect jumper on Foundation Fieldbus (FF).

Figure 4: Fieldbus Write Protect
Figure 4: Fieldbus Write Protect

Configuration Guide
Refer to the provided configuration guide for detailed instructions on configuring the SmartLine Remote Indicator.

Appendix A. PRODUCT CERTIFICATIONS

A1 European Directive Information (CE Mark)
For European installations, comply with the European Directive Information (CE Mark) provided in Appendix A of the manual.

FAQ (Frequently Asked Questions)

- **Q: How can I access the complete product documentation?**
  A: To access complete documentation, you can scan the QR code provided using your smartphone or QR code scanner. Alternatively, you can visit the SmartLine HUB page by following the URL **https://hwll.co/SmartLineHUB**.
- **Q: Where can I find the mounting dimensions for the remote indicator?**
  A: The mounting dimensions can be found in the manual provided. Please refer to the section on “Mounting Remote Indicator” for more details.
- **Q: What precautions should I take during the display installation process?**
  A: During the display installation process, it is important to handle the display with care to avoid damage. Additionally, ensure proper grounding to prevent electrical hazards. For further safety guidelines, please refer to the manuals.

SmartLine RMA803 Fieldbus Remote Indicator Assembly Quick Start Installation Guide
34-ST-25-52, Revision 8, September 2022

- This document provides descriptions and procedures for the Quick Installation of Honeywell’s family of SmartLine Remote Indicator.
- The SmartLine Remote Indicator is a configurable intelligent field device which functions as an output and status indicator for any Foundation Fieldbus device on the same H1 link.
- Table 1 lists the protocols, human interface (HMI), materials, approvals, and mounting bracket options.
- For full details refer to the manuals listed below for protocols, user Interface (HMI) operation, Installation, configuration, calibration, maintenance, parts, and safety and approvals etc. including options

Trademarks

- SmartLine, RMA are U.S. registered trademarks of Honeywell Inc.
- FOUNDATION™ is a trademark of the Fieldbus Foundation

Documentation

- To access complete documentation, including language variants, scan the QR code below using your smart phone/device or QR code scanner.
- Go to the APP store for your free Smartphone QR scanner
- Or you can follow the URL to access the online SmartLine HUB page.
- The HUB page will contain direct links to open SmartLine product documentation.

URL
https://hwll.co/SmartLineHUB

QR Code

Installation and Startup

Installation Site Evaluation

Evaluate the site selected for the Remote Indicator installation with respect to the process system design specifications and Honeywell's published performance characteristics for your particular model. Some parameters that you may want to include in your site evaluation are:

- Environmental Conditions:
  - Ambient Temperature
  - Relative Humidity
- Potential Noise Sources:
  - Radio Frequency Interference (RFI)
  - Electromagnetic Interference (EMI)
- Vibration Sources
  - Pumps
  - Motorized System Devices (e.g., pumps)
  - Valve Cavitation
- Process Parameters
  - Temperature
  - Maximum Pressure Rating

Display Installation Precautions

Temperature extremes can affect display quality. The display can go blank if the temperature is below -20°C; however, this is only a temporary condition. The display will again be readable when temperatures return to within operable limits. The display update rate may increase at cold temperature extremes, but as with readability, normal updating resumes when temperatures are within limits for full operability.

Mounting Remote Indicator

Summary

- Remote Indicator models can be attached to a two-inch (50 millimeter) vertical or horizontal pipe using Honeywell's optional pipe mounting bracket. Honeywell's optional wall mounting bracket is also shown below.
- Figure 1 shows typical bracket-mounted installations.

