Flow-Meter Compatibility Matrix

25 April 2024



EtherMeter[®]

- MODEL EM-100
- FLOW METER GATEWAY FOR SCADA, TELEMETRY, & BUILDING AUTOMATION SYSTEMS
- COVERED BY US PATENT NO. 8,219,214



- MODEL EMP
- ENCODER-TO-MILLIAMP & PULSE CONVERTER FOR WATER METERS
- COVERED BY US PATENT NO. 11,041,738



- MODEL TMD
- REMOTE VISUAL DISPLAY FOR WATER METERS
- COVERED BY US PATENT NO. 11,041,738

AUTHORIZED SCADAMETRICS RESELLER

SCADAmetrics

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<u>EtherMeter[®], Signalizer[™], TheMeterDisplay[™]</u> <u>Compatibility Matrix</u>

1. PULSE-TYPE METERS AND THE ETHERMETER

TheMeterDisplay[™] and The Signalizer[™] are designed to interface exclusively to absoluteencoder-type meters. However, the EtherMeter[®] – although *primarily* designed for absoluteencoder-type meters – also provides meter-reading support for many pulse-based meters. As a consequence, pulse meter signal(s) may be connected to either (or both) of the EtherMeter's meter input channels. Pulse processing technology allows the EtherMeter to collect meter totalization and flow rate data from non-encoder-based meters. Common examples include petroleum & chemical meters, commercial & industrial natural gas meters, volume correctors, and many others.

When the EtherMeter handles pulse-based meters, the totalization and flow-rate data is stored and transmitted from the same Modbus- and Rockwell-compatible memory registers that it uses for encoder-based meters. Therefore, regardless of which type of meter(s) is connected to the EtherMeter (encoder versus pulse), collection of totalization and flow data by the connected SCADA system is identical.

Because of the large number of pulse-type meters available, we cannot provide an exhaustive list of compatible pulse-type meter makes and models. Instead, we specify the acceptable pulse-type technologies, which include ONLY the following types:

- Mechanical Dry Contact
- Solid-State Dry Contact
- Open-Collector Input

2. ENCODER-TYPE METERS

The provided Encoder-Type Meter Compatibility Matrix is by no means exhaustive, especially in light of the fact that there are a multitude of three-wire-protocol registers available on the market today. Advertised full compatibility is limited to registers deemed so based upon testing within the laboratory and/or the field; and those are denoted by the EtherMeter[®] logo:

If there is a Sensus-protocol, Neptune-protocol, or Elster K-Frame-protocol ercosin meter register that is not listed as compatible based upon testing, and you would like to see it listed as such, then please contact SCADAmetrics. Note that in such cases, we may request a register for testing and verification. You may also field-test a meter for compatibility using a SCADAmetrics Model TMD TheMeterDisplay[™].

ENCODER-TYPE METER COMPATIBILITY MATRIX

Make	Model	Notes
	AquaMaster III	Compatible (based upon laboratory and/or field testing). Test Results provided courtesy City of Montreal, Quebec, Canada.
		Good register for SCADA System interrogation of encoder register.
		Provides medium-resolution totalization (6 digits). The medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.) Provides accurate bi- directional measurements of flow-rate and totalization.
	Mag-Meter	Note: The data-logging version of this meter does NOT provide the "ScanCoder" output signal that the EtherMeter requires.
ABB Elster-AMCO	Protocol	Mains-powered or battery-powered.
	Option	Register requires user or factory pre-programming per Quick Reference Guide IM/AM/QRG_13:
		Set Parameter 326 (Adapter Code) to '0' (ScanCoder). Set Parameter 327 (Totalizer Source and Range) to '2' (Net x1).
		Must use the following EtherMeter setup command(s): SET ROLLn <most-significant 2="" digits="" display="" meter="" on="" totalizer="" unit=""> SET TYPEn AUTO or ELSTER</most-significant>
		Wiring Interface: +V(GREEN)=TX, DATA(RED)=RX, 0V(BLACK)=CMN Connect To: 3-Terminal PCB WADX2026
	ADE®	Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Badger Meter.
		Good register for SCADA System interrogation of encoder register.
Badger		Provides medium-resolution totalization (6 digits). The medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.)
		Register requires factory pre-programming. The maximum (6 digits) is recommended.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note 1: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS. Note 2: On certain Badger Meters that are built to be connected to an Itron ERT, the following alternate color coding may apply: BLACK=TX, RED=RX, DRAIN=CMN
	HRE-LCD High Resolution Encoder, LCD Version	Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of ABS Water Cooperative (IL).
Badger		Excellent register for SCADA System interrogation of encoder register. When ordering, please make sure to request the encoder version and * not * the pulse (Badger HR) version.
		Provides high-resolution totalization (9 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Battery-powered (20-year battery life).
		Register requires factory pre-programming. The maximum (9 digits) is recommended.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note 1: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS. Note 2: On certain Badger Meters that are built to be connected to an Itron ERT, the following alternate color coding may apply: BLACK=TX, RED=RX, DRAIN=CMN

