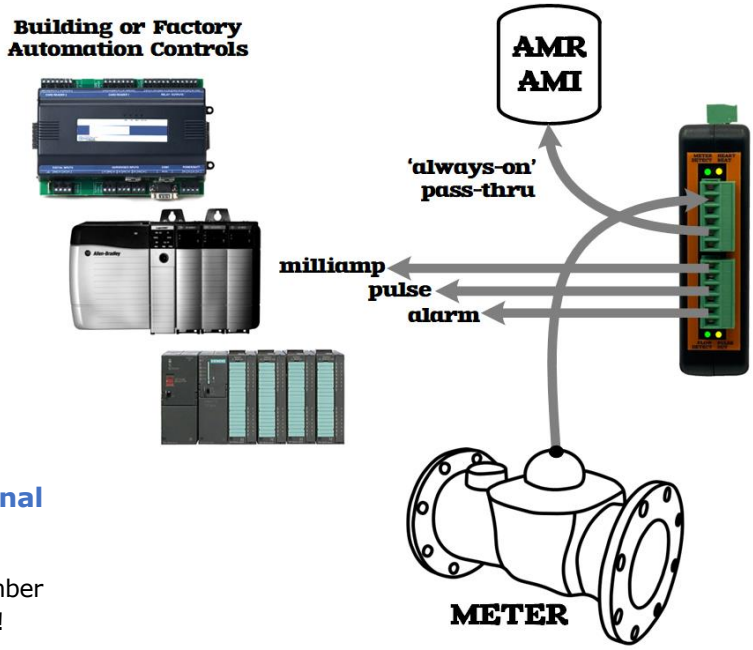
SCADAMETRICS®

The Signalizer™

Model EMPv2 – US Patent No. 11,041,738



The Versatile 4-20 Milliamp and Pulse Signal Source for Sensus® Water Meters!

SCADAmetrics® is pleased to introduce the newest member of its DINstrumentation™ series – **The Signalizer™!**

This new electronic signal generator for water meters provides a 4-20 milliamp (flow) output and a dry contact pulse (per volume) output! – while still maintaining the meter's ability to be co-connected to an AMI/AMR endpoint!

Meter Owners have traditionally been required to make a weighted buying decision: encoder-type meter?... or milliamp/pulse-type meter? **The Signalizer** allows you to easily have both with the same meter!

The Signalizer utilizes the popular encoder signal from the water meter to generate both a 4-20mA rate-of-flow signal[1] and a dry-contact pulse-per-volume signal. …And because **The Signalizer** is outfitted with an integral pass-thru port, it can co-exist with an AMI/AMR system[2]. Even if power is removed, the pass-thru port is always functional – ensuring continuous connectivity to the AMR/AMI system!

The Signalizer is compatible with the OMNI, OMNI+, Cordonel, accuSTREAM, iPerl, iPerl+, and ECR registers by Sensus/Xylem (Morrisville, NC).

[1]**Encoder Resolution** – a high-fidelity 4-20mA signal requires high-resolution encoder resolution (8+ digits). Therefore, for optimal 4-20mA SIGNALIZER performance, we recommend the Sensus register be pre-programmed to transmit eight (8) or nine (9) totalizer digits..

[2]**Permitting** – If the meter is owned by the water utility, we recommend that you first contact its engineering department for permission!