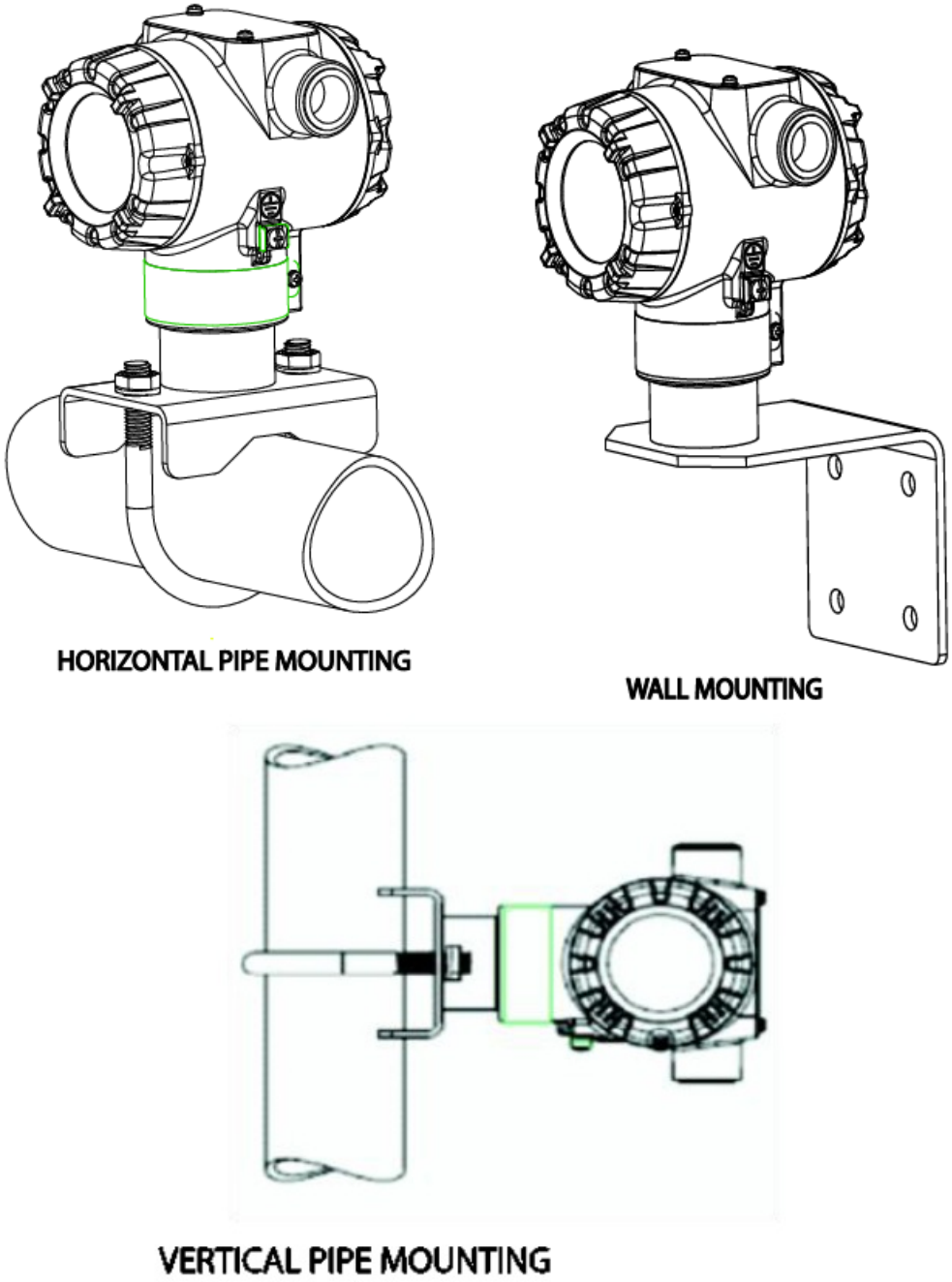


Figure 1: Typical Bracket Mounted Installations

Mounting Dimensions

Refer to Honeywell drawing number 50094836 for detailed electronic housing dimensions. Refer to Honeywell drawing numbers 50095917 for detailed pipe mounting dimensions and 50095918 for detailed wall mounting dimensions. Abbreviated overall dimensions are also shown on the Specification Sheets for the Remote Indicator models. This section assumes that the mounting dimensions have already been taken into account and the mounting area can accommodate the Remote Indicator.

Bracket Mounting

If you are using an optional bracket, start with Step 1.

1. Align the two mounting holes in the Remote Indicator with the two slots in the mounting bracket and assemble the (2) M8 hex cap screws, (2) lock washers and (2) flat washers provided. Rotate Remote Indicator assembly to the desired position and torque the M8 hex cap screws to 27,0 Nm/20,0 Lb-ft maximum.

Pipe Mount Option: Refer to Figure 2

2. Position the bracket on a 2-inch (50.8 mm) horizontal or vertical pipe and install a “U” bolt around the pipe and through the holes in the bracket. Secure the bracket with the nuts, flat washers and lock washers provided.
3. Wall Mount Option: Position the bracket on the mounting surface at the desired location and secure the bracket to the mounting surface using the appropriate hardware (Wall mounting hardware requirements to be determined and supplied by the end user)

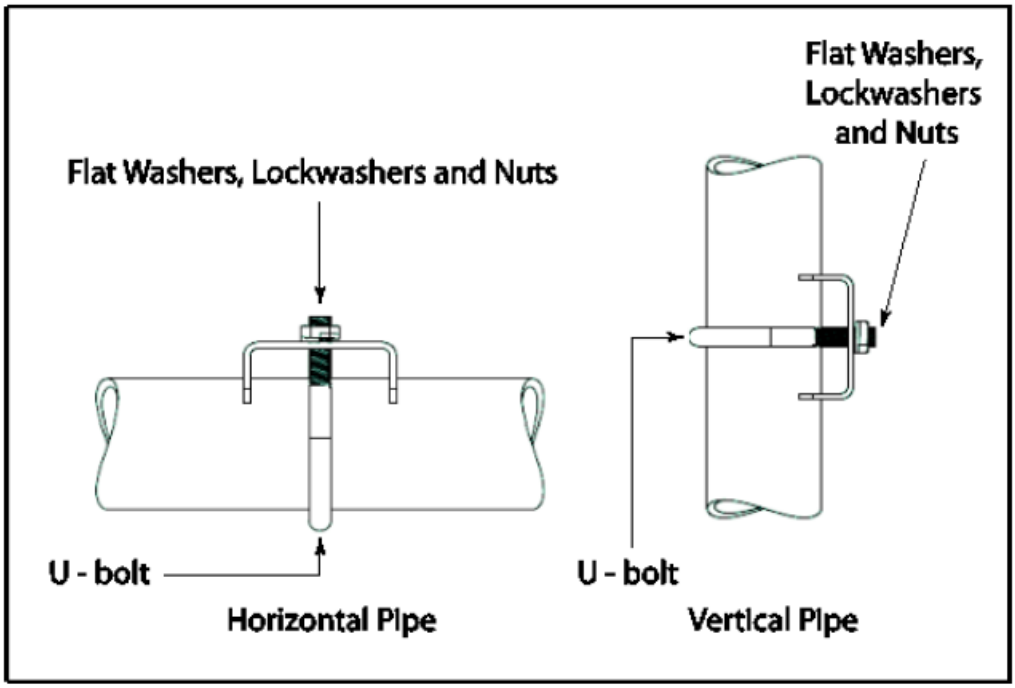


Figure 2: Pipe Mounting Bracket Secured to a Horizontal or Vertical Pipe

Wiring a Remote Indicator

Overview

- The Remote Indicator is designed to operate as part of a Fieldbus Network.
- Loop wiring is connected to the Remote Indicator by simply attaching the loop wires to the terminals on the Remote Indicator terminal block in the Electronics Housing shown in Figure 3. Connect the Loop Power wiring shield to earth ground only at the power supply end.