	HRE-MECH High Resolution Encoder, Mechanical Version	Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of ABS Water Cooperative (IL).
		Excellent register for SCADA System interrogation of encoder register. When ordering, please make sure to request the encoder version and *not * the pulse (Badger HR) version.
Badger		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Register requires factory pre-programming. The maximum (8 digits) is recommended.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note 1: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS. Note 2: On certain Badger Meters that are built to be connected to an Itron ERT, the following alternate color coding may apply: BLACK=TX, RED=RX, DRAIN=CMN
		Compatible (based upon laboratory and/or field testing). Test Results provided courtesy City of Montreal, Quebec, Canada.
		Excellent register for SCADA System interrogation of encoder register.
	E-Series [®] Meter	Provides high-resolution totalization (9 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
Badger	(Pro	Battery-powered (20-year battery life).
		Register requires factory pre-programming. Specify 'High-Resolution E-Series ADE Mode'. The maximum (9 digits) is recommended.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note 1: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS. Note 2: On certain Badger Meters that are built to be connected to an Itron ERT, the following alternate color coding may apply: BLACK=TX, RED=RX, DRAIN=CMN
	M2000 Mag-Meter	Compatible (based upon laboratory and/or field testing). Test Results provided courtesy Lange Tech (Chesterfield, Missouri)
		Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		The Encoder feature of this meter requires Badger M2000 firmware version 1.10 or later. Reference Badger Meter P/N 67354-003 to obtain a firmware upgrade kit. Enabling the meter as an encoder requires three settings, all within the advanced menu, to be configured:
		 Totalizer Resolution – Selects the resolution of the display totalizer. Protocol Type =V2 – Selects the type of information to be transmitted to the appendent.
Badger		Dial Type – Enables encoder and selects the number of significant totalizer digits to transmit. Recommended 8 or 9 dials.
		Register requires field- or factory-programming. The maximum (8 digits) is recommended: Ouput #4 should be set to ADE. Communication method should be set to ADE.
		Mains-powered or battery-powered. SCADAmetrics recommends mains-powered, so that regular battery replacement is not required.
		MagMeter: Meter grounding lug(s) MUST be tied to the control panel electrical grounding terminal/lug.
		Wiring: M2000.TERM.8 = TX, M2000.TERM.1 = RX, M2000.TERM.2 = CMN
		Note 1: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS. Note 2: On certain Badger Meters that are built to be connected to an Itron ERT, the following alternate color coding may apply: BLACK=TX, RED=RX, DRAIN=CMN

		Compatible (based upon laboratory and/or field testing)
		Test Results provided courtesy City of Montreal, Quebec, Canada.
		Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
	M5000 Mag-Meter	Register requires field- or factory-programming. The maximum (8 digits) is recommended: Ouput #4 should be set to ADE. Communication method should be set to ADE.
Badger	Ć	Mains-powered or battery-powered. SCADAmetrics recommends mains-powered, so that regular battery replacement is not required.
	N.	MagMeter: Meter grounding lug(s) MUST be tied to the control panel electrical grounding terminal/lug.
		Wiring: INPUT+ = TX, ADE_DATA = RX, INPUT- JUMPERED TO ADE_GROUND = CMN
		Note 1: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS. Note 2: On certain Badger Meters that are built to be connected to an Itron ERT, the following alternate color coding may apply: BLACK=TX, RED=RX, DRAIN=CMN
		Compatible (based upon published specifications).
		Excellent register for SCADA System interrogation of encoder register.
		Mains-powered, Strap-On Ultrasonic Meter.
	Dynasonics	Provides high-resolution totalization (7,8,9, or 10 digits). The high-resolution
	TFX-500w	totalization speeds the flow-rate calculation and detection of reverse flows.
Dedaar	Clamp-On Ultrasonic Meter	Register requires field- or factory-programming via Flow Meter's User Interface. Nine (9) digits is highly recommended. 10 digits should not be selected. Endpoint Protocol should be set to V2. Resolution should be selected as follows:
Daugei		1" and Below: x0.1 gal x0.01 ft ³ x0.001 m ³
	(Cran	1.5" – 4": x1 gal x0.1 ft ³ x0.01 m ³ 6" and Above: x10 gal x1 ft ³ x0.01 m ³
		Wiring via Meter Terminal Block 500 (TB500):
		4 = TX Red-Sensus Neptune-Black
		5 = RX Green-Sensus Neptune-Red 3 = CMN Black-Sensus Neptune-Green
		Note 1: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
		Compatible (based upon published specifications).
		Excellent register for SCADA System interrogation of encoder register.
	Hydrus	Provides high-resolution totalization (9 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
Diehl	Hydrus Bulk	Battery-powered (20-year battery life).
		Register requires factory pre-programming. The maximum (9 digits) is recommended.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note 1: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.