Key Features –

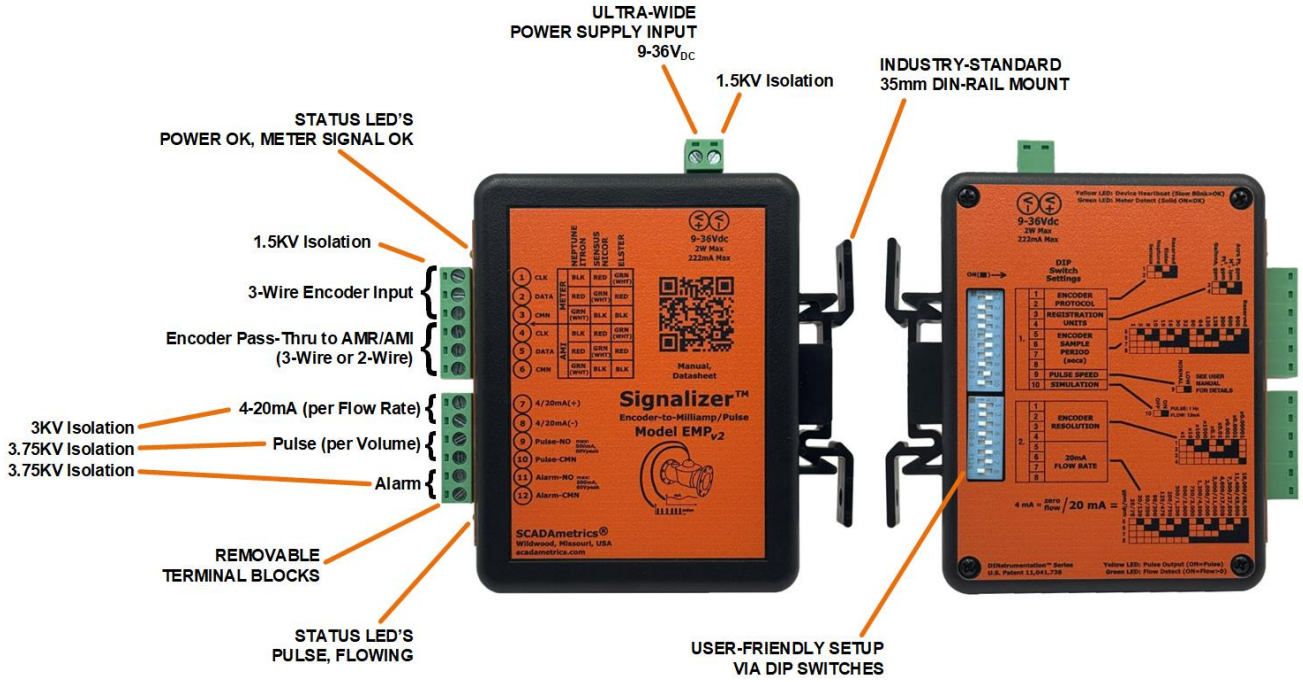
- 4-20mA Flow-Proportional Output (3KV Isolation).
- Dry-Contact, Volume-Proportional Output (3.75KV Isolation).
- Dry-Contact Alarm Output (3.75KV Isolation).
- Built-In Pass-Thru Port for Co-Connection to an AMI/AMR System – Works Even If Power Down!

- Compatible with 3-wire version Sensus registers.
- Works with All Popular Registration Units (Gallons, Cubic Feet, Cubic Meters, Acre Feet).

- No Computer Required! – Setup via DIP Switches Only!
- Removable Terminal Blocks, Simplified Wiring Procedures.
- Mounts on standard 35mm industrial DIN-rail.
- 24VDC-Powered (1.5KV Isolation). Low 1.2W Power Consumption.
- Enclosure and Circuit Board: UL 94-VO recognized materials.
- Simulation-Mode Feature: Emits 12mA and 1 Hz Pulse.
- Integral Common-Mode Rejection Choke

Are you interested in how SCADAmetrics meter technology can help you more closely monitor the flow through your water meters? Give us a call! We'll be glad to discuss the details!