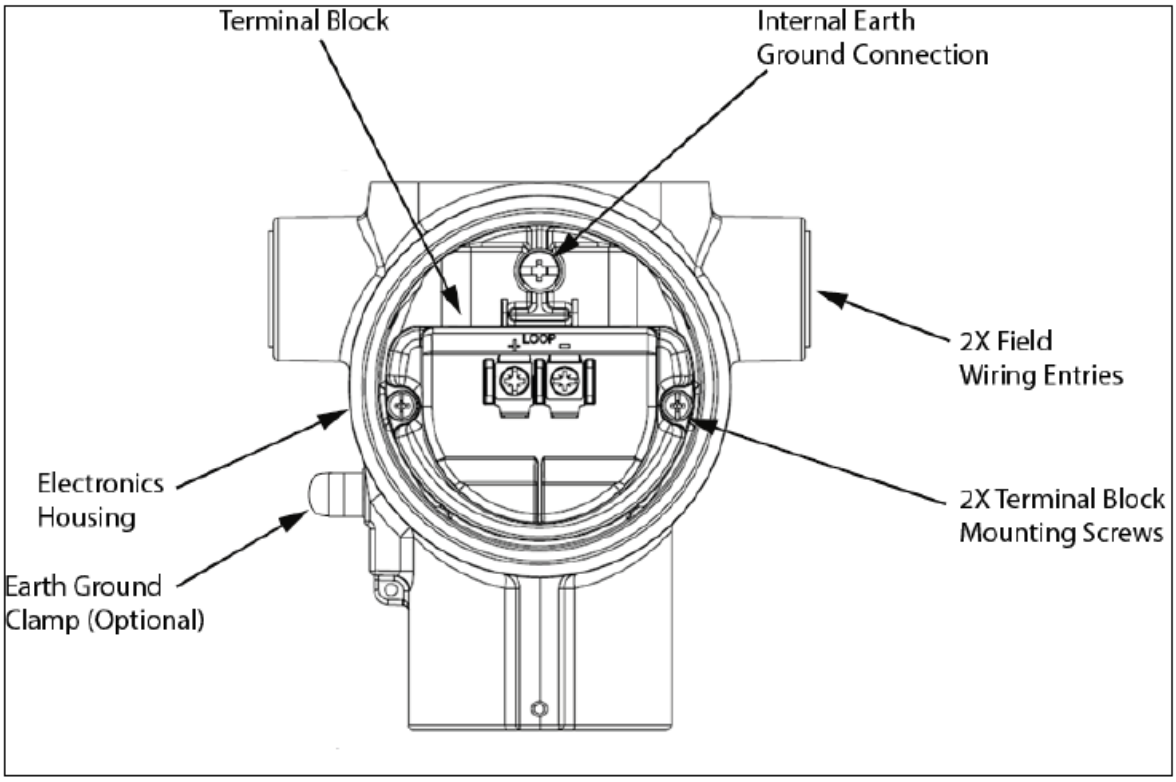


Figure 3: Two Position FF Terminal Block

- As shown in Figure 5, each Remote Indicator has an internal ground terminal. Optionally, a ground terminal is also on the outside of the Electronics Housing. While it is not necessary to ground the Remote Indicator for proper operation, doing so tends to minimize the possible effects of noise on the output signal and affords protection against lightning and static discharge. An optional lightning terminal block can be installed in place of the non-lightning terminal block for Remote Indicators that will be installed in an area that is highly susceptible to lightning strikes. For this to be effective the instrument case must be connected to earth ground.

ATTENTION
Wiring must comply with local codes, regulations and ordinances. Grounding may be required to meet various approval body certifications, for example CE conformity. Refer to Appendix A of this document for details.

Wiring Procedure

1. See Figure 3, above, for parts locations. Loosen the end cap lock using a 1.5 mm Allen wrench.
2. Remove the end cap cover from the terminal block end of the Electronics Housing.
3. Feed loop power leads through one end of the conduit entrances on either side of the Electronics Housing. The Remote Indicator accepts up to 16 AWG wire.
4. Plug the unused conduit entrance with a conduit plug appropriate for the environment.
5. Feed both loop powered leads through the Ferrite core, 32301350-001, and then back around and through a second time.
6. Connect both loop power leads to the loop terminals. Torque terminal screws to 0,6 N.m (5.3 lbf.in) to 0.8 N.m (7.0 lbf.in).

   Note. The remote Indicator is not polarity-sensitive.
7. Replace the end cap and secure it in place being careful not to damage the ferrite core or wires.

Fieldbus Network Wiring
For Fieldbus network wiring concepts, see application notes such as Relcom Inc. Fieldbus Wiring Guide.

Lightning Protection
If your Remote Indicator includes the optional lightning protection, connect a wire from the Earth Ground Clamp (see Figure 3) to Earth Ground to make the protection effective. Use a size 8 AWG or (8.37mm2) bare or green covered wire for this connection.

Supply Voltage Limiting Requirements

If your Remote Indicator complies with the ATEX 4 directive for self-declared approval per 94/9EC, the power supply has to include a voltage-limiting device. Voltage must be limited such that it does not exceed 9 to 32 V DC. Consult the process design system documentation for specifics.

ATTENTION
FF power Supply along with the Terminators has to be used.

Explosion-Proof Conduit Seal

WARNING

- When installed as explosion proof in a Division 1 Hazardous Location, keep covers tight while the Remote Indicator is energized. Disconnect power to the Remote Indicator in the non- hazardous area prior to removing end caps for service.
- When installed as non-incendive equipment in a Division 2 hazardous location, disconnect power to the Remote Indicator in the non-hazardous area, or determine that the location is non- hazardous before disconnecting or connecting the Remote Indicator wires.

Remote Indicator installed as explosion proof in Class I, Division 1, Group A Hazardous (classified) location in accordance with ANSI/NFPA 70, the US National Electrical Code, with 1/2-inch conduit do not require an explosion-proof seal for installation. If 3/4-inch conduit is used, a LISTED explosion proof seal must be installed in the conduit, within 18 inches (457.2 mm) of the Remote Indicator.

Write Protect Jumper on Foundation Fieldbus (FF)

- On Foundation Fieldbus Remote Indicator there is no Failsafe jumper selection but there is a Write Protect jumper.
- The bottom jumper sets the Write Protect. The default setting is OFF (Un-protected).
- When set to the on (Protected) position, Changed configuration parameters cannot be written to the transmitter.
- When set to the OFF (Un-protected) position, changed configuration parameters can be written to the transmitter.

	**ATTENTION:** Electrostatic Discharge (ESD) hazards. Observe precautions for handling electros tatic sensitive devices.
	**WARNING!** PERSONAL INJURY: Risk of electrical shock. Disconnect power before proceeding. HAZARDOUS LIVE voltages greater than 30 Vrms, 42.4 Vpeak, or 60 VDC may be accessible. Failure to comply with these instructions could result in death or
Step	**Action**
1	*Turn OFF Remote indicator power.*
2	*Loosen the end-cap lock and unscrew the end cap from the Electronics side of the Transmitter h ousing.*
3	*If applicable, carefully depress the tabs on the sides of the Display Module and pull it off.*
4	*Set the Write Protect jumper (Bottom jumper) to the desired behavior (Protected or Unprotected). See* Figure 4 *for jumper*
5	*Screw on the end cap and tighten the end-cap lock.*
6	*Turn ON Remote Indicator power.*

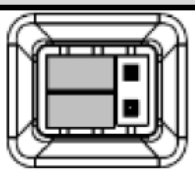
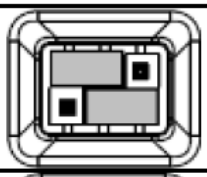
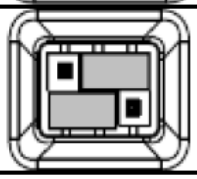
Image	*Description*
	*Fieldbus SIM Mode = OFF* *Write Protect = OFF (Not Protected)*
	*Fieldbus SIM Mode = OFF* *Write Protect = ON (Protected)*
	*Fieldbus SIM Mode = ON* *Write Protect = OFF (Not Protected)*