Honeywell (Elster-AMCO / ABB / Kent)	InVISION™ Sensus- Protocol Option	Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Bond-Madison Water District. <u>Good</u> register for SCADA System interrogation of encoder register. Provides medium-resolution totalization (6 digits). The medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.) Register requires factory pre-programming. The maximum (6 digits) is recommended. Wiring Color Codes: RED=TX_GREEN=RX_BLACK=CMN
		Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
Honeywell (Elster-AMCO / ABB / Kent)	InVISION™ K-Frame Protocol Option	Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Elster-AMCO Water. Good register for SCADA System interrogation of encoder register. Provides medium-resolution totalization (6 digits). The medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.)
		Wiring Color Codes: GREEN=TX, RED=RX, BLACK=CMN Note: On the EtherMeter, the user must set TYPEn to AUTO or ELSTER.
	ScanCoder	Compatible (based upon laboratory and/or field testing).
Honeywell (Elster-AMCO / ABB / Kent)	K-Frame Protocol Option	<u>Good</u> register for SCADA System interrogation of encoder register. Provides medium-resolution totalization (6 digits). The medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.) Wiring Color Codes: BLACK=TX, RED=RX, GREEN(OR BARE SHIELD)=CMN Note: On the EtherMeter, the user must set TYPEn to AUTO or ELSTER.
		Compatible (based upon laboratory and/or field testing).
		Excellent register for SCADA System interrogation of encoder register.
		speeds the flow-rate calculation and detection of reverse flows.
	evoQ4	Battery-powered (10-year battery life).
Honeywell	Mag-Meter Sensus- Protocol Option	Register requires factory pre-programming. The maximum (8 digits) is recommended.
(Elster-AMCO / ABB /		When purchasing the 8-Digit Sensus-Protocol module for the evoQ4, there are two options: VFRAME 8-Digit (Gal x10) and SHIFTED VFRAME 8-Digit (Gal x1).
Kent)	Ç	For Meter Sizes 4" and Below, SHIFTED VFRAME 8-Digit (Gal x1) is recommended.
	L.	For Meter Sizes 6" and Above, VFRAME 8-Digit (Gal x10) is recommended.
		MagMeter: Meter grounding lug(s) MUST be tied to the control panel electrical grounding terminal/lug.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or ELSTER.

		Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Elster-AMCO Water.
Honeywell (Elster-AMCO / ABB /	evoQ4	Good register for SCADA System interrogation of encoder register.
	Mag-Meter K-Frame Protocol Option	Provides medium-resolution totalization (6 digits). The medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.)
		Provides accurate measurement of bi-directional flow-rate and totalization.
Kent)		Battery-powered (10-year battery life).
		MagMeter: Meter grounding lug(s) MUST be tied to the control panel electrical grounding terminal/lug.
		Wiring Color Codes: WHITE=TX, RED=RX, BLACK=CMN Note: On the EtherMeter, the user must set TYPEn to AUTO or ELSTER.
		Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Itron (Actaris).
		Excellent register for SCADA System interrogation of encoder register.
ltron	Cyble™ Coder	Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
(Actaris)		Battery-Powered (12-year battery life).
		Register requires factory pre-programming. The maximum (8 digits) is recommended.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
		Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Kamstrup USA.
	Flow IQ 2100 Ultrasonic Meter	Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (9 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows. Also provides advanced alarm flags, which can be accessed by the EtherMeter. Please request special Kamstrup Firmware when ordering the EtherMeter.
Kamstrup		Note: On the EtherMeter, SAMPn should always be set to an even multiple of 32 seconds. Example: On the EtherMeter, set SAMPn to 64, TOn to 64 (same as SAMPn), FCALCn to DTOTAL
		Battery-powered (16-year battery life). Note: For maximum Kamstrup meter battery life preservation, the user should set the EtherMeter's SAMPn setting to >=320 Seconds.
		Register requires factory pre-programming. The maximum (9 digits) is recommended.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
Master Meter	Acculinx™	Compatible (based upon laboratory and/or field testing). Test Register and Results courtesy of Davis-Monthan AFB (Tucson, AZ).
		Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Register should <u>NOT</u> include the Factory RESISTOR option. Register requires factory pre-programming. The maximum (8 digits) is recommended.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.

	Octave®	Compatible (based upon laboratory and/or field testing). Test Register and Results courtesy of Davis-Monthan AFB (Tucson, AZ).
		Excellent register for SCADA System interrogation of encoder register.
		Battery-powered (10-year battery life).
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Meter Register requires factory pre-programming.
	Ultrasonic Meter	When ordering the Octave [®] , specify:
Master Meter		 ENCODER_UPDATE_PERIOD as 60 seconds. "NET UNSIGNED" Totalization Mode. Maximum Number of Encoder Digits (8 digits). DOT include the Encoder DESISTOR entire
		 Bo <u>NOT</u> include the Factory RESISTOR option. Resolution = GALx1 (meter 4" or smaller) or GALx10 (meter 6" or larger).
		 Resolution = FT³x0.1 (meter 4" or smaller) or FT³x1 (meter 6" or larger).
		Note: On the EtherMeter, Recommended SAMPn Setting: 60, 120, 180, 240, 300, 600, or 900 Seconds. (Must Be A Multiple of 60 Seconds). Example. On the EtherMeter, set SAMPn to 60, TOn to 60 (same as SAMPn), FCALCn to DTOTAL
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
	Elinx™ Interpreter	Compatible (based upon laboratory and/or field testing). Test Registers provided courtesy of Master Meter Inc.
		Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Battery-powered (20-year battery life). Note: On the EtherMeter, the user should set SAMPn >= 30 seconds to assist battery life.
Master Meter		Register requires factory pre-programming.
		When ordering the Elinx™, specify:
		 Maximum Number of Encoder Digits (8 digits). Resolution = GALx1 (meter 4" or smaller) or GALx10 (meter 6" or larger). or Resolution = ET³x0 1 (meter 4" or smaller) or ET³x1 (meter 6" or larger).
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.