SCADAmetrics
scadametrics.com
Wildwood, Missouri USA
636.405.7101



Engineering Specifications –

Dimensions:	4.5" x 5.0" x 1.275"
Weight:	6.5 Ounces
Supply Voltage:	9-36V_{DC}
Supply Power:	1.25W
Power Supply Isolation:	1500V_{RMS}
EMI Suppression:	EN55032 Class B Chebyshev DC Power Filter, 3-Wire Common-Mode Rejection Choke for Encoder Signal
Neptune Protocol Support:	Yes, 8,9-Digit "MACH-10/ProCoder/E-CODER", and 6-Digit "ProRead" Protocols
Sensus Protocol Support:	Yes, Both Fixed and Variable Digit Sensus Protocols (4-9 digits)
Elster Protocol Support:	Yes, Auto-Fills Units and Decimal Shift, Based on Embedded Info within Elster K-Frame
AMI Pass-Thru Port Support:	Universal – Works with All Major-Brand AMI/AMR Endpoints: Neptune, Sensus, Aclara, Badger, Metron-Farnier, Itron, Master Meter, Hersey/Mueller, RG3, Zenner, Honeywell, Kamstrup, SCADAmetrics, Touchpads (All), Remote Displays (All)
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
Encoder Sample Period (s):	1, 5, 8, 10, 15, 16, 30, 32, 60, 64, 120, 128, 300, 600, 900, Reserved (User-Selectable)
Programming Method:	Integrated DIP Switches, 18-Poles
4-20mA Flow Range (gpm):	20,30,50,80,125,200,300,500,750,1200,2000,3000,4600,7300,11400,18000
4-20mA Flow Range (lpm):	75,120,200,300,475,750,1200,2000,3000,4500,7000,11000,17500,27500,43000,68000
4-20mA Resolution:	16-Bit DAC
4-20mA Isolation:	3000V_{RMS}
4-20mA Max Series Resistance:	500 Ω
4-20mA Signal Type:	Active. Therefore, <u>do not</u> add an external loop supply, or else damage to the unit will result!
Pulse Output Type:	Solid-State Dry-Contact, 1 Pulse-per-Encoder Resolution
Contact Closure Duration:	50% Duty Cycle or 1000ms – whichever is less
Alarm Output Type:	Solid-State Dry-Contact, Closes if Meter or Signalizer Fault
Pulse Resolution:	Normal-Speed Mode (All Encoders): Pulse Resolution = Encoder Resolution Low-Speed Mode (8-Digit Encoders): Pulse Resolution = Encoder Resolution / 10 Low-Speed Mode (9-Digit Encoders): Pulse Resolution = Encoder Resolution / 100
Closed-Contact Resistance:	0.4 ohm, typical
Closed-Contact Max Current:	500mA
Open-Contact Max Voltage:	60V
Pulse/Alarm Isolation:	3750V_{RMS}
Meter Cable Connection:	3-Position, Removable Screw-Down Terminal Block, 12-26 AWG
Pass-Thru Cable Connection:	3-Position, Removable Screw-Down Terminal Block, 12-26 AWG
Pass-Thru Port for AMR/AMI:	Yes, Supports both 3-Wire and 2-Wire AMR Devices
Temperature:	-40C to 85C (-40°F to 185°F)
Relative Humidity:	5% to 95%, Non-Condensing
Enclosure Rating:	Built to IP40 Specifications, Not Rated for Submersion/Outdoor Use
Manufacturing Location:	USA
Environmental:	ROHS-Compliant, Lead-Free
Meter Interface:	AWWA C707-05
Warranty:	2 Years (see www.scadametrics.com for details)

Engineering Dimensions (Inches) –

Meter Terminal Block Hookup –

Term.	Function	Sensus Meter with Standard Cable	Sensus Meter with Nicor Cable	Sensus Meter with Itron ERT Cable
1	Meter Clock	Red	Red	Black
2	Meter Data	Green	Green	Red
3	Meter Cmn	Black	Black	White|Shield

AMR/AMI Terminal Block Hookup –

Term.	Function	Sensus (Metron-Farnier, Badger, Master Meter, Kamstrup, Mueller, Zenner, RG3, Aclara, Nicor Cable)	Neptune & Itron ERT	Elster Color
4	Utility AMI Clock	Red	Black	White|Green
5	Utility AMI Data	Green|White	Red	Red
6	Utility AMI Cmn	Black	Green | White	Black