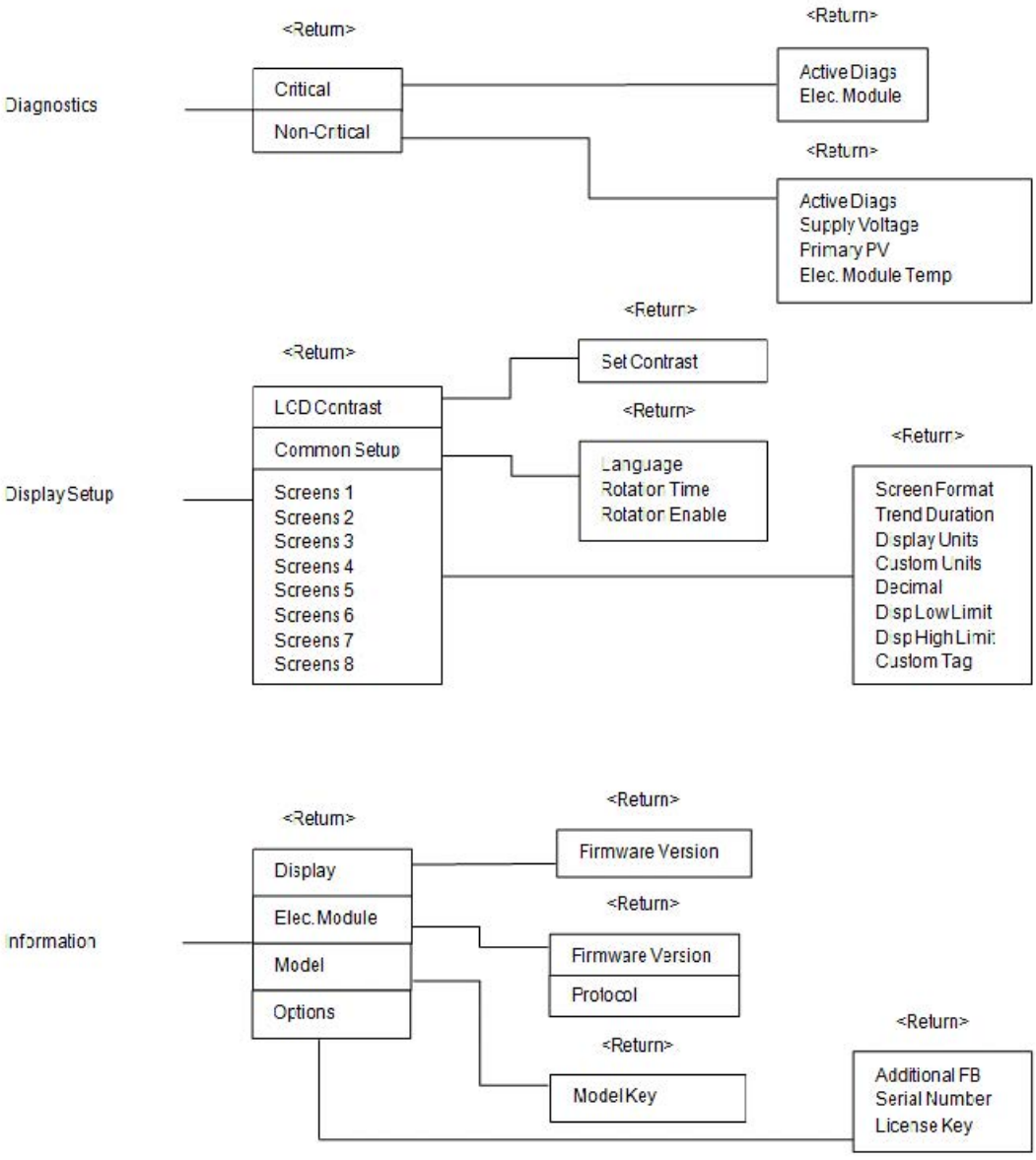
Figure 4: Fieldbus Write Protect

Configuration Guide

Table 1 shows the Advanced Display Configuration. Use these tables to configure the transmitter.

Table 1 – Advanced Display Configuration

Level 1	Level 2	Level 3
<Exit>	n/a	n/a
Diagnostics	Critical Non-Critical	For details go to the Diagnostics Menu table.
Display Setup	LCD Contrast Common Setup • Screen 1 • Screen 2 • … Screen 8	• For details go to the Display Setup Menu table. • **Note** that the Advanced Display supports the configuration of up to 8 different screens.
Information	Display Elec Module Model Options	For details go to the Information Menu table.



Appendix A. PRODUCT CERTIFICATIONS

A1 European Directive Information (CE Mark)

RMA800 SmartLine Remote Indicator Series EU Declaration of conformity (Document #32302406), can be downloaded here: EU Declaration

A2. Hazardous Locations Certifications

MSG CODE	AGENCY	TYPE OF PROTECTION	Electrical Parameters	Ambient Temperature
A	FM Approvals ™ (USA)	• **Explosion proof:** Class I, Division 1, Groups A, B, C, D; T6..T4 • **Dust Ignition Proof:** Class II, III, Division 1, Groups E, F, G; T4 Class 1, Zone 1, AEx d IIC T4 Gb Class 2, Zone 21, AEx tb IIIC T 95ºC IP66 Db	Note 1	T6: -50ºC to +65ºC T4, T5: -50 ºC to 85ºC
		Intrinsically Safe: Class I, II, III, Division 1, Groups A, B, C,D, E, F, G; T4 Class I Zone 0 AEx ia IIC T4 Ga	Note 2	-50 ºC to 70ºC
		Non-Incendive Class I, Division 2, Groups A, B, C, D; T4 Class I Zone 2 AEx nA IIC T4 Gc	Note 1	-50 ºC to 85ºC
		Enclosure: Type 4X/ IP66/ IP67	ALL	ALL
		Standards: FM 3600: 2018; FM 3611: 2018; ANSI/ UL 60079-0: 2013; ANSI/ UL 60079-1: 2015; FM 3610: 2018; ANSI/ UL 60079-11: 2014; FM 3810: 2018; ANSI/ UL 60079-15: 2013; ANSI/ UL 60079-31 : 2015; FM Class 3615: 2018; FM 3616: 2011		
B	CSA-Canada	• **Explosion proof:** CSA 14.2689056 Class I, Division 1, Groups A, B, C, D; T4 • **Dust Ignition Proof:** Class II, III, Division 1, Groups E, F, G; T4 Class I Zone 1 Ex db IIC T4 Gb Ex db IIC T4 Gb Zone 21 Ex tb IIIC T 95ºC Db Ex tb IIIC T 95ºC Db	Note 1	-50ºC to +705ºC
		Intrinsically Safe: CSA 14.2689056 Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T4 Ex ia IIC T4 Ga Ex ic IIC T4 Gc	Note 2	-50ºC to 70ºC
		Non-Incendive CSA 14.2689056 Class I, Division 2, Groups A, B, C, D; T4 Class I Zone 2 Ex ec IIC T4 Gc Ex ec IIC T4 Gc	Note 1	-50ºC to 70ºC
		Enclosure: Type 4X/ IP66/ IP67	ALL	ALL