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	FlowCom Smart-Output Version *	Compatible (based upon laboratory and/or field testing). Test Register courtesy of McCrometer Corp. (Hemet, CA).
		* In June 2021, we received reports that certain new FlowCom registers were including a decimal point in their totalization string, which renders the register incompatible with the EtherMeter – and likely incompatible with many other AMR endpoints. So therefore, we recommend that you proceed with caution, and at your own risk, with this register.
		For compatible versions, it is a <u>Fair</u> register for SCADA System interrogation of encoder register.
McCromotor		Provides high-resolution totalization (8 digits). Generally speaking, an 8-digit high- resolution register will enable fast calculation of flow-rates. However, in this case, the FlowCom register only updates its available reading once every 10 minutes; and therefore flow-rate calculation can only be performed as a 10-minute average flow, severely hampering its ability to provide up-to-date flow readings via its encoder signal. If flow data is required, then the system integrator should purchase and utilize the FlowCom Smart Output (Encoder) + 4-20mA option.
(& Water Specialties)		Battery-powered. In order to assist battery capacity, recommend that the FlowCom be purchased with the 4-20mA output option, which allows for externally-powering the meter.
		Register requires factory pre-programming. The maximum (8 digits) is recommended.
		By default, the FlowCom register is pre-set to a McCrometer-selected default meter resolution. However, we recommend that the user request that McCrometer pre-program the 8-digit resolution to the following non-default settings:
		2" - 4" Gallons x 1 6" - 10" Gallons x 10
		12" + Gallons x 100
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note 1: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS. Note 2: On the EtherMeter, the user should set FCALCn to DTOTAL, SAMPn to 600, and TOn to 600
	ProComm Transmitter	Compatible (based upon laboratory and/or field testing). Test Meter courtesy of McCrometer Corp. (Hemet, CA).
	UltraMag™ Elangod	Excellent register for SCADA System interrogation of encoder register.
	MagMeter Models UM06 & UM08	Provides high-resolution (8 or 9 digits) or medium-resolution (6-Digit) totalization. The high-resolution (8-9 digit) totalization is preferable, as it speeds the flow-rate calculation.
McCrometer (& Water Specialties)	FPI Mag™ Insertion MagMeter	Order with Converter Option: '7' (Smart Output). Order with Smart Output Protocol Option: IT9 (9-Digit)or SEN (8-Digit)
	SPI Mag™ Insertion MagMeter	<u>Note:</u> If the meter is to be connected <u>only</u> to an EtherMeter, then the 9-Digit option is recommended. If the meter is to be co-connected to a utility AMR system, then select the output compatible with the utility AMR system (9 Digit, 8 Digit, 6 Digit).
	Smart-Output	Terminal Block Wire Codes: Term.28=TX, Term.29=RX, Term.27=CMN
	Version	MIM085 Option Wiring Color Codes: BLACK=TX, RED=RX, WHITE=CMN MIM086 Option Wiring Color Codes: BLACK=TX, RED=RX, WHITE=CMN MIM087 Option Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN
		Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.

	M-Series & L-Series Transmitters	Compatible (based upon laboratory and/or field testing). Test Meter courtesy of McCrometer Corp. (Hemet, CA).
		Excellent register for SCADA System interrogation of encoder register.
	UltraMag™ Flanged MagMeter Models UM06	Provides high-resolution (8 or 9 digits) or medium-resolution (6-Digit) totalization. The high-resolution (8-9 digit) totalization is preferable, as it speeds the flow-rate calculation.
	& UM08	Order with "MIM085 Smart Output™ Option: 9-Digit Absolute Encoder Signal.
McCrometer (& Water	FPI Mag™ Insertion	or Order with "MIM087 Smart Output™ Option: 8-Digit Absolute Encoder Signal.
Specialties)	MagMeter	Note: If the meter is to be connected <u>only</u> to an EtherMeter, then the MIM085 (9-
	SPI Mag™ Insertion MagMeter	System, then select the output compatible with the utility AMR system (MIM085=9 Digit, MIM087=8 Digit, MIM086=6 Digit).
	Smart-Output	Terminal Block Wire Codes: Term.28=TX, Term.29=RX, Term.27=CMN
	Version	MIM085 Option Wiring Color Codes: BLACK=TX, RED=RX, WHITE=CMN MIM086 Option Wiring Color Codes: BLACK=TX, RED=RX, WHITE=CMN MIM087 Option Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN
		Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
	HawkEye™ OER	Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Metron-Farnier. (Note: The 6-digit (newest) version of this register is recommended.)
		Good register for SCADA System interrogation of encoder register.
Metron-Farnier		Provides medium-resolution totalization (6 digits). The medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.)
		Register requires factory pre-programming. The maximum (6 digits) is recommended.
		Wiring Color Codes: RED=TX, WHITE=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
	MIU (Register Attachment)	Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Metron-Farnier.
		Good register for SCADA System interrogation of encoder register.
Metron-Farnier		Provides medium-resolution totalization (6 digits). The medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.) Reverse-flows can cause erroneous readings and are not detected with this register.
		Battery-powered.
		Register requires factory pre-programming. The maximum (7 digits) is recommended.
		Wiring Color Codes: RED=TX, WHITE=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.

