SmartLine

Technical Information

RMA803 SmartLine Remote Fieldbus Indicator Specification 34-ST-03-90, December 2015



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

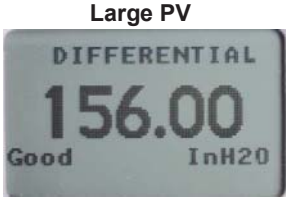
Advanced Graphics LCD Display Features

- 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).

Large PV



Trend Display



Bar Gra



Similar to all other SmartLine products, the display rotation timin

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 configuartion				
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 – White 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	-20 to 70	-4 to 158	-30 to 80	-22 to 175
Humidity (%RH)	10 to 55		0 to 100		0 to 100	

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: millimeters / inches

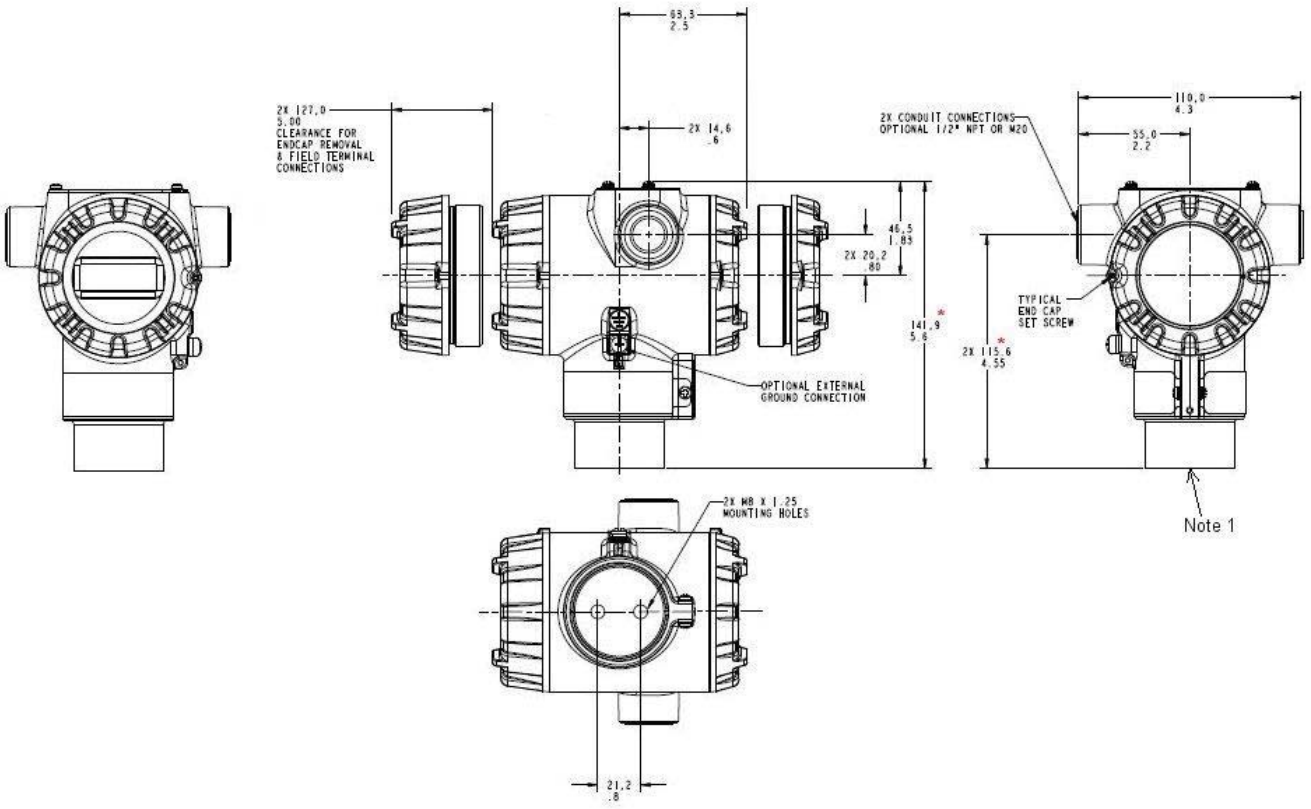


Figure 2 – RMA Dimensions

*** 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^{O} FROM THE STANDARD MOUNTING POSITION

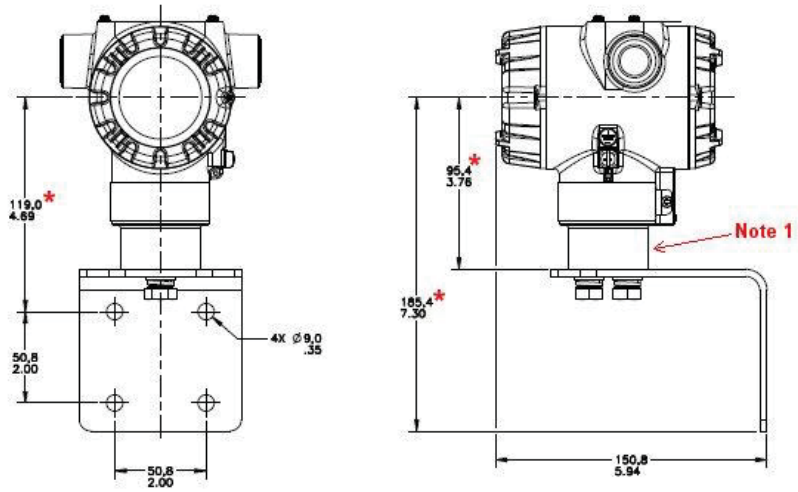
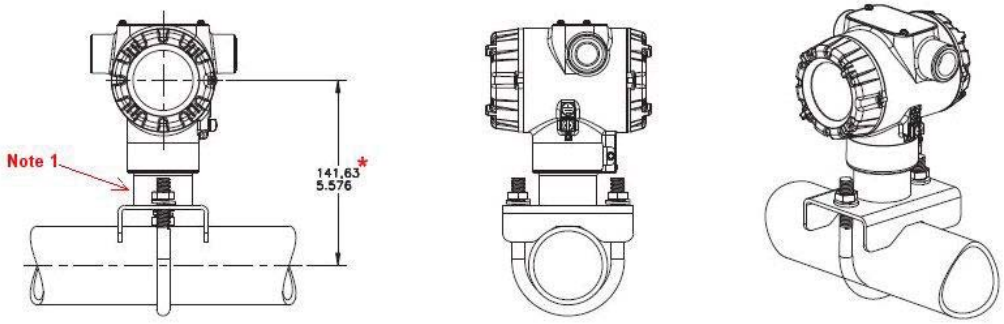
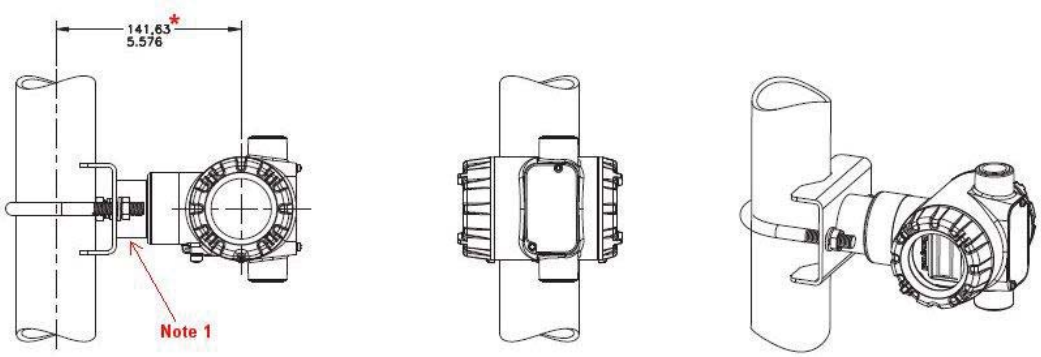


Figure 3 –Horizontal Wall Mounting



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.

