

Technical Information

RMA803 SmartLine Remote Fieldbus Indicator
Specification 34-ST-03-90, December 2023**Introduction**

The Honeywell RMA803 is a Foundation Fieldbus remote indicator suitable for use with any Foundation Fieldbus measuring device. The RMA803 allows users to display up to eight (8) values and associated status from devices connected on the same H1 link. The RMA803 can be located anywhere along the Foundation Fieldbus H1 segment providing easy to access data for inaccessible measuring devices or control devices not equipped with displays. The RMA can also provide advanced calculation and or control capability via the use of the optional PID, signal characterizer, arithmetic, input selector, and integrator function blocks.

Best in Class Features:

- Foundation Fieldbus Interoperability tested
- Up to eight values can be displayed
- Full graphic display provides bar graph and trending
- Link master capability
- Wide variety of function blocks
- Remote Meter diagnostic displays
- Polarity insensitive electrical connections
- Modular design characteristics
- Dual compartment housing

Link Active Scheduler

Transmitters can perform as a backup Link Active Scheduler (LAS) and take over when the host is disconnected. Acting as a LAS, the device ensures scheduled data transfers typically used for the regular, cyclic transfer of control loop data between devices on the Fieldbus.

Number of Devices/Segment

Entity IS model: 6 devices/segment

Schedule Entries

30 maximum schedule entries

Number of VCR's: 50 max

Compliance Testing: Tested according to ITK 6.1.1



Figure 1 –RMA803 Remote Indicator

Software Download

Utilizes Class-3 of the Common Software Download procedure as per FF-883.

Integral Keypad

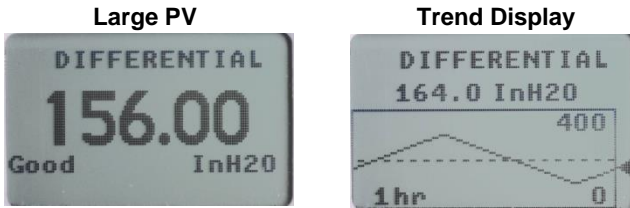
The RMA803 utilizes an integral three button keypad permitting limited display set-up and operation. Full set up capabilities are available using DD/DTM based configuration tools

Advanced Graphics LCD Display Features

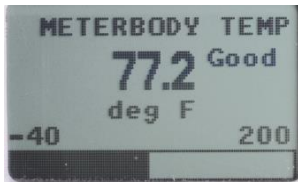
- 0, 90, 180, & 270 degree viewing position adjustments
- Standard and custom measurement units available.
- Up to eight display screens with 3 formats are possible
- (Large PV or PV with Bar Graph or PV with Trend Graph)
- Configurable screen rotation timing (4 to 30 sec)
- Multiple language capability. (EN, GE, FR, IT, SP, RU, TU, CH & JP)
- Ability to enable/disable screen rotation

Display Screens & Diagnostics

The RMA803 graphics display is capable of up to 8 displays in any one of 3 formats (Large PV, Bar Graph, and Trend Display). Certain diagnostics for the RMA803 are also accessible (see the accessible parameter listing for details).



Bar Graph



Similar to all other SmartLine products, the display rotation timing and contrast settings are user configurable.

Function Blocks

Block Type	Block Description	Permanent Blocks	Supported Instances	Execution Timing
Resource Transducer	Resource	1	n/a	n/a
	LCD Transducer	1	n/a	n/a
	Diagnostic Transducer	1	n/a	n/a
Standard	MAO (Multiple A/O)	1	0	30 ms
Optional	PID	1	1	45 ms
	Signal Characterizer	1	3	30 ms
	Arithmetic	1	3	30 ms
	Input Selector	1	3	30 ms
	Integrator	1	0	30 ms