Metron-Farnier	Innov8™ Innov8-VN™	Compatible (based upon laboratory and/or field testing). Test Registers provided courtesy of Metron-Farnier (Boulder, CO). EtherMeter Firmwares Dated 28 Aug 2019, and Later. Excellent register for SCADA System interrogation of encoder register. When ordering the Innov8 or Innov8-VN, please make sure to request the encoder version and *not* the pulse version. When ordering the Innov8-VN, please make sure to order with the 3-wire encoder cable option. Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows. Battery-powered (10-year battery life). Note: On the EtherMeter, the user should set SAMPn >= 30 seconds to assist battery life. Register requires factory pre-programming. The maximum (8 digits) is recommended. Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user Should set TYPEn to AUTO or SENSUS
Mueller (Hersey)	SSR	Compatible (based upon laboratory and/or field testing). Excellent register for SCADA System interrogation of encoder register. Provides high-resolution totalization (9 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows. Register requires factory pre-programming. The maximum (9 digits) is recommended. Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
Mueller (Hersey)	ME-8	Compatible (based upon laboratory and/or field testing). Excellent register for SCADA System interrogation of encoder register. Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows. Register requires factory pre-programming. The maximum (8 digits) is recommended. Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
Mueller (Hersey)	Translator	Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Hersey Meter. Good register for SCADA System interrogation of encoder register. Provides medium-resolution totalization (6 digits). The medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.) Register requires factory pre-programming. The maximum (6 digits) is recommended. Wiring Color Codes: RED=TX, WHITE=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.

		Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Siemens Industry.
		Excellent register for SCADA System interrogation of encoder register.
	HbMAG Mag-Meter Sensus Protocol Option	Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		This mag-meter provides accurate measurement of bi-directional flow-rate and totalization.
		By Default, this meter is Battery-powered. We recommend the meter configuration that features the line-powered option with a small internal battery backup option.
Mueller		Line-Powered Option: 12/24 V AC/VDC Mains (Line) Powered.
(Hersey)		Internal Battery Backup Option: HBBAT1D.
		Register requires user/factory pre-programming. The maximum (8 digits) is recommended. Adjust Parameter 305 to provide desired resolution. For 3" size meters and below, set to "Two Digits After Decimal Point" (GALx100 x 0.01 = GALx1 Resolution). For 4" size meters and above, set to "One Digit After Decimal Point (GALx100 x 0.1 = GALx10 Resolution).
		Note: On the EtherMeter, Recommended SAMPn Setting: 15, 30, 45, 60, 75, (Must Be A Multiple of 15 Seconds).
		MagMeter: Meter grounding lug(s) MUST be tied to the control panel electrical grounding terminal/lug.
		Wiring Codes: TX=TERM.91, RX=TERM.92, CMN=TERM.93 Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
		Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Ti-Sales (Sudbury, MA).
	Pro-Coder™	Excellent register for SCADA System interrogation of encoder register.
Neptune		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Register does not require any special factory pre-programming (Neptune Factory Defaults = OK).
		Note 1: On the EtherMeter, the user should set TYPEn to AUTO or NEPTUNE.
		Note: The EtherMeter is <u>NOT</u> compatible with the R900i version of the Pro-Coder. The R900i has a built-in radio, but no hookup cables or terminals, and therefore it is not compatible with the EtherMeter or any other non-Neptune reading equipment.
		Wiring Color Codes: BLACK=TX, RED=RX, GREEN=CMN

