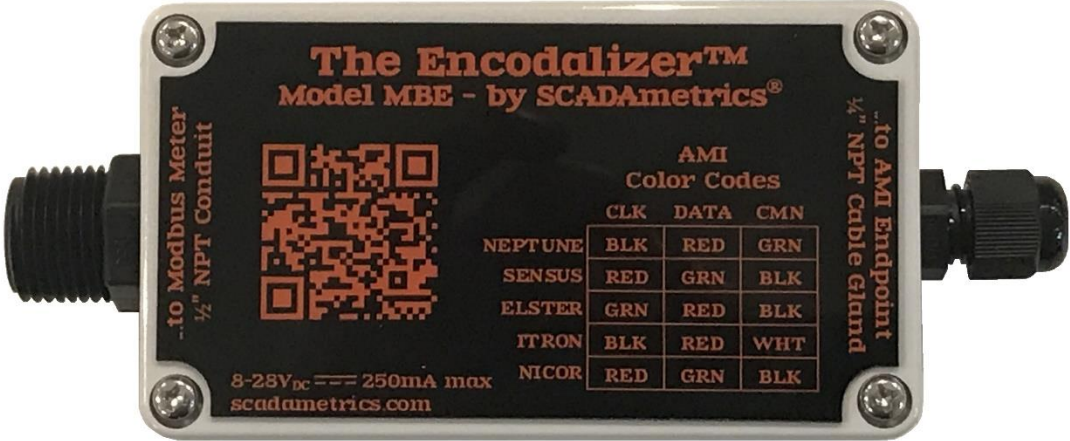




The Encodalizer™

Model MBE



AWWA C707-05 COMPLIANT

2 YEAR WARRANTY

Adds a 3-Wire AMR/AMI Signal to Modbus-Outfitted Flow Meters!

SCADAmetrics® is pleased to introduce its newest AMR SCADA flow metering accessory – **The Encodalizer™!**

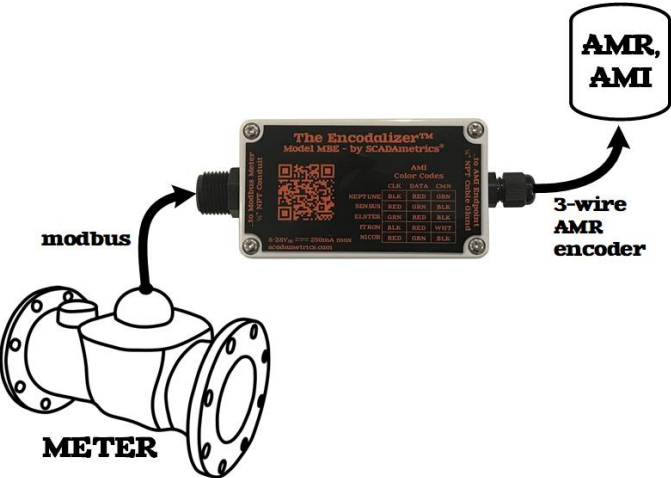
Do you have a flow meter that you would like to connect to your AMR/AMI system – but it is not outfitted with a 3-wire AMR/AMI encoder signal? **The Encodalizer** – our new Modbus-to-AMR protocol converter– makes this possible!

