

EtherMeter™

**FLOW METER GATEWAY FOR SCADA, TELEMETRY,
& BUILDING AUTOMATION SYSTEMS**
PATENT PENDING



Flow-Meter Compatibility Matrix

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AUTHORIZED SCADAMETRICS RESELLER



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St. Louis, Missouri USA
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EtherMeter™ Compatibility Matrix





The following 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 K-Frame-protocol encoder 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.

Make	Model	Notes
<p style="text-align: center;">ABB Elster-AMCO</p>	<p style="text-align: center;">AquaMaster</p> <p style="text-align: center;">Mag-Meter</p> <p style="text-align: center;">K-Frame Protocol Option</p>	<p>Likely Compatible (based upon published specifications).</p> <p><u>Excellent</u> register for SCADA System interrogation of encoder register.</p> <p>Provides high-resolution totalization (if set to read least-significant 6 digits).</p> <p>Provides accurate measurement of bi-directional flow-rate and totalization.</p> <p>Mains-powered or battery-powered.</p> <p>Register requires user or factory pre-programming per Quick Reference Guide IM/AM/QRG_13:</p> <p>Set Parameter 326 (Adapter Code) to '0' (ScanCoder). Set Parameter 327 (Totalizer Source and Range) to '2' (Net x1).</p> <p>Must use the following EtherMeter setup commands: SET SCn YES SET PWRn 400 SET ROLLn <most-significant 2 totalizer digits on meter display unit></p> <p>Wiring Interface: +V(GREEN)=TX, DATA(RED)=RX, 0V(BLACK)=CMN Connect To: 3-Terminal PCB WADX2026</p>
<p style="text-align: center;">Badger</p>	<p style="text-align: center;">ADE®</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Badger Meter.</p> <p><u>Good</u> register for SCADA System interrogation of encoder register.</p> <p>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.)</p> <p>Register requires factory pre-programming. The maximum (6 digits) is recommended.</p> <p>Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN</p>
<p style="text-align: center;">Elster-AMCO (ABB/Kent)</p>	<p style="text-align: center;">InVISION™</p> <p style="text-align: center;">Sensus- Protocol Option</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Bond-Madison Water District.</p> <p><u>Good</u> register for SCADA System interrogation of encoder register.</p> <p>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.)</p> <p>Register requires factory pre-programming. The maximum (6 digits) is recommended.</p> <p>Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN</p>

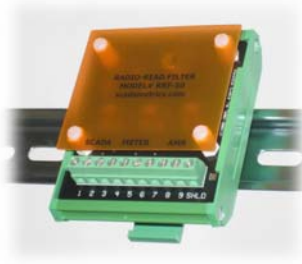
<p>Elster-AMCO (ABB/Kent)</p>	<p>InVISION™</p> <p>K-Frame Protocol Option</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Elster-AMCO Water.</p> <p><u>Good</u> register for SCADA System interrogation of encoder register.</p> <p>Provides medium-resolution totalization (6 digits). The medium-resolution totalization delays flow-rate calculations and reverse-flow detection. (The "FIXED DTOTAL" flow calculation method is recommended.)</p> <p>Wiring Color Codes: GREEN=TX, RED=RX, BLACK=CMN Note: On the EtherMeter, the user must set PWRn parameter to 600 msec.</p>
<p>Elster-AMCO (ABB/Kent)</p>	<p>ScanCoder</p> <p>K-Frame Protocol Option</p> 	<p>Compatible (based upon laboratory and/or field testing).</p> <p><u>Good</u> register for SCADA System interrogation of encoder register.</p> <p>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.)</p> <p>Must use the following EtherMeter setup commands: SET SCn YES SET PWRn 400</p> <p>Wiring Color Codes: BLACK=TX, RED=RX, GREEN(OR BARE SHIELD)=CMN Note: On the EtherMeter, the user must set PWRn parameter to 400 msec.</p>
<p>Elster AMCO</p>	<p>evoQ4</p> <p>Mag-Meter</p> <p>Sensus- Protocol Option</p>	<p>Likely Compatible (based upon published specifications).</p> <p><u>Good</u> register for SCADA System interrogation of encoder register.</p> <p>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.)</p> <p>Provides accurate measurement of bi-directional flow-rate and totalization.</p> <p>Battery-powered (10-year battery life).</p> <p>Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN</p>
<p>Elster AMCO</p>	<p>evoQ4</p> <p>Mag-Meter</p> <p>K-Frame Protocol Option</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Elster-AMCO Water.</p> <p><u>Good</u> register for SCADA System interrogation of encoder register.</p> <p>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.)</p> <p>Provides accurate measurement of bi-directional flow-rate and totalization.</p> <p>Battery-powered (10-year battery life).</p> <p>Wiring Color Codes: WHITE=TX, RED=RX, BLACK=CMN Note: On the EtherMeter, the user must set PWRn parameter to 600 msec.</p>
<p>Hersey</p>	<p>Translator</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Hersey Meter.</p> <p><u>Good</u> register for SCADA System interrogation of encoder register.</p> <p>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.)</p> <p>Register requires factory pre-programming. The maximum (6 digits) is recommended.</p> <p>Wiring Color Codes: RED=TX, WHITE=RX, BLACK=CMN</p>