		Compatible (based upon laboratory and/or field testing).
	E-Coder™	Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Register does not require any special factory pre-programming (Neptune Factory Defaults = OK).
		Note 1: On the EtherMeter, the user should set TYPEn to AUTO or NEPTUNE. Note 2: On the EtherMeter, the user should set SAMPn >= 20 seconds.
Neptune		Note: The EtherMeter is <u>NOT</u> compatible with the R900i version of the E-Coder. The R900i has a built-in radio, but no hookup cables or terminals, and therefore it is not compatible with the EtherMeter or any other non-Neptune reading equipment.
		Wiring Color Codes: BLACK=TX, RED=RX, GREEN=CMN
		SPECIAL NOTE FOR NEPTUNE COMPOUND METERS OUTFITTED WITH TWO E-CODER REGISTERS: When using a compound meter, and 2 registers are connected in parallel, that means the registers are programmed into 'Network Mode'. The EtherMeter is not compatible with registers that are in 'Network Mode'. The register signal wires must be separated; and the registers must be re-programmed into 'Normal Mode' using a Neptune Handheld Programmer. Please call if more details are required.
		Compatible (based upon laboratory and/or field testing). Test Meter provided courtesy of Ti-Sales (Sudbury, MA).
		Excellent register for SCADA System interrogation of encoder register.
	Mach 10™	Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
Neptune		Register does not require any special factory pre-programming (Neptune Factory Defaults = OK).
		Note 1: On the EtherMeter, the user should set TYPEn to AUTO or NEPTUNE. Note 2: On the EtherMeter, the user should set SAMPn >= 20 seconds.
		Note: The EtherMeter is <u>NOT</u> compatible with the R900i version of the Mach 10. The R900i has a built-in radio, but no hookup cables or terminals, and therefore it is not compatible with the EtherMeter or any other non-Neptune reading equipment.
		Wiring Color Codes: BLACK=TX, RED=RX, GREEN=CMN
		Compatible (based upon laboratory and/or field testing). Test Meter provided courtesy of Ti-Sales (Sudbury, MA).
		Excellent register for SCADA System interrogation of encoder register.
		Select Purchase Option: Neptune Protocol or Sensus Protocol 8 Digits.
Neptune	WaterFlux	Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation.
also sold under	3070	Register does not require any special factory pre-programming (Factory Defaults = OK).
manufacturer name: Krohne	L. C.	Note 1: On the EtherMeter, the user should set TYPEn to AUTO or NEPTUNE.
		Note 2: On the EtherMeter, Recommended SAMPn Setting: 30, 60, 90, 120, (Must Be A Multiple of 30 Seconds).
		MagMeter: Meter grounding lug(s) MUST be tied to the control panel electrical grounding terminal/lug.
		NOTE! – Krohne Checksum Calculation Implemented Incorrectly.
		Wiring Color Codes: BLACK=TX, RED=RX, GREEN=CMN

Neptune also sold under manufacturer name: Seametrics	Tru/Mag™	Compatible (based upon laboratory and/or field testing).
		Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation.
		Register does not require any special factory pre-programming (Factory Defaults = OK).
		Note 1: On the EtherMeter, the user should set TYPEn to AUTO or NEPTUNE. Note 2: On the EtherMeter, the user should set SAMPn >= 20 seconds. Note 3: External-Power is recommended. Note 4: The Tru/Mag only measures flow in the forward direction (7/24/2012).
		MagMeter: Meter grounding lug(s) MUST be tied to the control panel electrical grounding terminal/lug.
		Wiring Color Codes: BLACK=TX, RED=RX, GREEN=CMN
		Compatible (based upon laboratory and/or field testing). Register must be an Auto-Sense and Revision H or above (eg: "AUTO H65N").
		Fair register for SCADA System interrogation of encoder register.
	ProRead™ "3-Board"	Provides low/medium-resolution totalization (5.2 digits). The low/medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.)
		Register requires factory pre-programming. The maximum (5.2 digits) is recommended.
Neptune		Note 1: On the EtherMeter, the user should set TYPEn to AUTO or NEPTUNE.
		Wiring Color Codes: BLACK=TX, RED=RX, GREEN=CMN
		SPECIAL NOTE FOR NEPTUNE COMPOUND METERS OUTFITTED WITH TWO PRO-READ REGISTERS: When using a compound meter, and 2 registers are connected in parallel, that means the registers are programmed into 'Network Mode'. The EtherMeter is not compatible with registers that are in 'Network Mode'. The register signal wires must be separated; and the registers must be re-programmed into 'Normal Mode' using a Neptune Handheld Programmer. Please call if more details are required.
	ProRead™ "2-Board"	Compatible (based upon laboratory and/or field testing). Register must be an Auto-Sense and Revision H or above (eg: "AUTO H49N"). Test Register provided courtesy of Ti-Sales (Sudbury, MA).
		Fair register for SCADA System interrogation of encoder register.
Neptune		Provides low -resolution totalization (4 digits). The low -resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.)
		Register requires factory pre-programming. The maximum (4 digits) is recommended.
		Note: On the EtherMeter, the user should set TYPEn to AUTO or NEPTUNE.
		Wiring Color Codes: BLACK=TX, RED=RX, GREEN=CMN
		SPECIAL NOTE FOR NEPTUNE COMPOUND METERS OUTFITTED WITH TWO PRO-READ REGISTERS: When using a compound meter, and 2 registers are connected in parallel, that means the registers are programmed into 'Network Mode'. The EtherMeter is not compatible with registers that are in 'Network Mode'. The register signal wires must be separated; and the registers must be re-programmed into 'Normal Mode' using a Neptune Handheld Programmer. Please call if more details are required.

RG3	Tomahawk™	Compatible (based upon laboratory and/or field testing). Test Registers provided courtesy of RG3 Meter Company.
		Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Battery-powered (20-year battery life). Note: On the EtherMeter, the user should set SAMPn >= 30 seconds to assist battery life.
		Register requires factory pre-programming. The maximum (8 digits) is recommended.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
	iMag 4700	Compatible (based upon published specifications).
		Excellent register for SCADA System interrogation of encoder register.
Seametrics		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Battery-powered (20-year battery life). Note: On the EtherMeter, the user should set SAMPn >= 30 seconds to assist battery life.
		Register requires factory pre-programming. The maximum (8 digits) is recommended.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
	ICE® (ECR-III)	Compatible (based upon laboratory and/or field testing). Test Registers provided courtesy of Core and Main.
		Excellent register for SCADA System interrogation of encoder register.
Sensus (Xylem / Rockwell / Invensys)		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Register requires factory pre-programming. The maximum (8 digits) is recommended.
		Recommended Pre-Programming Parameters:
		Programmable ID: <disabled></disabled>
		Programmable Text: <disabled blank=""> Multiplier: <disabled></disabled></disabled>
		Unit: <disabled> Reading String: <normal reading="" string=""></normal></disabled>
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.