Accessible Parameter Listing

Fieldbus Accessible Parameter Listing	Parameter Type		Available via	
	FF Device	RMA 803	RMA Display	RMA DD
Display Advanced Diagnostics				
Power Failure Tracking Counter	X	√	X	R
Electronics Temperature Tracking	X	√	X	R
Service Life Alarm	X	√	X	R
Time in Service	X	√	X	R
Critical & Non Critical Alarm Details	X	√	R	R
Transmitter configuration				
Tag ID	X	√	X	R/W
Display Transmitter Information				
PV (SV, TV, & QV)	√	X	R	R
PV Status	√	X	R	R
Display SetUp/Configuration				
LCD contrast	X	√	R/W	R/W
Common SetUp				
Language	X	√	R	R/W
Rotation time	X	√	R/W	R/W
Screen Rotation (Enable/Disable)	X	√	R/W	R/W
Screen configuration				
Screen format	X	√	R	R/W
PV selection	X	√	X	R/W
Display units	X	√	R	R/W
Custom units	X	√	R	R/W
Decimals	X	√	R	R/W
Custom Tag	X	√	R	R/W
Display Low limit	X	√	R	R/W
Display High limit	X	√	R	R/W
Trend Duration	X	√	R	R/W
Display Product Information				
Display				
Version number	X	√	R	R
Serial Number	X	√	R	R
Optional Blocks Enable/Disable	X	√	R	R
License Key	X	√	W	W
Electronic Module				
Firmware version	X	√	R	R
Protocol	X	√	R	R
Model Key	X	√	R	R

x- Not available, √ - Available, R – Read Only, R/W – Read/Write, W – Write Only

Specifications

Operating Conditions						
Parameter	Reference Condition		Operative Limits		Transportation and Storage	
	°C	°F	°C	°F	°C	°F
Ambient Temperature ¹	25±1	77±2	-40 to 70	-4 to 158	-30 to 80	-22 to 175
Humidity (%RH)	10 to 55		0 to 100		0 to 100	

LCD display operating temperature is –20 to 70°C. At temperatures beyond this operating limit, display may not be readable but the loop will remain intact.

Physical/Functional Specifications	
Parameter	Description
Supply Voltage	9 - 32Vdc Terminal Voltage
Current Consumption	Steady State: 17.5mAdc Code Download: 28mA
Vibration:	IEC 60770-1 field or pipeline, vibration (10-2000 Hz: 0.21mm displacement / 3g max acceleration)
Electromagnetic Compatibility	IEC 61326-3-1
Lightning Protection Option	Leakage Current: 10uA max @ 42.4VDC 93C Impulse rating: 8/20uS 5000A (>10 strikes) 10000A (1 strike min.) 10/1000uS 200A (> 300 strikes)
Electronic Housing	Pure Polyester Powder Coated Low Copper (<0.4%)-Aluminum. Meets NEMA 4X, IP66, IP67 and NEMA 7 (explosion proof). All stainless steel housing is optional. Cover O-Ring material : Silicone
Wiring	Accepts up to 16 AWG (1.5 mm diameter).
Mounting Bracket	Carbon Steel (Zinc-Chromate plated) or 316 Stainless Steel. Suitable for wall or 2" (50mm) vertical or horizontal pipe mounting.
Electrical Connections	½"-14 NPT or M20
Dimensions	See Figure 2 , Figure 3 , Figure 4 and Figure 5
Net Weight	2.5 lbs (1,1 kg) with aluminum housing

Performance	
Parameter	Description
Accuracy	Equivalent to connected devices
Display Resolution	Digital Readout: 7 digits, Bar Graph: 128 divisions or 0.78%, Trend: 2.5% of scale
Display Capacity	Up to eight (8) function block outputs
Standard Function Blocks (Execution Times)	Resource (n/a), Transducer (n/a), LCD (n/a), Diagnostic (n/a) & Multiple Analog Output (30ms)
Optional Function Blocks (Execution Times)	PID (45ms), Signal Characterizer (30ms), Arithmetic (30ms), Input Selector (30ms), Integrator (30ms),