	B	CSA- Canada	**Standards:** CSA C22.2 No. 0: 2015; CSA C22.2 No. 30: 2016; CSA C22.2 No. 94-M91; CSA C22.2 No. 25: 2017; CSA C22.2 No. 61010-1: 2017; CSA-C22.2No.157: 2016; C22.2 No. 213: 2017; C22.2 No. CSA 60079-0:2015; C22.2 No. 60079-1: 2016; C22.2 No. 60079-11: 2014;C22.2 No. 60079-15: 2016; C22.2 No. 60079-31: 2015; ANSI/ ISA12.12.01-2017; ANSI/ ISA 61010-1: 2016; ANSI/ UL 60079-0: 2013; ANSI/ UL 60079-1: 2015; ANSI/ UL 60079-11: 2014; ANSI/ UL 60079-15: 2013; ANSI/ UL 60079-31: 2015; FM 3600: 2011; FM 3615: 2006; FM Class 3616: 2011; ANSI/ UL 913: 2015; UL 916: 2015; ANSI/ UL 12.27.01: 2017; ANSI/UL 50E: 2015		
	C	ATEX	**Flame-proof and Dust:** SIRA 14ATEX2147X  II 2 G Ex db IIC T6.T5 Gb II 2 D Ex tb IIIC T 95ºC Db	Note 1	T6: -50ºC to +65ºC T95 ºC, T5: -50ºC to 85ºC
			Intrinsically Safe: SIRA  14ATEX2147X/ SIRA 14ATEX4148X II 1 G Ex ia IIC T4 Ga II 3 G Ex ic IIC T4 Gc	Note 2	-50ºC to 70ºC
			Increased Safety: SIRA  14ATEX4148X II 3 G Ex ec IIC T4 Gc	Note 1	-50ºC to 85ºC
			Enclosure: Type IP66/ IP67	ALL	ALL
			STANDARDS: EN IEC 60079-0: 2018; EN 60079-1: 2014; EN 60079-11: 2012; EN 60079-31: 2014; EN 60079-7: 2015/A1: 2018;		
			Flame-proof and Dust: CSAE 22UKEX1046X  II 2 G Ex db IIC T6.T5 Gb II 2 D Ex tb IIIC T 95ºC Db	Note 1	T6: -50ºC to +65ºC T5: -50ºC to 85ºC

C	UKEX	**Intrinsically Safe:** CSAE 22UKEX1046X/ CSAE 22UKEX1323X  II 1 G Ex ia IIC T4 Ga II 3 G Ex ic IIC T4 G c	Note 2	-50ºC to 70ºC
		Increased Safety: CSAE  22UKEX1323X II 3 G Ex ec IIC T4 Gc	Note 1	-50ºC to 85ºC
		Enclosure: Type IP66/ IP67	ALL	ALL
		STANDARDS: EN IEC 60079-0: 2018; EN 60079-1: 2014; EN 60079-11: 2012; EN 60079-31: 2014; EN 60079-7: 2015/A1: 2018;		
D	IECEx	**Flame-proof:** IECEx SIR 14.0050X Ex db IIC T6.T5 Gb Ex tb IIIC T 95ºC Db	Note 1	T6: -50ºC to +65ºC T5: -50ºC to 85ºC
		Intrinsically Safe: IECEx SIR 14.0050X E x ia IIC T4 Ga Ex ic IIC T4 Gc	Note 2	-50ºC to 70ºC
		Increased Safety: IECEx SIR 14.0050X E x ec IIC T4 Gc	Note 1	-50ºC to 85ºC
		Enclosure: IP66/ IP67	ALL	ALL
		STANDARDS: IEC 60079-0: 2017; IEC 60079-1: 2014; IEC 60079-11: 2011; IEC 6 0079-7: 2017; IEC 60079-31: 2013		

		Flame-proof:		T6: -20ºC to 65ºC
		Ex db IIC T6..T5 Gb Ex tb IIIC T 9 5ºC Db	Note 1	T95ºC, T5: -20ºC to 85ºC
E	SAEx	**Intrinsically Safe:** Ex ia IIC T4 G a	Note 2	-20ºC to 70ºC
		Ex ic IIC T4 Gc		
		Non-Incendive	Note 1	–20ºC to 85ºC
		Ex ec IIC T4 Gc		
		Enclosure: IP66/ IP67	ALL	ALL
F	INMETRO	**Flame-proof:**		T6: -20ºC to 65ºC
		Ex db IIC T6..T5 Gb Ex tb IIIC T 9 5ºC Db	Note 1	T95ºC, T5: -20ºC to 85ºC
		Intrinsically Safe:		
		Ex ia IIC T4 Ga	Note 2	-20ºC to 70ºC

		Ex ic IIC T4 Gc		
		Non-Incendive	Note 1	–20ºC to 85ºC
		Ex ec IIC T4 Gc		
		Enclosure: IP66/ IP67	ALL	ALL
		STANDARDS: ABNT NBR IEC 60079-0: 2013; ABNT NBR IEC 60079-1:		
		2016; ABNT NBR IEC 60079-11: 2013; ABNT NBR IEC 60079-7: 2018;		
		ABNT NBR IEC 60079-31: 2014		
		Flame-proof:		T6: -20ºC to 65ºC
		Ex d IIC T6/T5 Gb Ex tD A21 IP6 6/67 T95ºC	Note 1	T95ºC, T5: -20ºC to 85ºC
		Intrinsically Safe:		
		Ex ia IIC T4 Ga	Note 2	-20ºC to 70ºC
G	NEPSI	Ex ic IIC T4 Gc		
		Non-Incendive	Note 1	–20ºC to 85ºC
		Ex nA IIC T4 Gc		
		Enclosure: IP66/ IP67	ALL	ALL
		STANDARDS: GB 3836.1-2010; GB 3836.2-2010; GB 3836.4-2014; GB		
		3836.19-2010; GB 3836.20-2010; GB 12476.1-2013; GB 12476.5-2013		
		Flame-proof:		T6: -20ºC to 65ºC
		Ex db IIC T6..T5 Gb	Note 1	T5: -20ºC to 85ºC
P	CCoE/ PESO	**Intrinsically Safe:**		
		Ex ia IIC T4 Ga	Note 2	-20ºC to 70ºC

			Enclosure: IP66/ IP67	ALL	ALL
	BIS certification		“For details of BIS certification please visit **www.bis.gov.in”**		

Notes

1. **Operating Parameters:**

   Voltage= 12 to 42 V Current= 25 mA

2. **Intrinsically Safe Entity Parameters**

   For details see Control Drawing, 50089981.