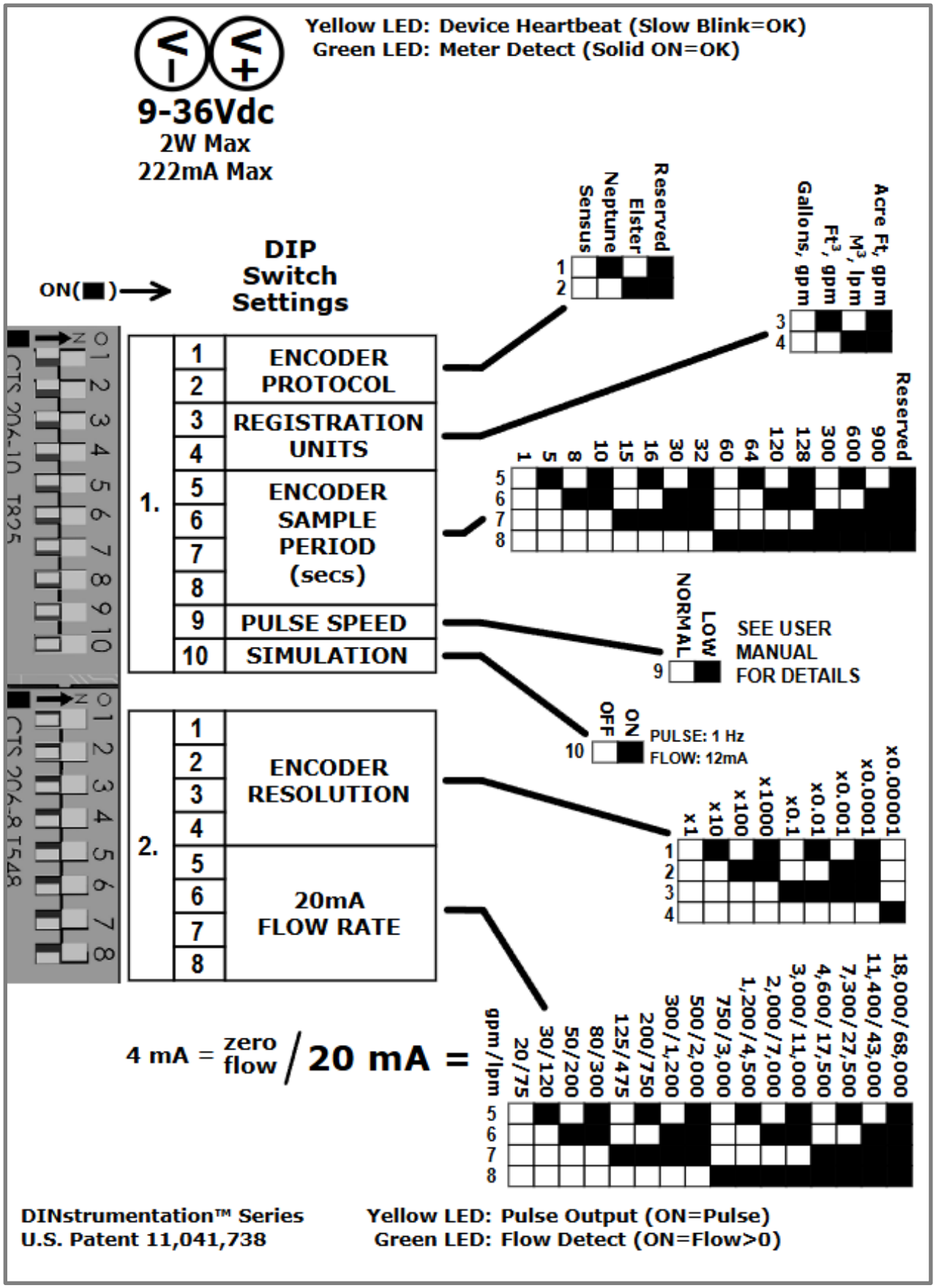
Wiring Notes:

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. Meter Terminal Block Hookup (Terminals 1,2,3): Apply the color-coding that pertains to the manufacturer of the Water Meter (or manufacturer of the Specialty Cable, such as Nicor or Itron).
3. Utility AMI/AMR Terminal Block Hookup (Terminals 4,5,6): 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).
4. Alternative color-coding: manufacturers occasionally substitute a WHITE wire for a GREEN wire.
5. If the recommended wiring has been attempted, and the display still reports "meter not detected", then re-try using each of the six possible wire color-coding combinations on terminals 1,2,3.