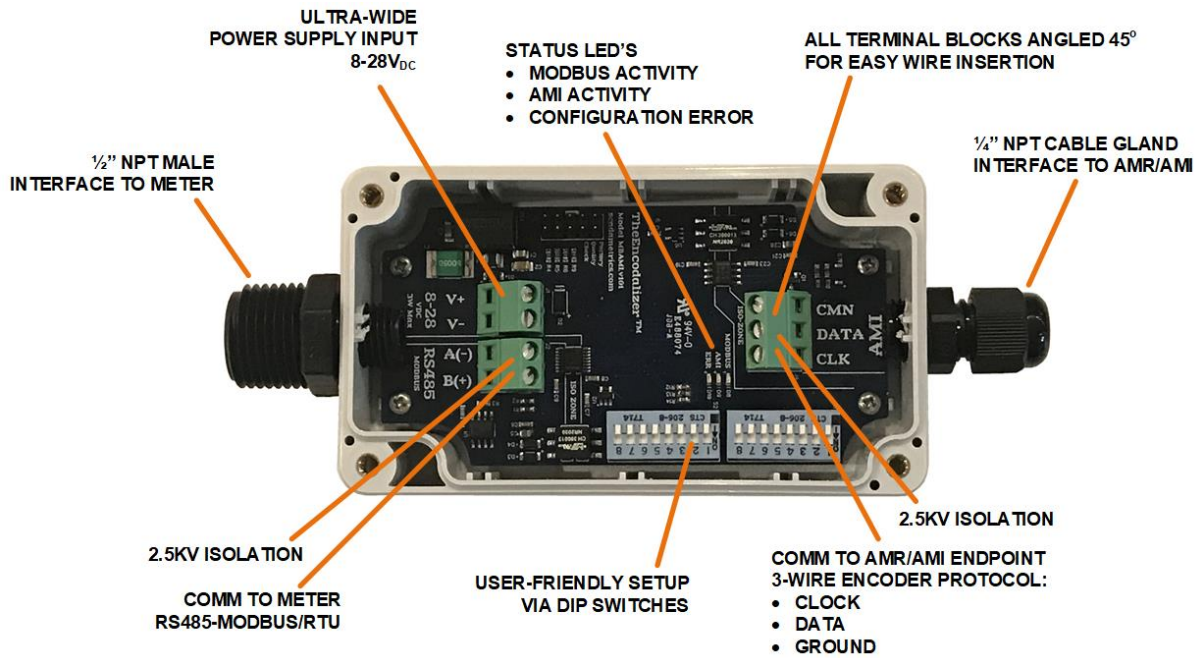
Because **The Encodalizer** leverages Modbus/RTU to communicate with the host water meter, it ensures that the transmitted encoder totalization is always a perfect match to the totalization as displayed on the meter’s physical transmitter.

Key Features -

- RS-485 Modbus/RTU Port with 2.5KV Isolation
- 3-Wire Encoder Port with 2.5KV Isolation
- User-Settings via Dip Switches – No Computer Programming Required!
- User-Selectable Encoder Protocol: Sensus or Neptune
- User-Selectable Number of AMR Digits
- User-Selectable AMR Registration Units
- User-Selectable AMR Resolution
- Power: Accepts Wide Voltage Range: 8-28V_{dc}
- Angled Terminal Blocks for Easy Wiring
- ½” NPT Male Threaded Fitting Adapts to Most MagMeter Transmitters
- Enclosure and Circuit Board: UL 94-VO recognized materials

Are you interested in how SCADAmetrics technology can help connect specialty process flow meters to your AMR/AMI system? Give us a call! We’ll be glad to discuss the details!





Engineering Specifications -

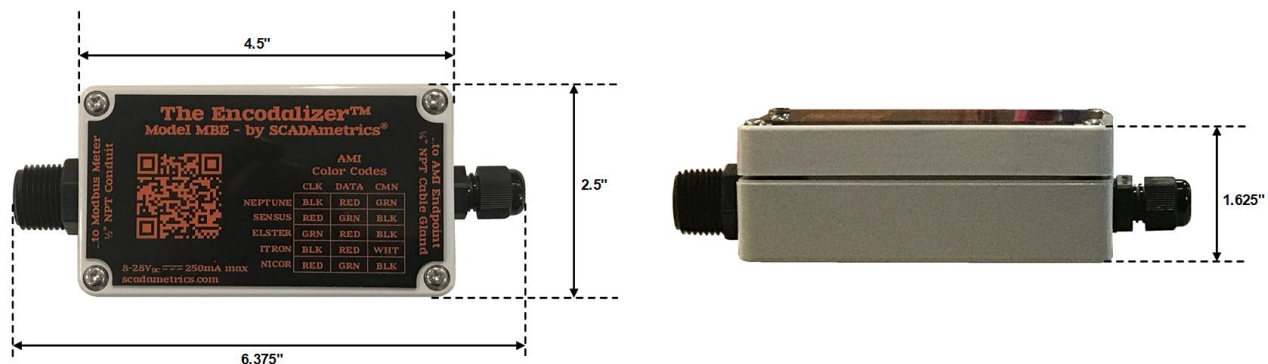
Dimensions:	6.375" x 2.5" x 1.625"
Weight:	6.0 Ounces
Supply Voltage:	8-28V _{DC}
Supply Power:	0.5W
RS485 Modbus/RTU Isolation:	2500V _{RMS}
3-Wire Encoder Isolation:	2500V _{RMS}