Sensus (Xylem / Rockwell / Invensys)	OMNI T² Turbo, C² Compound, F² Fire Svc, R² Residential	Compatible (based upon laboratory and/or field testing). Test Registers provided courtesy of Core and Main.
		Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Battery-powered (10-year battery life). Note: On the EtherMeter, the user should set SAMPn $>=$ 30 seconds to assist battery life.
		Register requires factory pre-programming. The maximum (8 digits) is recommended.
		Recommended Pre-Programming Parameters: Reading Wheels: 8 thru 1 Programmable ID: <disabled> Programmable Text: <disabled blank=""> Multiplier: <disabled> Unit: <disabled> Reading String: <"Normal-Mode" Reading String> (*Not* Smart Mode)</disabled></disabled></disabled></disabled>
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
	OMNI+ (PLUS) T² Turbo, C² Compound, F² Fire Svc, R² Residential	Compatible (based upon laboratory and/or field testing).
		Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Battery-powered (10-year battery life). Note: On the EtherMeter, the user should set SAMPn \geq 30 seconds to assist battery life.
Sensus		Register requires factory pre-programming. 8 digits of totalization are available, and the following resolutions are recommended:
Rockwell / Invensys)		1.5" - 4" DiameterGallons x1 $FT^3 x0.1$ $M^3 x0.01$ 6"+ DiameterGallons x10 $FT^3 x1$ $M^3 x0.1$
		Recommended Pre-Programming Parameters: Programmable ID: <disabled> Programmable Text: <disabled blank=""> Multiplier: <disabled> Unit: <disabled> Reading String: <"Normal-Mode" Reading String> (*Not* Smart Mode)</disabled></disabled></disabled></disabled>
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
Sensus (Xylem / Rockwell / Invensys)	Cordonel	Compatible (based upon published specifications).
		Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Battery-powered (20-year battery life). Note: On the EtherMeter, the user should set SAMPn \geq 30 seconds to assist battery life.
		Register requires factory pre-programming. The maximum (8 digits) is recommended.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.

Sensus (Xylem / Rockwell / Invensys)	ECR	Compatible (based upon laboratory and/or field testing). Test Registers provided courtesy of Core and Main.
		Note 1: Register Utilizes The "Fixed-Length" Variation of The Sensus Protocol.
		Note 2: Obsolete Register, No Longer Available from Sensus. SCADAmetrics recommends replacement with ICE® Register.
		Note 3: Sensus/Rockwell produced a register called "ECR/TRC" which has been tested and found to be NOT compatible with the EtherMeter.
		Fair register for SCADA System interrogation of encoder register.
		Provides low resolution totalization (4 digits). The low -resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.)
		Register does not require factory pre-programming.
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
		Compatible (based upon laboratory and/or field testing). Test Results reported, courtesy of Allied Control Services (NJ).
		Excellent register for SCADA System interrogation of encoder register.
	Hydroverse	Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Battery-powered (10-year battery life). Note: On the EtherMeter, the user should set SAMPn $>=$ 30 seconds to assist battery life.
		Register requires factory pre-programming. 8 digits of totalization are available, and the following resolutions are recommended:
Sensus (Xylem / Rockwell / Invensys)		1.5" - 4" DiameterGallons x1 $FT^3 x0.1$ $M^3 x0.01$ 6"+ DiameterGallons x10 $FT^3 x1$ $M^3 x0.1$
		Recommended Pre-Programming Parameters: Programmable ID: <disabled> Programmable Text: <disabled blank=""> Multiplier: <disabled> Unit: <disabled> Reading String: <"Normal-Mode" Reading String> (*Not* Smart Mode)</disabled></disabled></disabled></disabled>
		Encoder Wiring Color Codes: BLUE=TX, PURPLE=RX, GREEN/YELLOW=CMN
		Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
		Additional Wiring Color Codes:
		ORANGE = Forward Pulse RED = Reverse Pulse BROWN = Alarm Output
		For APK and APK.PLUS applications, only two wires should be connected to the
		APK/APK.PLUS: ORANGE and YELLOW. There is no 24V _{DC} excitation required.

Sensus (Xylem / Rockwell / Invensys)	iPerl™ Mag-Meter	Compatible (based upon laboratory and/or field testing). Test Registers provided courtesy of Core and Main.
		Excellent register for SCADA System interrogation of encoder register.
		Battery-powered (10-year battery life). Note: On the EtherMeter, the user should set SAMPn >= 30 seconds to assist battery life.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Register requires factory pre-programming. The maximum (8 digits) is recommended. Requires iPerl 3-Wire, Plain-End Connector.
		Recommended Pre-Programming Parameters: Reading Wheels: 8 thru 1 Programmable ID: <disabled> Programmable Text: <disabled blank=""> Multiplier: <disabled> Unit: <disabled> Reading String: <normal reading="" string=""> Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.</normal></disabled></disabled></disabled></disabled>
		Compatible (based upon laboratory and/or field testing). Test Registers provided courtesy of Core and Main.
	AccuStream™	Excellent register for SCADA System interrogation of encoder register.
Sensus (Xylem / Rockwell / Invensys)		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Register requires factory pre-programming. The maximum (8 digits) is recommended.
		Recommended Pre-Programming Parameters: Reading Wheels: 8 thru 1 Programmable ID: <disabled> Programmable Text: <disabled blank=""> Multiplier: <disabled> Unit: <disabled> Reading String: <normal reading="" string=""></normal></disabled></disabled></disabled></disabled>
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.