A3. Marking ATEX Directive

1. **General**

   The following information is provided as part of the labeling of the Remote Indicator:

   1. Name and Address of the manufacturer
   2. The serial number of the Remote Indicator is located on the Meter Body data- plate. The first two digits of the serial number identify the year (02) and the second two digits identify the week of the year (23); for example, 0223xxxxxxxx indicates that the product was manufactured in 2002, in the 23rd week.

2. **Apparatus Marked with Multiple Types of Protection**

   The user must determine the type of protection required for installation the equipment. The user shall then check the box [ ] adjacent to the type of protection used on the equipment certification nameplate. Once a type of protection has been checked on the nameplate, the equipment shall not then be reinstalled using any of the other certification types.

3. **WARNINGS and Cautions**

   Non-Incendive / Non-Sparking (Division 2 and Zone 2 Environments):

   1. **WARNING** – EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2 Intrinsically Safe (Divisions 1, Zone 1 and Zone 2 Environments):
   2. **WARNING** – EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.
   3. **WARNING** – DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT.

      Explosion-Proof (Division 1 and Zone 1 Environments):

   4. **WARNING** – DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT.
   5. **WARNING** – DO NOT OPEN WHEN ENERGIZED “OPEN CIRCUIT BEFORE REMOVING COVER”

      Flameproof (Division 1 and Zone 1 Environments):

   6. **WARNING** – DO NOT OPEN WHEN ENERGIZED

General Requirements / Increased Safety (Zone 1):

- **WARNING** – DO NOT OPEN WHEN ENERGIZED
- **WARNING** – OPEN CIRCUIT BEFORE REMOVING COVER

All Protective Measures:
WARNING: FOR CONNECTION IN AMBIENTS ABOVE 60 C USE WIRE RATED 105 C

A. 4 Conditions of Use” for Ex Equipment”, Hazardous Location Equipment or “Schedule of Limitations”:

1. Consult the manufacturer for dimensional information on the flameproof joints for repair.
2. Painted surface of the RMA 800 series may store electrostatic charge and become a source of ignition in applications with a low relative humidity less than approximately30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust or oil. Cleaning of the painted surface should only be done with a damp cloth.
3. The ambient temperature range, maximum process temperature and applicable temperature class of the equipment is as follows:

   RMA803: T4 for -20˚C < Ta < 70˚C

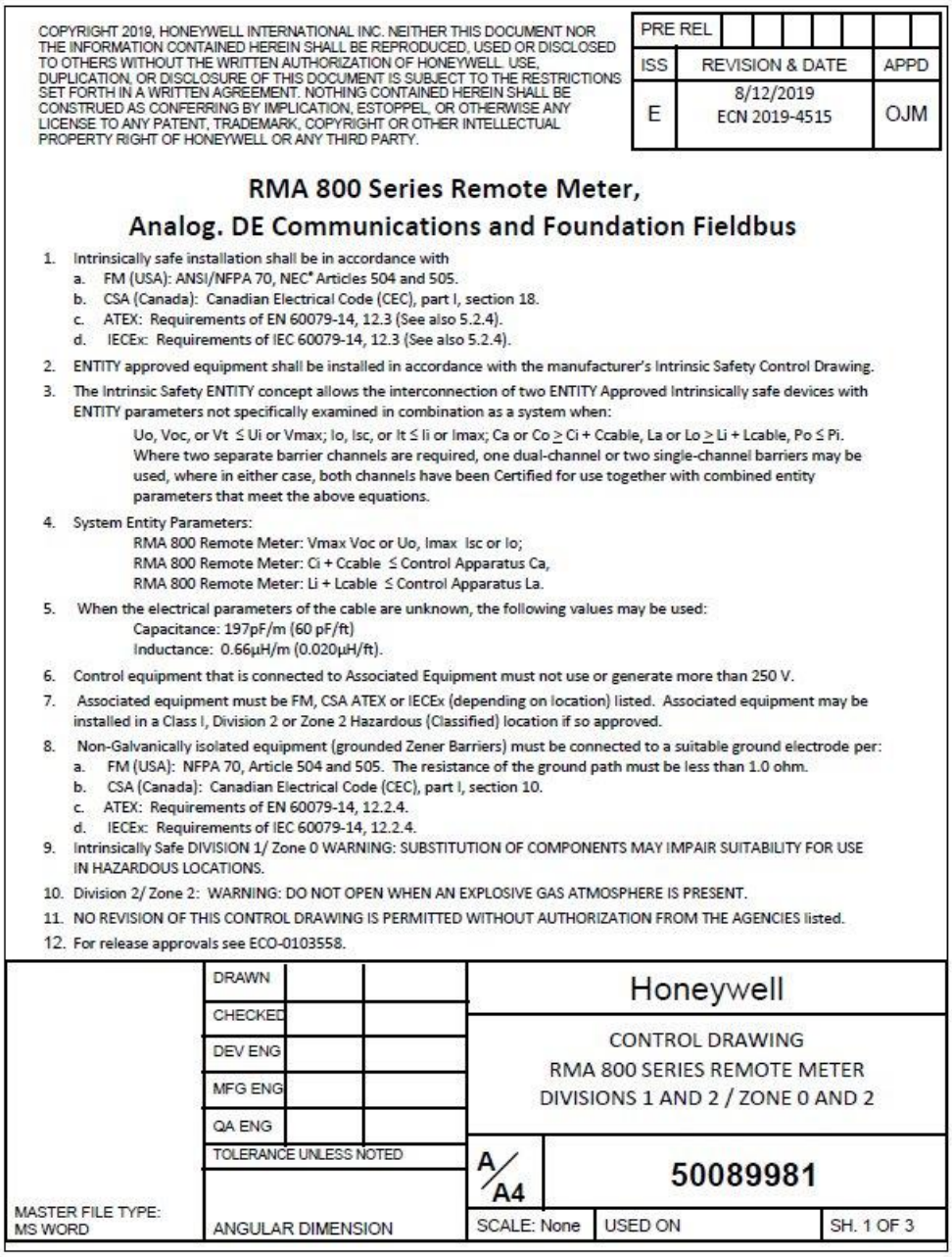
4. The RMA800 series enclosure contains aluminum and is considered to present a potential risk of ignition by impact or friction. Care must be considered during installation and use to prevent impact or friction to avoid

impact.