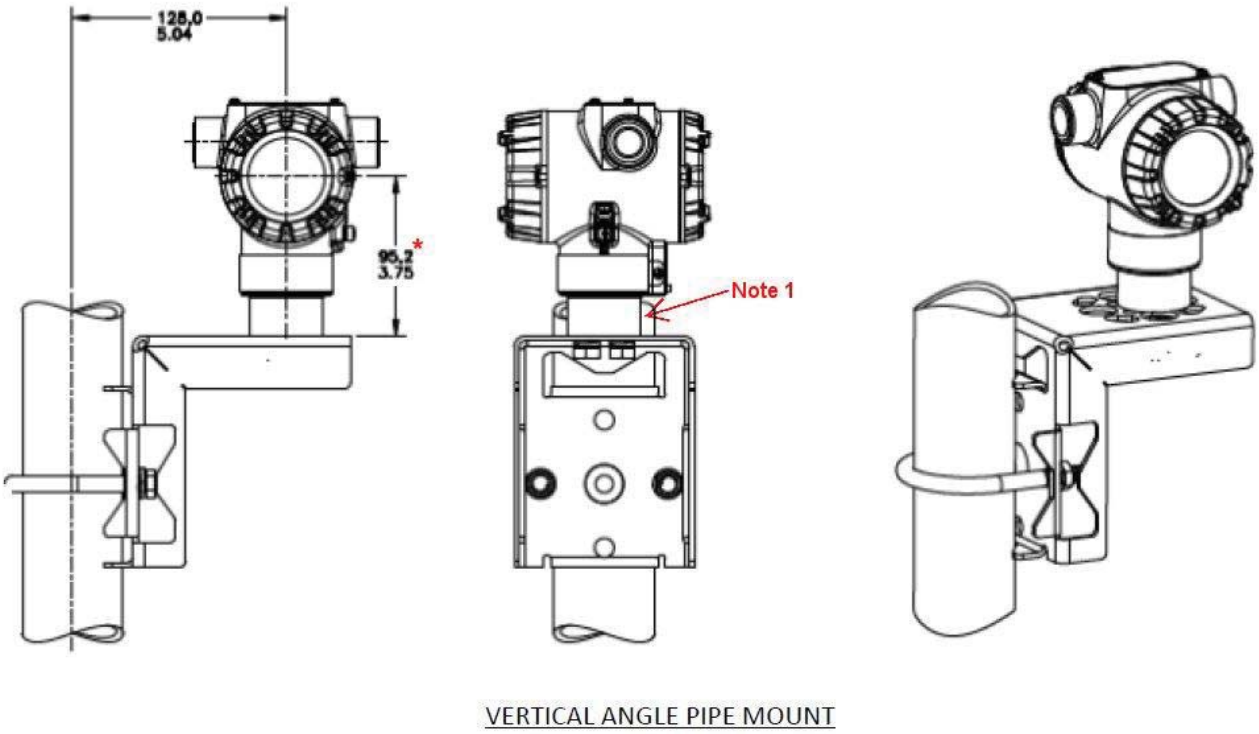


Figure 5 - Pipe Mount, Vertical

***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 ™ (USA)	**Explosion proof:** Class I, Division 1, Groups A, B, C, D; **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	-20 °C to 70°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 FISCO Field Device Ex ia IIC T4	Note 2	-20 °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	-20 °C to 70°C
		Enclosure: Type 4X/ IP66/ IP67	ALL	ALL
		Standards: FM 3600:2011; ANSI/ ISA 60079-0: 2013 FM 3615:2006; ANSI/ ISA 60079-1 : 2009 FM 3616 : 2011 ; ANSI/ ISA 60079-31 : 2009 FM 3610:2010; ANSI/ ISA 60079-11 : 2013 FM 3810 : 2005 ; FM 3611:2004; ANSI/ ISA 60079-15 : 2012 ; FM 3810 : 2005 ; NEMA 250 : 2003 ; ANSI/ IEC 60529 : 2004		
B	CSA-Canada	**Explosion proof:** CSA 14.2689056 Class I, Division 1, Groups A, B, C, D; **Dust Ignition Proof:** Class II, III, Division 1, Groups E, F, G; T4 Zone 1 Ex d IIC T4 Gb Ex tb IIIC T 95°C IP 66 Db DIP A21 Class II, III	Note 1	-20 °C to 70°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 FISCO Field Device Ex ia IIC T4	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 70°C
		Enclosure: Type 4X/ IP66/ IP67	ALL	ALL