Sensus Protocol Support:	Yes, Variable Digit Sensus Protocols (6,7,8,9 digits)
Neptune Protocol Support:	(Planned Future)
Supported Units:	Gallon, Cubic Feet, Cubic Meters, Acre-Feet
Supported Scalars:	x1, x10, x100, x1,000 --- x0.1, x0.01, x0.001, x0.0001, x0.00001
Programming Method:	Integrated DIP Switches, 16-Poles

3-Wire Encoder Connection:	3-Position, Removable Screw-Down Terminal Block, 12-26 AWG
Power Supply Connection:	2-Position, Removable Screw-Down Terminal Block, 12-26 AWG
RS485 Modbus/RTU Connection:	2-Position, Removable Screw-Down Terminal Block, 12-26 AWG

Temperature:	-40C to 85C (-40°F to 185°F)
Relative Humidity:	5% to 95%, Non-Condensing
Enclosure Rating:	Built to IP62 Specifications, Not Rated for Submersion Use
Manufacturing Location:	USA
Environmental:	ROHS-Compliant, Lead-Free
Meter Interface:	AWWA C707-05
Warranty:	2 Years (see www.scadmetrics.com for details)

Engineering Dimensions (Inches) -



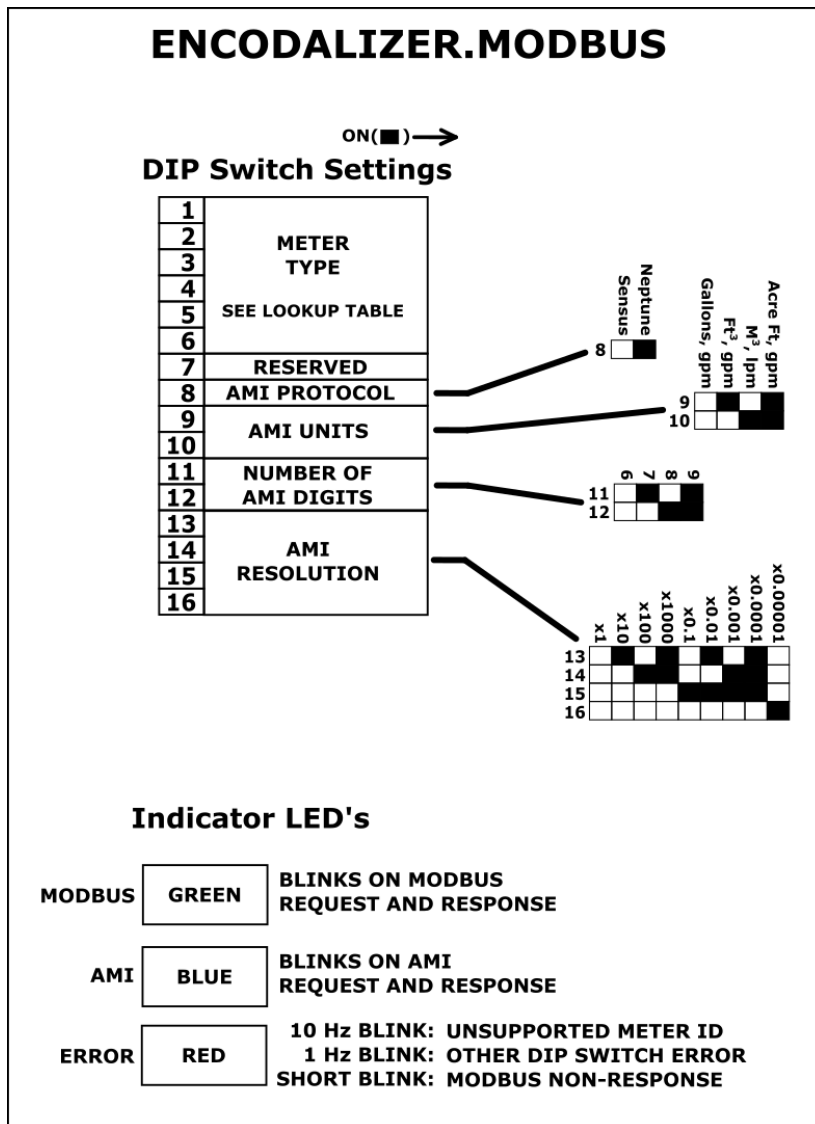
AMI Terminal Block Hookup -

Function	Sensus Meter Color (Badger, Metron-Farnier, Master Meter, Kamstrup, Mueller, Zenner, RG3, Nicor Cable)	Neptune Color	Itron ERT Cable
CLK	Red	Black	Black
DATA	Green White	Red	Red
CMN	Black	Green	White Shield