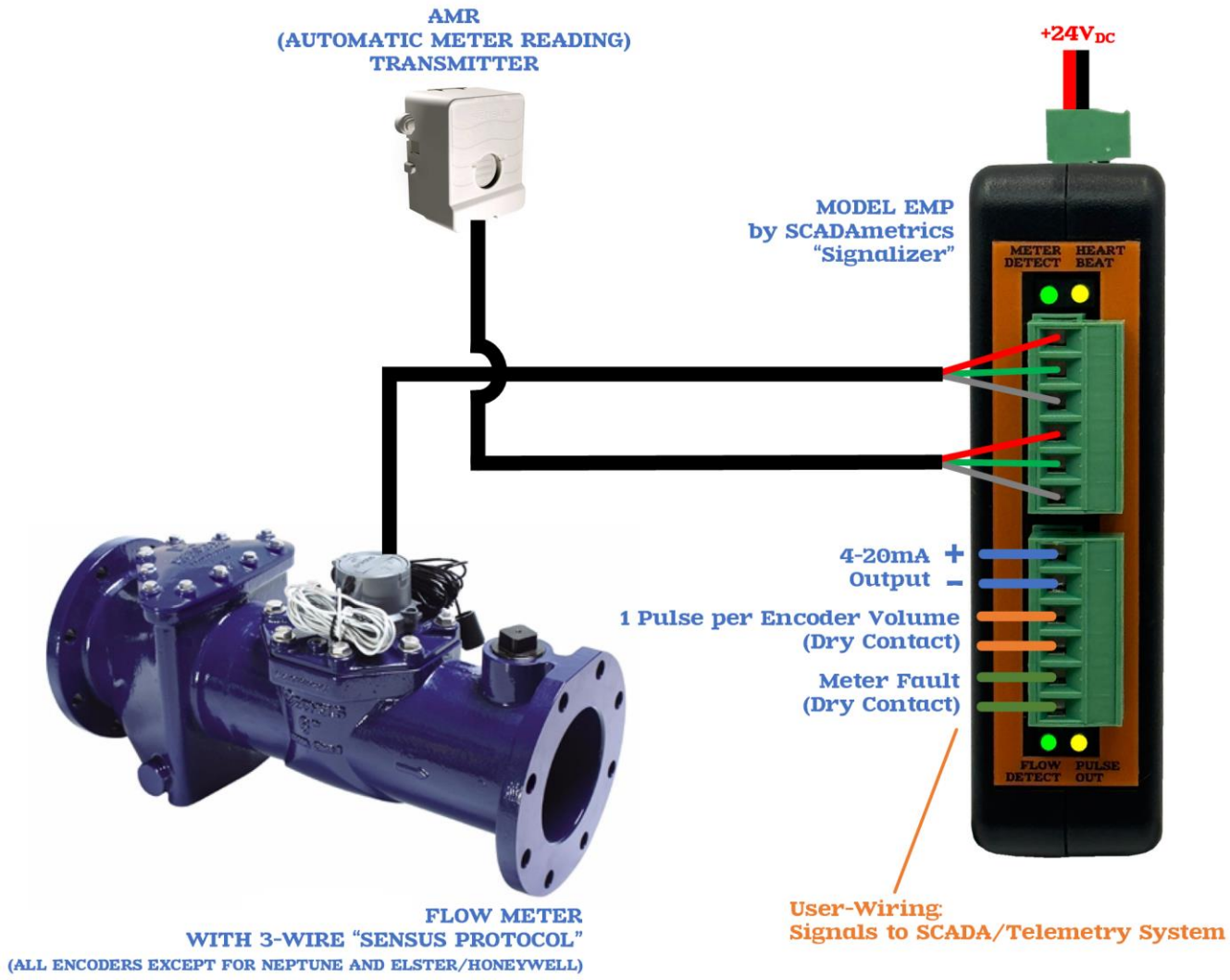
Signal Terminal Block Hookup –

Terminal	Function	Notes
7	4-20mA +	Settable Range via DIP Switches
8	4-20mA –	
9	Pulse +	Solid-State Dry Contact (N-O) 500mA Max, 60V Max
10	Pulse –	
11	Alarm +	Solid-State Dry Contact (N-O) 500mA Max, 60V Max
12	Alarm –	

DIP Switch Setup (Also Imprinted on Device Rear Cover) –



QUICK-START GUIDE –



WIRING FOR SENSUS
CORDONEL,
OMNI-T2/R2/F2/C2,
IPERL,
ACCUSTREAM,
& ECR
WATER METERS

Fig.1

Initial Setup:

1. **Attach the water meter's three (3) encoder wires to Signalizer terminals 1,2,3 (see above table for color-coding).**

2. **(If Applicable) Attach the AMR/AMI endpoint's three (3) encoder wires to Signalizer terminals 4,5,6 (see above table for color-coding).**