Mounting & Dimensional Drawings

Reference Dimensions: $\frac{\text{millimeters}}{\text{inches}}$

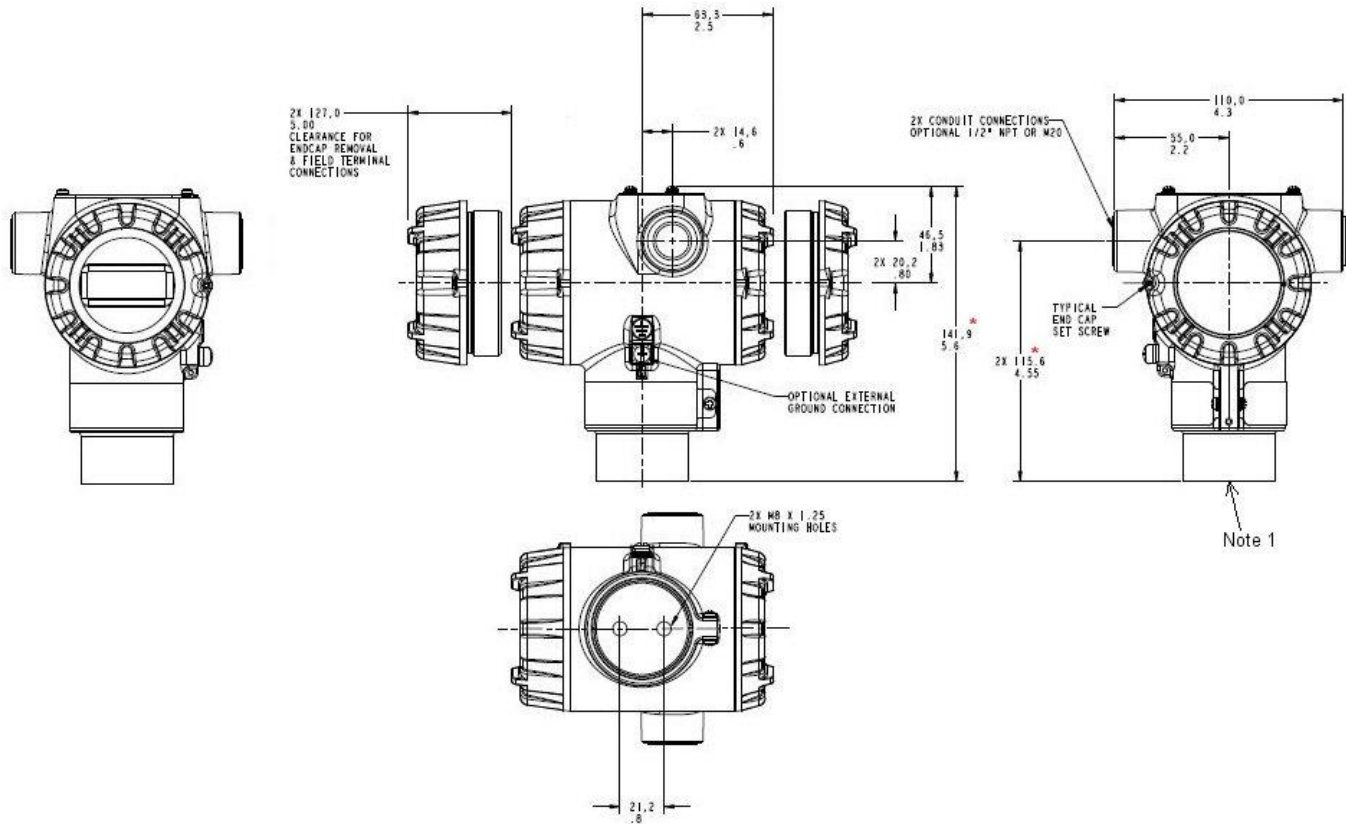


Figure 2 – RMA Dimensions

* **Note 1:** Housing adapter may not be present on all transmitter models. If the housing adapter is not present, subtract 24,5mm (0,96 inches) from the dimension specified.