5. If a charge-generating mechanism is present, the exposed metallic part on the enclosure is capable of storing a level of electrostatic charge that could become incentive for IIC gases. Therefore, the user/installer shall implement precautions to prevent the buildup of electrostatic charge, e.g. earthing the metallic part. This is particularly important if the equipment is installed in a zone 0 location.

On installation, the RMA800 series shall be provided with supply transient protection external to the apparatus such that the voltage at the supply terminals of the RMA800 series does not exceed 140% of the voltage rating of the equipment

A.5 Control Drawing



PRE REL		
ISS	REVISION & DATE	APPD
E	8/12/2019 ECN 2019-4515	OJM

RMA 800 Series Remote Meter,
Analog. DE Communications and Foundation Fieldbus

1. Intrinsically safe installation shall be in accordance with
   a. FM (USA): ANSI/NFPA 70, NEC® Articles 504 and 505.
   b. CSA (Canada): Canadian Electrical Code (CEC), part I, section 18.
   c. ATEX: Requirements of EN 60079-14, 12.3 (See also 5.2.4).
   d. IECEx: Requirements of IEC 60079-14, 12.3 (See also 5.2.4).
2. ENTITY approved equipment shall be installed in accordance with the manufacturer's Intrinsic Safety Control Drawing.
3. The Intrinsic Safety ENTITY concept allows the interconnection of two ENTITY Approved Intrinsically safe devices with ENTITY parameters not specifically examined in combination as a system when:
   Uo, Voc, or Vt ≤ Ui or Vmax; Io, Isc, or It ≤ Ii or Imax; Ca or Co ≥ Ci + Ccable, La or Lo ≥ Li + Lcable, Po ≤ Pi.
   Where two separate barrier channels are required, one dual-channel or two single-channel barriers may be used, where in either case, both channels have been Certified for use together with combined entity parameters that meet the above equations.
4. System Entity Parameters:
   RMA 800 Remote Meter: Vmax Voc or Uo, Imax Isc or Io;
   RMA 800 Remote Meter: Ci + Ccable ≤ Control Apparatus Ca,
   RMA 800 Remote Meter: Li + Lcable ≤ Control Apparatus La.
5. When the electrical parameters of the cable are unknown, the following values may be used:
   Capacitance: 197pF/m (60 pF/ft)
   Inductance: 0.66µH/m (0.020µH/ft).
6. Control equipment that is connected to Associated Equipment must not use or generate more than 250 V.
7. Associated equipment must be FM, CSA ATEX or IECEx (depending on location) listed. Associated equipment may be installed in a Class I, Division 2 or Zone 2 Hazardous (Classified) location if so approved.
8. Non-Galvanically isolated equipment (grounded Zener Barriers) must be connected to a suitable ground electrode per:
   a. FM (USA): NFPA 70, Article 504 and 505. The resistance of the ground path must be less than 1.0 ohm.
   b. CSA (Canada): Canadian Electrical Code (CEC), part I, section 10.
   c. ATEX: Requirements of EN 60079-14, 12.2.4.
   d. IECEx: Requirements of IEC 60079-14, 12.2.4.
9. Intrinsically Safe DIVISION 1/ Zone 0 WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR USE IN HAZARDOUS LOCATIONS.
10. Division 2/ Zone 2: WARNING: DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT.
11. NO REVISION OF THIS CONTROL DRAWING IS PERMITTED WITHOUT AUTHORIZATION FROM THE AGENCIES listed.
12. For release approvals see ECO-0103558.

DRAWN		Honeywell
CHECKED		CONTROL DRAWING RMA 800 SERIES REMOTE METER DIVISIONS 1 AND 2 / ZONE 0 AND 2
DEV ENG		
MFG ENG		
QA ENG		
TOLERANCE UNLESS NOTED		A/A4 — 50089981
MASTER FILE TYPE: MS WORD	ANGULAR DIMENSION	SCALE: None — USED ON — SH. 1 OF 3

RMA801, Analog/ DE Communications

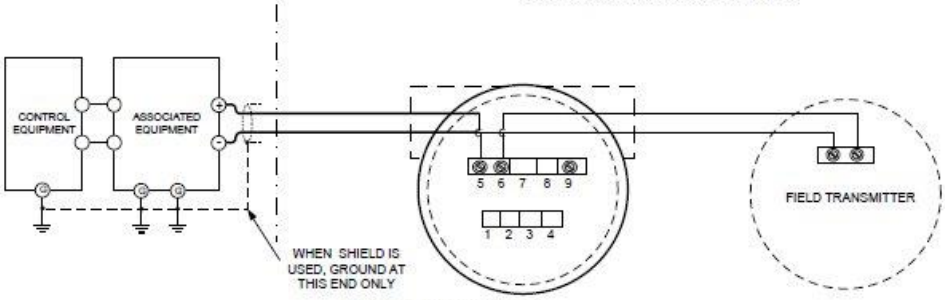
ENTITY PARAMETERS "Ex ia" and Ex ic"	Associated Apparatus
Ui or Vmax ≥6 and ≤ 30V	Uo, Voc or Vt ≥6 and ≤ 30V
Ii or Imax ≤ 225 mA	Io (Isc or It) ≤ 225 mA
Pi or Pmax = 1W	Po ≤ 1 W
Ci= 28.2nF	Ca or Co ≥ C_{cable} + $C_{RMA\ 800}$
Li= 4µH	La or Lo ≥ L_{cable} + $L_{RMA\ 800}$

Note: No Change in Parameters when Terminal 9, DE Communications is connected

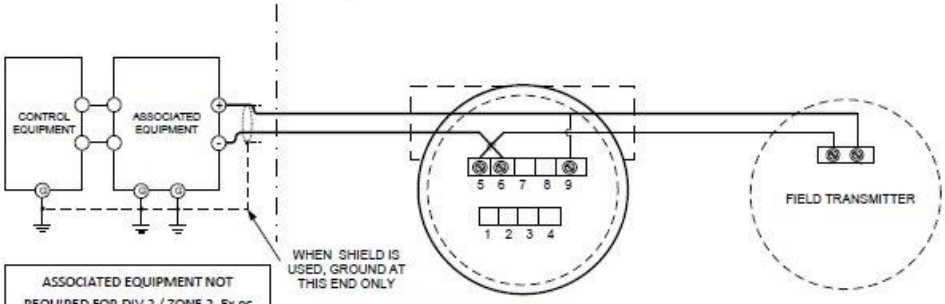
NON-HAZARDOUS LOCATION

HAZARDOUS (CLASSIFIED) LOCATION

CLASS I, CLASS II, DIVISION 1, GROUPS A, B, C, D, E, F & G;
ZONE 0 IIC & ZONE 2 IIC,
CLASS I DIVISION 2, GROUPS A, B, C, D;