<p>Itron (Actaris)</p>	<p>Cyble™ Coder</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Itron (Actaris).</p> <p><u>Excellent</u> register for SCADA System interrogation of encoder register.</p> <p>Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.</p> <p>Battery-Powered (12-year battery life).</p> <p>Register requires factory pre-programming. The maximum (8 digits) is recommended.</p> <p>Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN</p>
<p>Master Meter</p>	<p>Acculinx™</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Register and Results courtesy of Davis-Monthan AFB (Tucson, AZ).</p> <p><u>Excellent</u> register for SCADA System interrogation of encoder register.</p> <p>Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.</p> <p>Register requires factory pre-programming. The maximum (8 digits) is recommended.</p> <p>Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN</p>
<p>Metron-Farnier</p>	<p>HawkEye™ OER</p> 	<p>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.)</p> <p><u>Good</u> register for SCADA System interrogation of encoder register.</p> <p>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.)</p> <p>Register requires factory pre-programming. The maximum (6 digits) is recommended.</p> <p>Wiring Color Codes: RED=TX, WHITE=RX, BLACK=CMN</p>
<p>Metron-Farnier</p>	<p>MIU (Register Attachment)</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Metron-Farnier.</p> <p><u>Good</u> register for SCADA System interrogation of encoder register.</p> <p>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.</p> <p>Battery-powered.</p> <p>Register requires factory pre-programming. The maximum (7 digits) is recommended.</p> <p>Wiring Color Codes: RED=TX, WHITE=RX, BLACK=CMN</p>

<p>Neptune (Schlumberger)</p>	<p>E-Coder™</p> 	<p>Compatible (based upon laboratory and/or field testing).</p> <p><u>Excellent</u> register for SCADA System interrogation of encoder register.</p> <p>Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.</p> <p>Register does not require any special factory pre-programming (Factory Defaults = OK).</p> <p>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.</p> <p>Note: On the EtherMeter, the user must set PWRn parameter to 200 msec.</p> <p>Wiring Color Codes: BLACK=TX, RED=RX, GREEN=CMN</p>
<p>Neptune (Schlumberger)</p>	<p>ProRead™ "3-Board"</p> 	<p>Compatible (based upon laboratory and/or field testing). Register must be an Auto-Sense and Revision H or above (eg: "AUTO H65N").</p> <p><u>Fair</u> register for SCADA System interrogation of encoder register.</p> <p>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.)</p> <p>Register requires factory pre-programming. The maximum (5.2 digits) is recommended.</p> <p>Note: On the EtherMeter, the user must set PWRn parameter to 200 msec.</p> <p>Wiring Color Codes: BLACK=TX, RED=RX, GREEN=CMN</p>
<p>Neptune (Schlumberger)</p>	<p>ProRead™ "2-Board"</p> 	<p>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.</p> <p><u>Fair</u> register for SCADA System interrogation of encoder register.</p> <p>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.)</p> <p>Register requires factory pre-programming. The maximum (4 digits) is recommended.</p> <p>Note: On the EtherMeter, the user must set PWRn parameter to 200 msec.</p> <p>Wiring Color Codes: BLACK=TX, RED=RX, GREEN=CMN</p>
<p>Sensus (Rockwell/ Invensys)</p>	<p>ICE® (ECR-III)</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Registers provided courtesy of HD Supply Waterworks.</p> <p><u>Excellent</u> register for SCADA System interrogation of encoder register.</p> <p>Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.</p> <p>Register requires factory pre-programming. The maximum (8 digits) is recommended.</p> <p><u>Recommended Pre-Programming Parameters:</u> Reading Wheels: 8 thru 1 Programmable ID: <disabled> Programmable Text: <disabled/blank> Multiplier: <disabled> Unit: <disabled> Reading String: <Normal Reading String></p> <p>Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN</p>