Mounting & Dimensional Drawings

TRANSMITTER ENCLOSURE CAN BE ROTATED A TOTAL OF 90° FROM THE STANDARD MOUNTING POSITION

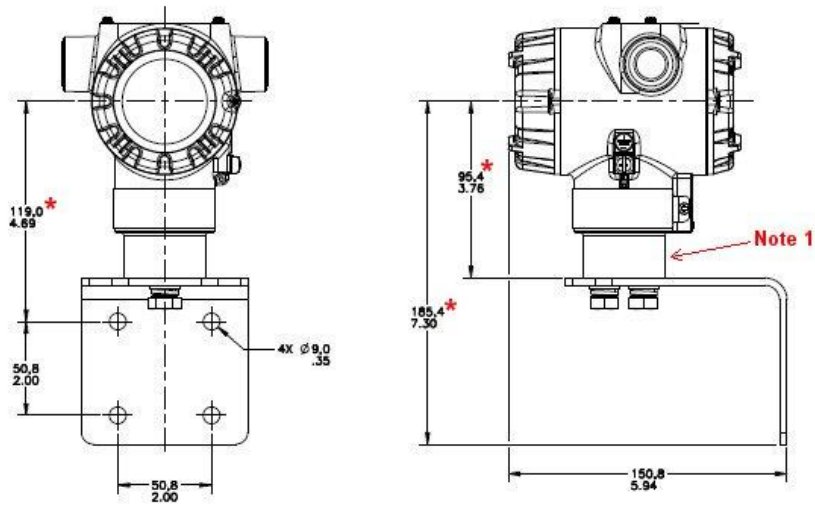
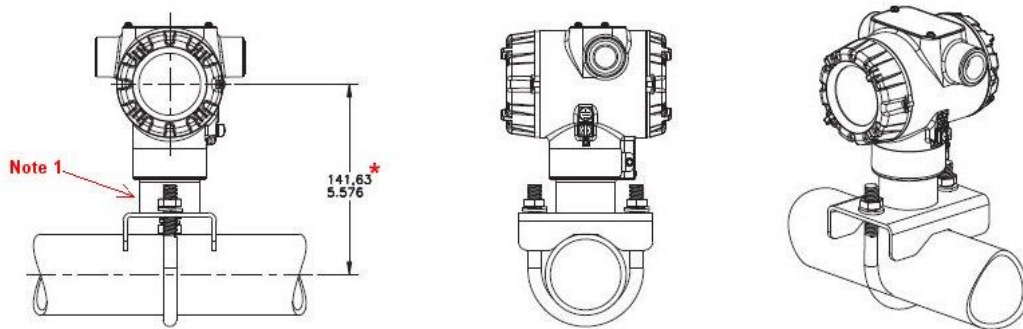
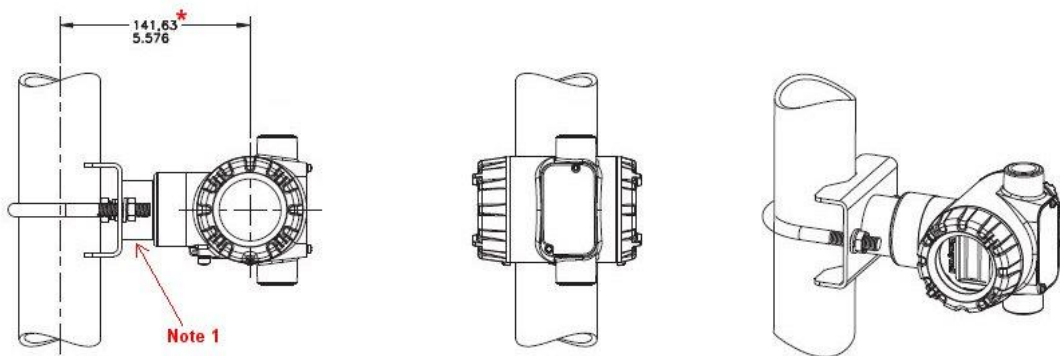