Sensus (Xylem / Rockwell / Invensys)	AccuMag™ Mag-Meter	Compatible (based upon laboratory and/or field testing). Test Results provided courtesy of City of Montreal, Quebec, Canada.
		Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		Note: On the EtherMeter, SAMPn should always be set to an even multiple of 30 seconds. Example: On the EtherMeter, set SAMPn to 60, TOn to 60 (same as SAMPn), FCALCn to DTIME or DTOTAL.
		Battery-powered (8 to 15-year battery life). Note: For maximum meter battery life preservation, the user should set the EtherMeter's SAMPn setting to >=300 Seconds.
		Note: It has been our observation that the 30 second update period of the Accumag is only approximate. Therefore, setting FCALCn to DTIME is likely to provide better results than DTOTAL.
		MagMeter: Meter grounding lug(s) MUST be tied to the control panel electrical grounding terminal/lug.
		Recommended Pre-Programming Parameters: Reading Wheels: 8 thru 1 Programmable ID: <disabled> Programmable Text: <disabled blank=""> Multiplier: <disabled> Unit: <disabled> Reading String: <normal reading="" string=""></normal></disabled></disabled></disabled></disabled>
		Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
		Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Siemens Industry.
		Excellent register for SCADA System interrogation of encoder register.
		Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.
		This mag-meter provides accurate measurement of bi-directional flow-rate and totalization.
		By Default, this meter is Battery-powered. We recommend the meter configuration that features the line-powered option with a small internal battery backup option.
	F M MAG 8000	Line-Powered Option: 12/24 V AC/VDC Mains (Line) Powered.
	Mag-Meter Sensus Protocol Option	Internal Battery Backup Option: HBBAT1D.
Siemens (Sitrans)		Register requires user/factory pre-programming using the Siemens Flow Tool Software. The maximum (8 digits) is recommended.
		Adjust Parameter 305 to provide desired resolution: For All Size Meters, Set to "Zero Digits After Decimal Point", which will provide GALx1 Resolution.
		To Monitor NET Totalization, Set Parameter 310 (Flow Direction Totalizer 1) to "NET".
		For Gallon Registration, Set Parameter 8 (Totalizer Unit) to GAL; and Set Parameter 9 (Flowrate Unit) to GPM.
		MagMeter: Meter grounding lug(s) MUST be tied to the control panel electrical grounding terminal/lug.
		Wiring Codes: TX=TERM.91, RX=TERM.92, CMN=TERM.93
		Note 1: On the EtherMeter, Recommended SAMPn Setting: 15, 30, 45, 60, 75, (Must Be A Multiple of 15 Seconds).
		Note 2: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.

Zenner USA	ETR	Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Zenner USA. <u>Good</u> register for SCADA System interrogation of encoder register. Provides medium-resolution totalization (6 digits). The medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.) Battery-powered (15-year battery life). Note: On the EtherMeter, the user should set SAMPn >= 30 seconds to assist battery life. Register requires factory pre-programming. The maximum (6 or 7 digits) is recommended. Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Note: On the EtherMeter, the user should set TYPEn to AUTO or SENSUS.
Zenner USA	STEALTH	Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Kevin Moore Electric Company (Utah). Provides high-resolution totalization (9 digits). This ultrasonic-meter provides accurate measurement of bi-directional flow-rate and totalization. IMPORTANT NOTE! – IF THE USER DESIRES TO CONNECT THE ZENNER STEALTH FLOW METER WITH THE MODEL EM.100 ETHERMETER OR MODEL EMP SIGNALIZER, THEN THE STEALTH <u>MUST</u> BE OUTFITTED WITH THE (NEW) MAINS-POWERED NDC COMMUNICATION MODULE – <u>NOT</u> THE BATTERY-POWERED NDC MODULE. BOTH THE ETHERMETER AND SIGNALIZER INTERROGATE THE FLOW METER, VIA THE NDC MODULE, AT FREQUENT INTERVALS, SO AS TO QUICKLY DETERMINE THE RATE-OF-FLOW (GPM/LPM). THESE FREQUENT INTERROGATIONS WILL GENERALLY CAUSE THE BATTERY OF THE STANDARD NDC MODULE TO DEPLETE AFTER APPROXIMATELY 864,000 INTERROGATIONS. THEREFORE, THE MAINS-POWERED MODULE IS REQUIRED. Register requires factory pre-programming. The maximum (9 digits) is recommended. Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN Nato: On the EtherMeter the upon should out TYPER to ALITO or SENSUS



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