MSG CODE	Agency	Type of Protection	Electrical Parameters	Ambient Temperature
		Standards: CSA C22.2 No. 0-10; CSA 22.2 No. 25-1966 (reaffirmed 2009); CSA C22.2 No. 30-M1986 (reaffirmed 2012); CSA C22.2 No. 94-M91; CSA C22.2 No. 142-M1987 (reaffirmed 2009); CSA-C22.2No.157-92 (reaffirmed 2012); C22.2 No. 213-M1987(reaffirmed 2012); C22.2 No. 60529-05 C22.2 No. CSA 60079-0:2011; C22.2 No. 60079-1: 2011; C22.2 No. 60079-11: 2011; C22.2 No. 60079-15: 2012; C22.2 No. 60079-31: 2012; ANSI/ ISA12.12.01-2012; ANSI/ ISA 60079-0 (12.00.01): 2009 ; ANSI/ ISA 60079-1 (12.22.01): 2009 ; ANSI/ ISA 60079-11(12.02.01) : 2012; ANSI/ ISA 60079-26 (12.00.03) : 2011; ANSI/ ISA 60079-15(12.12.02) : 2012 ; ANSI/ ISA 60079-27 (12.02.04) : 2006; ANSI/ ISA 60079-31(12.10.03) : 2009 ; FM Class 3615: Aug 2006; FM Class 3616: Dec 2011; ANSI/ IEC 60529 : Edition 2.1 ANSI/ UL 913: Edition 7; ANSI/ UL 916 : Edition 4 ;		
C	ATEX	**Flame-proof:** II 2 G Ex d IIC T4 Gb II 2 D Ex tb IIIC T 95°C Db	Note 1	-20 °C to 70°C
		Intrinsically Safe: II 2 G Ex ia IIC T4 Ga FISCO Field Device Ex ia IIC T4	Note 2	-50°C to 70°C
		Non-Incendive II 3 G Ex nA IIC T4 Gc	Note 1	-50°C to 70°C
		Enclosure: Type 4X/ IP66/ IP67	ALL	ALL
		STANDARDS: EN 60079-0: 2012; EN 60079-1 : 2007; EN 60079-11 : 2011; EN 60079-26 : 2006; EN 60079-31: 2009; EN 60079-15 : 2010; IEC 60529 : 2009 with Corr 3		
D	IECEx	**Flame-proof:** Ex d IIC T4 Gb Ex tb IIIC T 95°C IP 66 Db	Note 1	-20 °C to 70°C
		Intrinsically Safe: Ex ia IIC T4 Ga FISCO Field Device Ex ia IIC T4	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: 2011, Edition 6; IEC 60079-1 : 2007-04, Edition 6; IEC 60079-11 : 2011, Edition 6; IEC 60079-15 : 2010, Edition 4 IEC 60079-26 : 2006, Edition 2; IEC 60079-31 : 2008, Edition 1 IEC 60529 : 2009 with Corr 3		

Notes:

1. Operating Parameters:
   Voltage= 9 to 32 V (FF) Current = 28 mA (FF)
2. Intrinsically Safe Entity Parameters
   Ui=30 Ii=180 mA Pi= 1 W Ci= 0 nF Li= 0 uH

The Model Selection Guide is subject to change and is inserted into the specification as guidance only.
Prior to specifying or ordering a model check for the latest revision Model Selection Guide which is published at:
www.honeywellprocess.com/en-US/pages/default.aspx

Model Selection Guide

Model RMA800
Remote Indicator

Model Selection Guide
34-ST-16-90 Issue 5

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.