3. **(If Applicable) Connect the 4-20mA output signal to PLC/Controller: Terminals 7(+) and 8(-). Important Note! – The Signalizer™ provides loop power. The user must not add an additional loop power supply, or else damage to the unit will result.**

4. **(If Applicable) Connect the pulse output signal to the PLC/Controller: Terminals 9 and 10. Important Note! – The pulse output is a solid-state, dry-contact type. 500mA max, 60V max. Circuit must be current-limited by external means.**

5. **(If Applicable) Connect the alarm output signal to the PLC/Controller: Important Note! – The alarm output is a solid-state, dry-contact type. 500mA max, 60V max. Circuit must be current-limited by external means.**

6. **Set the DIP Switches, per the Datasheet.**

7. **Connect DC voltage source to the Signalizer's V+/V- terminals. An isolated $24V_{DC}$ power supply is recommended.**

Apply Power, and Observe…

- The upper yellow 'Hearbeat' LED should light up YELLOW with an OCCASIONAL BLINK, signifying that the Signalizer is working.

- During bootup, if the meter is detected, the upper green 'Meter OK' LED will blink ON for each detected encoded digit (from 4 to 9 blinks).

- After bootup, the upper green 'Meter OK' LED should light up SOLID GREEN, signifying that the meter has been successfully detected. A fast green blink means "Meter Not Detected".

- The Lower Yellow LED will follow the Pulse Output (LED ON=Contact Closure).

- The Lower Green LED will light up SOLID GREEN during periods when Positive Flow is Detected.

SENSUS WATER METERS –

Recommended DIP Switches 1.1 thru 2.4 FOR PLUS-VERSION 9-DIGIT (SUB-METER) METERS:

Size	Gallon	Cubic Feet	Cubic Meters
5/8" iPerl+, accuSTREAM+ SR-II E-Reg+ 3/4" iPerl+, accuSTREAM+ SR-II E-Reg+ 1" iPerl+, accuSTREAM+ SR-II E-Reg+	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1=ON DipSw.1.10= DipSw.1.11=ON DipSw.1.12= Normal Speed Pulse: 1 Pulse / 0.01 Gal Low Speed Pulse: 1 Pulse / 1 Gal	DipSw.1.1= DipSw.1.2= DipSw.1.3=ON DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.1.10=ON DipSw.1.11=ON DipSw.1.12= Normal Speed Pulse: 1 Pulse / 0.001 FT^3 Low Speed Pulse: 1 Pulse / 0.1 FT^3	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4=ON DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1=ON DipSw.1.10=ON DipSw.1.11=ON DipSw.1.12= Normal Speed Pulse: 1 Pulse / 0.0001 M^3 Low Speed Pulse: 1 Pulse / 0.01 M^3
1.5" Omni+ R2/T2/C2/F2 2" Omni+ R2/T2/C2/F2 3" Omni+ T2/C2/F2	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.1 Gal Low Speed Pulse: 1 Pulse / 10 Gal	DipSw.1.1= DipSw.1.2= DipSw.1.3=ON DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1=ON DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.01 FT^3 Low Speed Pulse: 1 Pulse / 1 FT^3	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4=ON DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2=ON DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.001 M^3 Low Speed Pulse: 1 Pulse / 0.1 M^3
4" Omni+ T2/C2/F2 6" Omni+ T2/C2/F2 8" Omni+ T2/C2/F2 10" Omni+ T2/C2/F2	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3= DipSw.2.4= Normal Speed Pulse: 1 Pulse / 1 Gal Low Speed Pulse: 1 Pulse / 100 Gal	DipSw.1.1= DipSw.1.2= DipSw.1.3=ON DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.1 FT^3 Low Speed Pulse: 1 Pulse / 10 FT^3	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4=ON DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1=ON DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.01 M^3 Low Speed Pulse: 1 Pulse / 1 M^3

IPERL+

OMNI+

Use encoded cable (right). If necessary, cut off touch-coupler adapter.

SR-II Plus
accuSTREAM Plus

For Sub-Meter Applications, The Signalizer Sample Period Is Set To 32 Seconds (DIP Switches 1.5-1.8) In Order to Provide Faster 4-20mA Updates to the SCADA/BMS System.