Figure 3 –Horizontal Wall Mounting



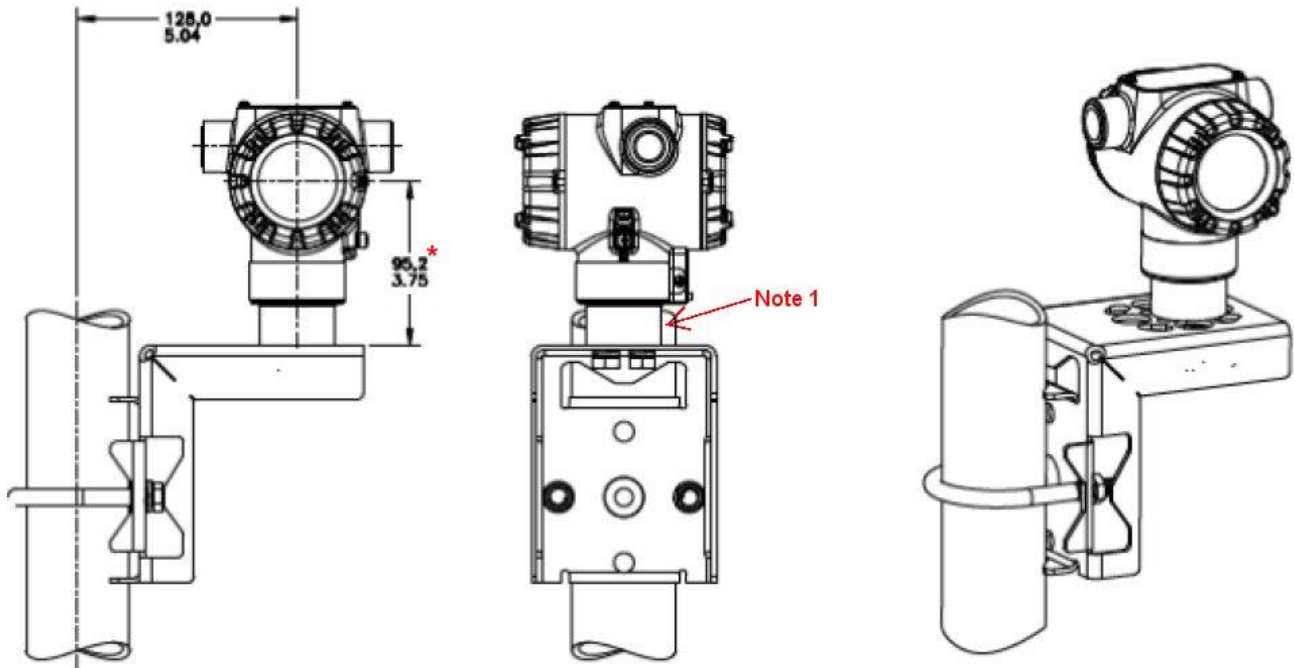
HORIZONTAL FLAT PIPE MOUNT



VERTICAL FLAT PIPE MOUNT

Figure 4 – Pipe Mount, Horizontal & Vertical

*** Note 1:** Housing adapter may not be present on all transmitter models. If the housing adapter is not present, subtract 24,5mm (0,96 inches) from the dimension specified.









VERTICAL ANGLE PIPE MOUNT

Figure 5 - Pipe Mount, Vertical

***Note 1:** Figure 5. Housing adapter may not be present on all transmitter models. If the housing adapter is not present, subtract 24,5mm (0,96 inches) from the dimension specified.

Approval Certifications:

MSG CODE	Agency	Type of Protection	Electrical Parameters	Ambient Temperature
A	FM Approvals TM (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 95°C IP 66 Db	Note 1	T6: -50°C to +65°C T4, T5: -50 °C to 85°C
		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 °C to 70°C
		Non-Incendive Class I, Division 2, Groups A, B, C, D; T4 Class I Zone 2 AEx nA IIC T4 Gc	Note 1	-50 °C to 85°C
		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;T6..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 95o C Db	Note 1	T6: -50°C to +65°C T4, T5: -50 °C to 85°C
		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	Note 2	-50°C to 70°C
		Non-Incendive CSA 14.2689056 Class I, Division 2, Groups A, B, C, D; T4 Class I Zone 2 Ex nA IIC T4 Gc Ex nA IIC T4 Gc	Note 1	-50°C to 85°C
		Enclosure: Type 4X/ IP66/ IP67	ALL	ALL
		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:  II 2 G Ex d IIC T6..T4 Gb II 2 D Ex tb IIIC T 95°C Db	Note 1	T6: -50°C to +65°C T4, T5: -50 °C to 85°C