POSITIVE SIDE OF LOOP



NEGATIVE SIDE OF LOOP

ASSOCIATED EQUIPMENT NOT REQUIRED FOR DIV 2 / ZONE 2 Ex ec or AEx nA INSTALLATIONS
CONTROL EQUIPMENT PARAMETERS WHEN NO ASSOCIATED EQUIPMENT
Umax=Ui= 42V, 25 mA, Po ≤ 1 W

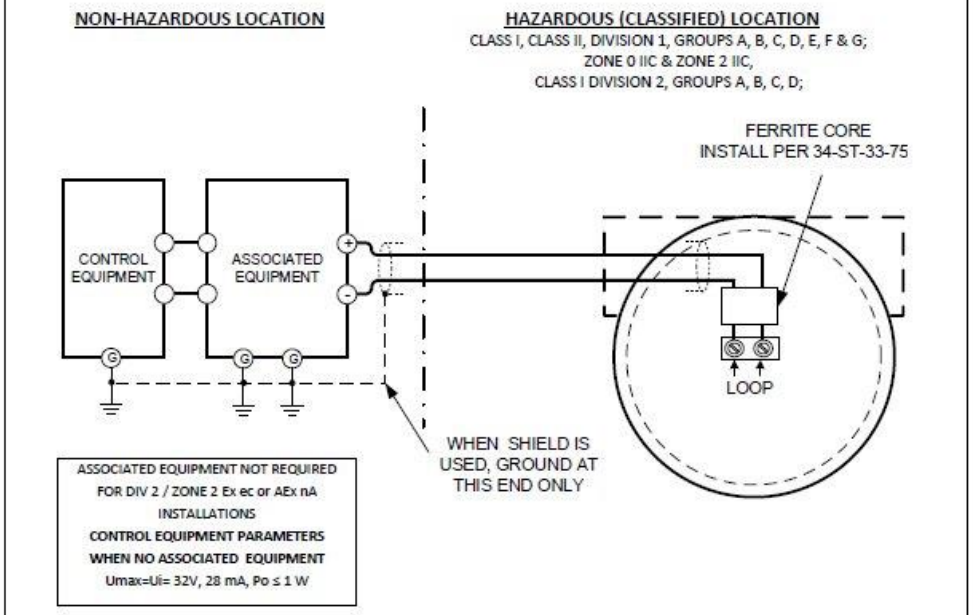
Honeywell	A/A4	50089981	
	SCALE: None	REV E DATE 8/12/19	SH. 2 of 3

RMA803, Foundation Fieldbus

ENTITY PARAMETERS "Ex ia" and Ex ic"	Associated Apparatus
Ui or Vmax ≤ 30V	Uo, Voc or Vt ≤ 30V
Ii or Imax ≤ 180 mA	Io (Isc or It) ≤ 180 mA
Pi or Pmax = 1W	Po ≤ 1 W
Ci= 0 nF	Ca or Co ≥ C_{cable} + $C_{RMA\ 800}$
Li= 9 µH	La or Lo ≥ L_{cable} + $L_{RMA\ 800}$

FISCO Parameters

ENTITY PARAMETERS "Ex ia" and Ex ic"
Ui or Vmax = 17.5V
Ii or Imax ≤ 380 mA
Pi or Pmax ≤ 5.32W
Li = 9 µH
Ci = 0 nF



Honeywell	A/A4	50089981	
	SCALE: None	REV E DATE 8/12/19	SH. 3 of 3

Sales and Service
For application assistance, current specifications, pricing, or name of the nearest Authorized Distributor, contact one of the offices below.

- ASIA PACIFIC (TAC) **hfs-tac-support@honeywell.com**

  Australia Honeywell Limited,
  - **Phone:** +(61) 7-3846 1255,
  - **FAX:** +(61) 7-3840 6481
  - **Toll Free** 1300-36-39-36,
  - **Toll Free Fax:** 1300-36-04-70
- **China – PRC – Shanghai, Honeywell China Inc**
  - . **Phone:** (86-21) 5257-4568,
  - **Fax:** (86-21) 6237-2826
- **Singapore, Honeywell Pte Ltd.**
  - **Phone:** +(65) 6580 3278.
  - **Fax:** +(65) 6445-3033 South Korea, Honeywell Korea Co Ltd.

    - **Phone:+(822)799** 6114.
    - **Fax:+(822)** 792 9015
- EMEA, **Phone:** + 80012026455 or +44 (0)1202645583.
    - **FAX:** +44 (0) 1344 655554
    - **Email:** (Sales) **sc-cp-apps-salespa62@honeywell.com**
- or (TAC) **hfs-tac-support@honeywell.com**
- AMERICAS, Honeywell Process Solutions,
    - Phone: 1-800-423-9883,
    - or 1-215/641-3610. (TAC) **hfs-tac-support@honeywell.com** .
    - Sales 1-800-343-0228.
    - **Email:** (Sales) **FP-Sales-Apps@honeywell.com**
- Knowledge Base search engine **http://bit.ly/2N5VIdi**

WARRANTY/REMEDY

- Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information.
- If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.
- While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product
  in the application.

For more information
To learn more about SmartLine Devices, visit **https://process.honeywell.com** Or contact your Honeywell Account Manager

Process Solutions Honeywell

- 1250 W Sam Houston Pkwy S
- Houston, TX 77042
- Honeywell Control Systems Ltd
- Honeywell House, Skimped Hill Lane
- Bracknell, England, RG12 1EB
- Shanghai City Centre, 100 Jungi Road
- Shanghai, China 20061
- **https://process.honeywell.com**

34-ST-25-52, Rev. 8

- September 2022

Documents / Resources

	Honeywell RMA803 SmartLine Fieldbus Remote Indicator [pdf] Installation Guide RMA803 SmartLine Fieldbus Remote Indicator, RMA803, SmartLine Fieldbus Remote Indicator, Fieldbus Remote Indicator, Remote Indicator, Indicator

References

- bit.ly/2N5VIdi
- lbf – Learn by fun
- BIS Home - Bureau of Indian Standards
- Home
- Home
- Home
- User Manual