SENSUS WATER METERS –

Recommended DIP Switches 1.1 thru 2.4 FOR 8-DIGIT (SUB-METER) METERS:

Size	Gallon	Cubic Feet	Cubic Meters
5/8" iPerl, accuSTREAM 3/4" iPerl, accuSTREAM 1" iPerl, accuSTREAM	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.1 Gal Low Speed Pulse: 1 Pulse / 1 Gal	DipSw.1.1= DipSw.1.2= DipSw.1.3=ON DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1=ON DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.01 FT^3 Low Speed Pulse: 1 Pulse / 0.1 FT^3	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4=ON DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2=ON DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.001 M^3 Low Speed Pulse: 1 Pulse / 0.01 M^3
1.5" Omni-R2/T2/C2/F2 2" Omni-R2/T2/C2/F2 3" Omni-T2/C2/F2	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3= DipSw.2.4= Normal Speed Pulse: 1 Pulse / 1 Gal Low Speed Pulse: 1 Pulse / 10 Gal	DipSw.1.1= DipSw.1.2= DipSw.1.3=ON DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.1 FT^3 Low Speed Pulse: 1 Pulse / 1 FT^3	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4=ON DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1=ON DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.01 M^3 Low Speed Pulse: 1 Pulse / 0.1 M^3
4" Omni-T2/C2/F2 6" Omni-T2/C2/F2 8" Omni-T2/C2/F2 10" Omni-T2/C2/F2	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1=ON DipSw.2.2= DipSw.2.3= DipSw.2.4= Normal Speed Pulse: 1 Pulse / 10 Gal Low Speed Pulse: 1 Pulse / 100 Gal	DipSw.1.1= DipSw.1.2= DipSw.1.3=ON DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3= DipSw.2.4= Normal Speed Pulse: 1 Pulse / 1 FT^3 Low Speed Pulse: 1 Pulse / 10 FT^3	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4=ON DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.1 M^3 Low Speed Pulse: 1 Pulse / 1 M^3

IPERL

OMNI
Use black encoded cable (right). If necessary, cut off touch-coupler adapter.

OMNI-PLUS
Use encoded cable (right). If necessary, cut off touch-coupler adapter.

HYDROVERSE

ICE

SR-II
accuSTREAM

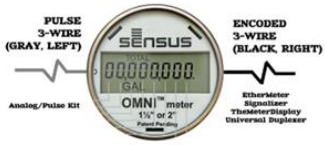
For Sub-Meter Applications, The Signalizer Sample Period Is Set To 32 Seconds (DIP Switches 1.5-1.8) In Order to Provide Faster 4-20mA Updates to the SCADA/BMS System.

SENSUS WATER METERS for NYC DEP –

Recommended DIP Switches 1.1 thru 2.4 FOR 8-DIGIT (NYC-DEP) METERS:

Size	Gallon	Cubic Feet	Cubic Meters
5/8" iPerl, accuSTREAM 3/4" iPerl, accuSTREAM 1" iPerl, accuSTREAM	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.1 Gal Low Speed Pulse: 1 Pulse / 1 Gal	DipSw.1.1= DipSw.1.2= DipSw.1.3=ON DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1=ON DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.01 FT^3 Low Speed Pulse: 1 Pulse / 0.1 FT^3	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4=ON DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2=ON DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.001 M^3 Low Speed Pulse: 1 Pulse / 0.01 M^3
1.5" Omni-R2/T2/C2/F2 2" Omni-R2/T2/C2/F2 3" Omni-T2/C2/F2	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3= DipSw.2.4= Normal Speed Pulse: 1 Pulse / 1 Gal Low Speed Pulse: 1 Pulse / 10 Gal	DipSw.1.1= DipSw.1.2= DipSw.1.3=ON DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.1 FT^3 Low Speed Pulse: 1 Pulse / 1 FT^3	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4=ON DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1=ON DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.01 M^3 Low Speed Pulse: 1 Pulse / 0.1 M^3
4" Omni-T2/C2/F2 6" Omni-T2/C2/F2 8" Omni-T2/C2/F2 10" Omni-T2/C2/F2	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1=ON DipSw.2.2= DipSw.2.3= DipSw.2.4= Normal Speed Pulse: 1 Pulse / 10 Gal Low Speed Pulse: 1 Pulse / 100 Gal	DipSw.1.1= DipSw.1.2= DipSw.1.3=ON DipSw.1.4= DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3= DipSw.2.4= Normal Speed Pulse: 1 Pulse / 1 FT^3 Low Speed Pulse: 1 Pulse / 10 FT^3	DipSw.1.1= DipSw.1.2= DipSw.1.3= DipSw.1.4=ON DipSw.1.5=ON DipSw.1.6=ON DipSw.1.7=ON DipSw.1.8= DipSw.1.9= DipSw.1.10= DipSw.2.1= DipSw.2.2= DipSw.2.3=ON DipSw.2.4= Normal Speed Pulse: 1 Pulse / 0.1 M^3 Low Speed Pulse: 1 Pulse / 1 M^3