Wiring Notes:

1. With the exceptions of Neptune Technology Group and Elster-AMCO (aka Honeywell, ABB, Kent), most meter manufacturers follow the Sensus wire color-coding scheme.
2. AMI Terminal Block Hookup (Terminals CLK, DATA, CMN): Apply the color-coding that pertains to the manufacturer of the AMI/AMR Endpoint (or manufacturer of the Specialty Cable, such as Nicor or Itron).
3. Alternative color-coding: manufacturers occasionally substitute a WHITE wire for a GREEN wire.

DIP Switch Setup -



Meter Type Lookup Table (Green: Implemented, ■ = DIP SWITCH ON)

Dip Switches	1	2	3	4	5	6
SCADAmetrics 1						
SCADAmetrics 2	■					
SCADAmetrics 1-2 (net)		■				
SCADAmetrics 1+2 (sum)	■	■				
Siemens Mag 6000 1			■			
Siemens Mag 6000 2		■	■			
Siemens Mag 6000 1-2 (net)		■	■			
Endress Hauser 1	■	■	■			
Endress Hauser 2				■		
Endress Hauser 1-2 (net)	■			■		
ABB 1		■		■		
ABB 2		■		■		
ABB 1-2 (net)			■	■		
ROSEMOUNT 1	■		■	■		
ROSEMOUNT 2			■	■		
ROSEMOUNT 1-2 (net)	■		■	■		

Dip Switches	1	2	3	4	5	6
Seametrics 1						
Seametrics 2	■				■	
Seametrics 1-2 (net)		■			■	
Krohne 1	■	■			■	
Krohne 2			■		■	
Krohne 1-2 (net)		■	■		■	
Flowtronic 1		■	■		■	
Flowtronic 2		■	■		■	
Flowtronic 1-2 (net)			■		■	
Toshiba 1	■			■	■	
Toshiba 2			■		■	
Toshiba 1-2 (net)	■		■		■	
Foxboro 1				■	■	
Foxboro 2	■			■	■	
Foxboro 1-2 (net)			■		■	
Sparling TigerMag 1	■			■	■	

Dip Switches	1	2	3	4	5	6
Sparling TigerMag 2						
Sparling TigerMag 1-2 (net)	■					
Eastech Vantage Ch.1		■				
Siemens HydroRanger Ch.1	■	■				
Modbus Slave - 41 , 9600	■		■	■	■	
Modbus Slave - 41 , 19200			■	■	■	
Modbus Slave - 41 , 38400	■		■	■	■	

Initial Setup:

- 1. Set the DIP Switches to match the connected meter and to match the desired AMI behavior profile.**
- 2. Attach the AMI Endpoint's three (3) encoder wires to Encodalizer terminals CLK, DATA, CMN (see above table for color-coding).**
- 3. Attach the Water Meter's Modbus/RTU cable pair to Encodalizer terminals RS485A(-) and RS485B(+).**
- 4. Attach the DC Power Supply to the Encodalizer. 24V_{DC}+ to V+ and 24V_{DC}- to V-. An isolated 24V_{DC} power supply is recommended.**

Apply Power, and Observe...

- The MODBUS LED (green) should blink at a regular interval, signifying that the Encodalizer is regularly polling the flow meter.
- The AMI LED (blue) will blink whenever the AMI endpoint polls the Encodalizer. Generally, this will be infrequent (1-4 polls per hour).
- If Illegal/Unsupported DIP Switch positions are set, then the ERROR LED (red) will blink. If the meter is unsupported, then the blink will be rapid (10 blinks per second). If the AMI settings are invalid, then the blink will be slow (1 blink per second).