<p>Sensus (Rockwell/ Invensys)</p>	<p>OMNI T² Turbo, C² Compound, F² Fire Service</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Registers provided courtesy of HD Supply Waterworks.</p> <p><u>Excellent</u> register for SCADA System interrogation of encoder register.</p> <p>Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.</p> <p>Battery-powered (10-year battery life).</p> <p>Register requires factory pre-programming. The maximum (8 digits) is recommended.</p> <p><u>Recommended Pre-Programming Parameters:</u> Reading Wheels: 8 thru 1 Programmable ID: <disabled> Programmable Text: <disabled/blank> Multiplier: <disabled> Unit: <disabled> Reading String: <Normal Reading String></p> <p>Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN</p>
<p>Sensus (Rockwell/ Invensys)</p>	<p>ECR</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Registers provided courtesy of HD Supply Waterworks. (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.)</p> <p><u>Fair</u> register for SCADA System interrogation of encoder register.</p> <p>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.)</p> <p>Register does not require factory pre-programming.</p> <p>Wiring Color Codes: RED=TX, GREEN=RX, BLACK=CMN</p>
<p>Siemens (Sitrans)</p>	<p>F M MAG 8000 Mag-Meter Sensus Protocol Option</p> 	<p>Compatible (based upon laboratory and/or field testing). Test Register provided courtesy of Siemens Industry.</p> <p><u>Excellent</u> register for SCADA System interrogation of encoder register.</p> <p>Provides high-resolution totalization (8 digits). The high-resolution totalization speeds the flow-rate calculation and detection of reverse flows.</p> <p>This mag-meter provides accurate measurement of bi-directional flow-rate and totalization.</p> <p>Battery-powered. In order to conserve battery capacity, recommend that the MAG8000 be purchased with the externally-powered / internal backup battery option.</p> <p>Register requires user/factory pre-programming. The maximum (8 digits) is recommended.</p> <p>Wiring Codes: TX=TERM.91, RX=TERM.92, CMN=TERM.93</p>















Radio-Read Filter Compatibility Matrix



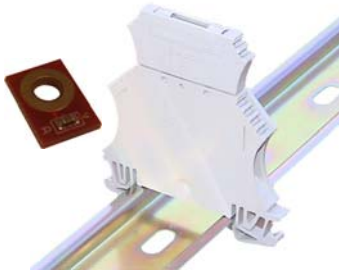
The following compatibility matrix is by no means exhaustive, especially in light of the fact that there are a multitude of three-wire-protocol registers available on the market today. Advertised full compatibility is limited to registers deemed so based upon testing within the laboratory and/or the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



If there is a “3-Wire” Sensus-protocol, Neptune-protocol, or K-Frame-protocol encoder 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.