		Intrinsically Safe:  II 2 G Ex ia IIC T4 Ga	Note 2	-50°C to 70°C
		Non-Incendive  II 3 G Ex ec IIC T4 Gc	Note 1	-50°C to 85°C
		Enclosure: Type 4X/ 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;		
C	UKEX	Flame-proof:  II 2 G Ex d IIC T6..T4 Gb II 2 D Ex tb IIIC T 95°C Db	Note 1	T6: -50°C to +65°C T4, T5: -50 °C to 85°C
		Intrinsically Safe:  II 2 G Ex ia IIC T4 Ga	Note 2	-50°C to 70°C
		Non-Incendive  II 3 G Ex ec IIC T4 Gc	Note 1	-50°C to 85°C
		Enclosure: Type 4X/ 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: Ex db IIC T6..T4 Gb Ex tb IIIC T 95o C Db	Note 1	T6: -50°C to +65°C T4, T5: -50 °C to 85°C
		Intrinsically Safe: Ex ia IIC T4 Ga	Note 2	-50°C to 70°C
		Non-Incendive Ex nA IIC T4 Gc	Note 1	-50°C to 70°C
		Enclosure: Type 4X/ IP66/ IP67	ALL	ALL
		STANDARDS: IEC 60079-0: 2017; IEC 60079-1: 2014; IEC 60079-11: 2011; IEC 60079-7: 2017; IEC 60079-31: 2014		
E	SAEx	Flame-proof: Ex db IIC T6..T5 Gb Ex tb IIIC T 95o C Db	Note 1	T6: -20°C to 65°C T95°C, T5: -20°C to 85°C
		Intrinsically Safe: Ex ia IIC T4 Ga Ex ic IIC T4 Gc	Note 2	-20°C to 70°C
		Non-Incendive Ex ec IIC T4 Gc	Note 1	--20°C to 85°C
		Enclosure: IP66/ IP67	ALL	ALL
		STANDARDS: IEC 60079-0: 2011; IEC 60079-1: 2014; IEC 60079-11: 2011; IEC 60079-7: 2006; IEC 60079-31: 2013		
P	CCoE/ PESO	Flame-proof: Ex db IIC T6..T5 Gb	Note 1	T6: 50°C to 65°C T5: -50°C to 85°C
		Intrinsically Safe: Ex ia IIC T4 Ga	Note 2	-50°C to 70°C
		Enclosure: IP66/ IP67	ALL	ALL
		STANDARDS: IEC 60079-0: 2017; IEC 60079-1: 2014; IEC 60079-11: 2011; IEC 60079-7: 2017; IEC 60079-31: 2013		

Notes:

Operating Parameters:

Voltage= 12 to 42 V Current = 25 mA

Intrinsically Safe Entity Parameters

For details see Control Drawing, 50089981.

Model Selection Guide

The Model Selection Guide is subject to change and is inserted into the specification as guidance only.



Model RMA800 Remote Indicator

34-ST-16-90 Issue 22

Section 13
Page: RMA8-1

Effective Date: December 01,2023
Model Selection Guide



Instructions: Make selections from all Tables Key through VI using column below the proper arrow. Asterisk indicates availability. Letter (a) refer to restrictions highlighted in the restrictions table. Tables delimited with dashes.
List Price: Price equals the sum of prices for all selections made.

Key	I	II	III	IV	V	VI
RMA80	-	-	-	-	-	00000

List Price equals the sum of prices for all selections.

KEY NUMBER	BASE MODEL
Remote Indicator	DE Protocol or Analog (4-20mA DC) Foundation Fieldbus

Selection		
RMA801	▼	
RMA803		▼

TABLE I	AGENCY APPROVALS (see data sheet for Approval Code Details)
Approvals	No Approvals Required
	FM Explosion proof, Intrinsically Safe, Non-incendive, & Dustproof
	CSA Explosion proof, Intrinsically Safe, Non-incendive, & Dustproof
	ATEX Explosion proof, Intrinsically Safe & Non-incendive
	IECEX Explosion proof, Intrinsically Safe & Non-incendive
	cCSAus Explosion proof, Intrinsically Safe, Non-incendive, & Dustproof-Canada & US
	SAEx/CCoE Explosion proof, Intrinsically Safe & Non-incendive
	INMETRO Explosion proof, Intrinsically Safe & Non-incendive
	NEPSI Explosion proof, Intrinsically Safe & Non-incendive
	KOSHA Explosion proof, Intrinsically Safe & Non-incendive
CCoE Explosion proof, Intrinsically Safe & Non-incendive	

0	*	*
A		*
B		*
C	*	*
D	*	*
K	*	
E	*	*
F	*	*
G	*	*
H	*	
P		*

TABLE II	TRANSMITTER ELECTRONICS SELECTIONS		
a. Electronic Housing Material & Connection Type	Material	Connection	Lightning Protection
	Polyester Powder Coated Aluminum	1/2 NPT	None
	Polyester Powder Coated Aluminum	M20	None
	Polyester Powder Coated Aluminum	1/2 NPT	Yes
	Polyester Powder Coated Aluminum	M20	Yes
	316 Stainless Steel (Grade CF8M)	1/2 NPT	None
	316 Stainless Steel (Grade CF8M)	M20	None
	316 Stainless Steel (Grade CF8M)	1/2 NPT	Yes
316 Stainless Steel (Grade CF8M)	M20	Yes	
b. Protocol Compatibility	Communications Protocol		
	DE protocol or Analog (4-20mA DC) Foundation Fieldbus Enabled		
c. Customer Interface Selections	Display	External Config Buttons	Languages
	Standard	None (Integrated on Display)	English
	Advanced	None	EN, GE, FR, IT, SP, RU, TU
	Advanced	External	EN, GE, FR, IT, SP, RU, TU
	Advanced	None	EN, CH, JP
Advanced	External	EN, CH, JP	