Key		I		II		III		IV		V		VI
RMA80_	-	_	-	_ _ _	-	_ _	-	_ _ _ _	-	_ _, _ _,_ _	-	00000

KEY NUMBER		Selection
Remote Meter	Foundation Fieldbus	RMA803

TABLE I	Agency Approvals (see data sheet for Approval Code Details)		
Approvals	No Approvals Required	0	*
	FM Explosion proof, Intrinsically Safe, Non-incendive, & Dustproof	A	*
	CSA Explosion proof, Intrinsically Safe, Non-incendive, & Dustproof	B	*
	ATEX Explosion proof, Intrinsically Safe & Non-incendive	C	*
	IECEx Explosion proof, Intrinsically Safe & Non-incendive	D	*

TABLE II	TRANSMITTER ELECTRONICS SELECTIONS				
a. Electronic Housing Material & Connection Type	Material	Connection	Lightning Protection		
	Polyester Powder Coated Aluminum	1/2 NPT	None	A _ _	*
	Polyester Powder Coated Aluminum	M20	None	B _ _	*
	Polyester Powder Coated Aluminum	1/2 NPT	Yes	C _ _	*
	Polyester Powder Coated Aluminum	M20	Yes	D _ _	*
	316 Stainless Steel (Grade CF8M)	1/2 NPT	None	E _ _	*
	316 Stainless Steel (Grade CF8M)	M20	None	F _ _	*
	316 Stainless Steel (Grade CF8M)	1/2 NPT	Yes	G _ _	*
	316 Stainless Steel (Grade CF8M)	M20	Yes	H _ _	*
b. Protocol Compatibility	Communications Protocol				
	Foundation Fieldbus Enabled			_ F _	*
c. Customer Interface Selections	Indicator	Config Buttons	Languages		
	Advanced	None	**EN**, DE, FR, IT, ES, RU, TR	_ _ D	*
	Advanced	External	**EN**, DE, FR, IT,ES, RU, TR	_ _ E	*
	Advanced	None	**EN**, CH, JP	_ _ H	*
	Advanced	External	**EN**, CH, JP	_ _ J	*

TABLE III	CONFIGURATION SELECTIONS		
a. Application Software	Application Software		
	Standard Operating Software	1 _	*
	Additional Function Blocks (Fieldbus Only: Adds PID, Char, Arith, Selector & Integ blocks)	2 _	*
b. Configuration	Factory Configuration		
	Factory Standard	_ S	*

TABLE IV	ACCESSORY SELECTIONS			
	Bracket Type	**Material**		
a. Mounting Bracket	None	None	0 _ _ _	*
	Flat Pipe Mounting Bracket	Carbon Steel	1 _ _ _	*
	Flat Pipe Mounting Bracket	316 Stainless Steel	2 _ _ _	*
	Wall Mounting Bracket	Carbon Steel	3 _ _ _	*
	Wall Mounting Bracket	316 Stainless Steel	4 _ _ _	*
	Marine Approved Mounting Bracket	316 Stainless Steel	5 _ _ _	*
	Angle Pipe Mounting Bracket	Carbon Steel	6 _ _ _	*
	Angle Pipe Mounting Bracket	316 Stainless Steel	7 _ _ _	*
b. Customer Tag	**Customer Tag Type**			
	No customer tag		_ 0 _ _	*
	One Wired Stainless Steel Tag (Up to 4 lines 26 char/line)		_ 1 _ _	*
	Two Wired Stainless Steel Tag (Up to 4 lines 26 char/line)		_ 2 _ _	*
c. Unassembled Conduit Plugs & Adapters	**Unassembled Conduit Plugs & Adapters**			
	No Conduit Plugs or Adapters Required		_ _ A0	*
	1/2 NPT Male to 3/4 NPT Female 316 SS Certified Conduit Adapter		_ _ A2	n
	1/2 NPT 316 SS Certified Conduit Plug		_ _ A6	n
	M20 316 SS Certified Conduit Plug		_ _ A7	m

TABLE V	OTHER Certifications & Options:(String in sequence comma delimited (XX, XX, XX,..)		
a. Additional Options	None - No additional options required	00	*
	Marine (LR Only)	MT	d
	Certificate of Conformance	F3	*
	Certificate of Origin	F5	*
	Extended Warranty Additional 1 year	01	* b
	Extended Warranty Additional 2 years	02	*
	Extended Warranty Additional 3 years	03	*
	Extended Warranty Additional 4 years	04	*
	Extended Warranty Additional 15 years	15	*

TABLE VI	Manufacturing Specials		
Factory	**Factory Identification**	0000	*

MODEL RESTRICTIONS

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

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, visit www.honeywellprocess.com
Or contact your Honeywell Account Manager

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