Make	Model		Notes
ABB	AquaMaster K-Frame		Not yet tested. If used, recommend RRF-50 Vers.400+
Badger	ADE®		Compatible (based upon laboratory and/or field testing). Register provided courtesy of Badger Meter.
Elster AMCO (ABB/Kent)	InVISION™ Sensus-Protocol		Compatible (based upon laboratory and/or field testing). Register provided courtesy of Bond-Madison Water District.
Elster AMCO (ABB/Kent)	InVISION™ K-Frame		Compatible (based upon laboratory and/or field testing). Register provided courtesy of Bond-Madison Water District. Must Use RRF-50 Vers.400+.
Elster AMCO (ABB/Kent)	ScanCoder		Compatible (based upon laboratory and/or field testing). Must Use Version RRF-50, Vers.400+
Elster AMCO	evoQ4 Sensus-Protocol		Likely compatible based upon published specifications, but not yet tested.
Elster AMCO	evoQ4 K-Frame		Compatible (based upon laboratory and/or field testing). Meter provided courtesy of Elster AMCO Water. Must Jumper Terminals 3,6, and 9 or use RRF-50 Vers.400+.
Hersey	Translator		Compatible (based upon laboratory and/or field testing). Register provided courtesy of Hersey Meter.
Itron (Actaris)	Cyble™ Coder		Compatible (based upon laboratory and/or field testing). Register provided courtesy of Actaris Metering Systems.
Master Meter	Acculinx™		Compatible (based upon laboratory and/or field testing). Register and results courtesy of Davis-Monthan AFB (Tucson, AZ).
Metron Farnier	HawkEye OER		Compatible (based upon laboratory and/or field testing). Registers provided courtesy of Metron Farnier.
Neptune (Schlumberger)	E-Coder™		Compatible (based upon laboratory and/or field testing). Note: On the EtherMeter, the user must set PWRn parameter to 200 msec. Note: Must Jumper Terminals 3,6, and 9 or use RRF-50 Vers.400+.
Neptune (Schlumberger)	ProRead™		Compatible (based upon laboratory and/or field testing). (Rev. “AUTO H65N” or “AUTO H49N” or later.) Registers provided courtesy of Ti-Sales. Note: On the EtherMeter, the user must set PWRn parameter to 200 msec. Note: Must Jumper Terminals 3,6, and 9 or use RRF-50 Vers.400+.
Sensus (Rockwell/Invensys)	ICE®		Compatible (based upon laboratory and/or field testing). Registers provided courtesy of HD Supply Waterworks.
Sensus (Rockwell/Invensys)	OMNI T ² , C ² , F ²		Compatible (based upon laboratory and/or field testing). Registers provided courtesy of HD Supply Waterworks.
Siemens (Sitran)	F M MAG 8000		Compatible (based upon laboratory and/or field testing). Meter provided courtesy of Siemens Industry.











Touch-Read Filter Compatibility Matrix

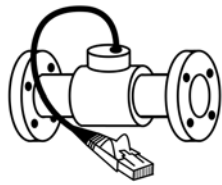


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If there is a “2-Wire” Sensus-protocol, Neptune-protocol, or K-Frame-protocol encoder meter register that is not listed as compatible based upon testing, and you would like to see it listed as such, then please contact SCADAmetrics. Note that in such cases, we may request a register and touch-reader for testing and verification.

Make	Model		Notes
ABB	AquaMaster K-Frame		Not yet tested.
Badger	ADE®		Compatible (based upon laboratory and/or field testing). Register provided courtesy of Badger Meter. Note: On the EtherMeter, the user must set PWRn parameter to 150 msec.
Elster AMCO (ABB/Kent)	InVISION™ Sensus-Protocol		Compatible (based upon laboratory and/or field testing). Register provided courtesy of Bond-Madison Water District.
Elster AMCO (ABB/Kent)	InVISION™ K-Frame		Not yet tested.
Elster AMCO (ABB/Kent)	ScanCoder		Not Compatible (Based On Field Testing).
Elster AMCO	evoQ4 Sensus-Protocol		Likely compatible based upon published specifications, but not yet tested.
Elster AMCO	evoQ4 K-Frame		Not yet tested.
Hersey	Translator		Compatible (based upon laboratory and/or field testing). Register provided courtesy of Hersey Meter.
Itron (Actaris)	Cyble™ Coder		Compatible (based upon laboratory and/or field testing). Register provided courtesy of Actaris Metering Systems.
Master Meter	Acculinx™		Compatible (based upon laboratory and/or field testing). Register and results courtesy of Davis-Monthan AFB (Tucson, AZ).
Metron Farnier	HawkEye OER		Compatible (based upon laboratory and/or field testing). Registers provided courtesy of Metron Farnier.
Neptune (Schlumberger)	E-Coder™		Compatible (based upon laboratory and/or field testing). Note: On the EtherMeter, the user must set PWRn parameter to 200 msec.
Neptune (Schlumberger)	ProRead™		Compatible (based upon laboratory and/or field testing). (Rev. “AUTO H65N” or “AUTO H49N” or later.) Registers provided courtesy of Ti-Sales. Note: On the EtherMeter, the user must set PWRn parameter to 200 msec.
Sensus (Rockwell/Invensys)	ICE®		Compatible (based upon laboratory and/or field testing). Registers provided courtesy of HD Supply Waterworks.
Sensus (Rockwell/Invensys)	OMNI T ² , C ² , F ²		Compatible (based upon laboratory and/or field testing). Registers provided courtesy of HD Supply Waterworks.



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