A__	*	*
B__	*	*
C__		*
D__		*
E__	*	*
F__	*	*
G__		*
H__		*

D	*	
F		*

__A	*	
__D		*
__E		*
__H		*
__J		*

TABLE III	CONFIGURATION SELECTIONS	
a. Application Software	Application Software	
	Standard Software Additional Function Blocks (Fieldbus Only: Adds PID, Char, Arith, Selector & Integ blocks)	
b. Configuration	Factory Configuration	Write Protection
	Factory Standard	Disabled
	Factory Standard	Enabled

1_	*	*
2_		*

_S	*	*
_T	*	

TABLE IV		ACCESSORY SELECTIONS	
	Bracket Type	Material	
a. Mounting Bracket	None	None	
	Flat Pipe Mounting Bracket	Carbon Steel	
	Flat Pipe Mounting Bracket	316 Stainless Steel	
	Wall Mounting Bracket	Carbon Steel	
	Wall Mounting Bracket	316 Stainless Steel	
	Marine Approved Mounting Bracket	316 Stainless Steel	
	Angle Pipe Mounting Bracket Angle Pipe Mounting Bracket	Carbon Steel 316 Stainless Steel	
b. Customer Tag	Customer Tag Type		
	No customer tag		
	One Wired Stainless Steel Tag (Up to 4 lines 26 char/line) Two Wired Stainless Steel Tag (Up to 4 lines 26 char/line)		
c. Unassembled Conduit Plugs & Adapters	Unassembled Conduit Plugs & Adapters		
	No Conduit Plugs or Adapters Required		
	1/2 NPT Male to 3/4 NPT Female 316 SS Certified Conduit Adapter		
	1/2 NPT 316 SS Certified Conduit Plug M20 316 SS Certified Conduit Plug		

RMA803			
RMA801			
0 ___	*	*	
1 ___	*	*	
2 ___	*	*	
3 ___	*	*	
4 ___	*	*	
5 ___	*	*	
6 ___	*	*	
7 ___	*	*	
_ 0 _	*	*	
_ 1 _	*	*	
_ 2 _	*	*	
__ A0	*	*	
__ A2	n	n	
__ A6	n	n	
__ A7	m	m	

TABLE V		OTHER Certifications & Options: (String in sequence comma delimited (XX, XX, XX,..))	
a. Additional Options	None - No additional options required		
	Certificate of Conformance		
	Certificate of Origin		
	Extended Warranty Additional 1 year		
	Extended Warranty Additional 2 years		
	Extended Warranty Additional 3 years		
	Extended Warranty Additional 4 years Extended Warranty Additional 15 years		

00	*	*	b
F3	*	*	
F5	*	*	
01	*	*	
02	*	*	
03	*	*	
04	*	*	
15	*	*	

TABLE VI		MANUFACTURING SPECIALS	
Factory	Factory Identification		

0000	*	*
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MODEL RESTRICTIONS

Restriction Letter	Available Only with		Not Available with	
	Table	Selection(s)	Table	Selection(s)
d	Ila	C, D, G, H __	IVa	1,2,3,4,6,7 __
m	Ila	B, D, F, H __		
n	Ila	A, C, E, G __		
b	Select only one option from this group			

PRODUCT MANUALS

Description	Part Number
RMA801 Remote Meter Assembly HART / DE manual - English	34-ST-25-62
RMA803 Remote Meter Assembly Foundation Fieldbus manual - English	34-ST-25-51

All product documentation is available at www.process.honeywell.com

Sales and Service

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

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Specifications are subject to change without notice.

For more information

To learn more about SmartLine RMA Remote Meter,
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Or contact your Honeywell Account Manager

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