IPERL



OMNI (use encoded cable, right (black))

OMNI-PLUS (use encoded cable, right (black))

HYDROVERSE

ICE

For NYC DEP Meter Applications, The Signalizer Sample Period Is Set To 600 Seconds (DIP Switches 1.5-1.8) In Order to Reduce Battery Wear Within the Water Meter.

SENSUS WATER METERS –

Recommended DIP Switches 2.5-2.8:

The Following Are *Suggested* Flow Span Settings, and May Need to Be Adjusted Based on Anticipated Max Flow Conditions.

Size	Gallon , Cubic Feet , Cubic Meters
5/8" iPerl, accuSTREAM 20 gpm 75 lpm	DipSw.2.5= DipSw.2.6= DipSw.2.7= DipSw.2.8=
3/4" iPerl, accuSTREAM 30 gpm 120 lpm	DipSw.2.5=ON DipSw.2.6= DipSw.2.7= DipSw.2.8=
1" iPerl, accuSTREAM 50 gpm 200 lpm	DipSw.2.5= DipSw.2.6=ON DipSw.2.7= DipSw.2.8=
1.5" Omni, HydroVerse, Prop 200 gpm 750 lpm	DipSw.2.5=ON DipSw.2.6= DipSw.2.7=ON DipSw.2.8=
2" Omni, HydroVerse, Prop 300 gpm 1200 lpm	DipSw.2.5= DipSw.2.6=ON DipSw.2.7=ON DipSw.2.8=
3" Omni, HydroVerse, Prop 750 gpm 3000 lpm	DipSw.2.5= DipSw.2.6= DipSw.2.7= DipSw.2.8=ON
4" Omni, HydroVerse, Prop 2000 gpm 7000 lpm	DipSw.2.5= DipSw.2.6=ON DipSw.2.7= DipSw.2.8=ON
6" Omni, HydroVerse, Prop 3000 gpm 11000 lpm	DipSw.2.5=ON DipSw.2.6=ON DipSw.2.7= DipSw.2.8=ON
8" Omni, HydroVerse, Prop 4600 gpm 17500 lpm	DipSw.2.5= DipSw.2.6= DipSw.2.7=ON DipSw.2.8=ON
10" Omni, HydroVerse, Prop 7300 gpm 27500 lpm	DipSw.2.5=ON DipSw.2.6= DipSw.2.7=ON DipSw.2.8=ON
16" Omni, HydroVerse, Prop 11,400 gpm 43000 lpm	DipSw.2.5= DipSw.2.6=ON DipSw.2.7=ON DipSw.2.8=ON

IPERL

OMNI (use black cable)

OMNI-PLUS (use encoded cable, right)

HYDROVERSE

ICE

SR-II Plus
accuSTREAM Plus

4-20mA Span Settings Are Based Solely on Meter Size and Maximum Expected Flow Rates.

FAST-REACTION BATCHING METER APPLICATIONS –

(a) Fast-Reaction Batch Control Meter Applications require ultra-fast pulse output reaction time: ~1 sec.

CAUTION! – Please ensure that the connected encoder-type flow meter can tolerate ultra-short sample periods. (i.e. Make sure there are no water meter register battery issues!)

Examples of Meter Registers that do not contain a battery, or otherwise can tolerate ultra-short sample periods:

- **Sensus ICE/ECR**

Fast Reaction Time DIP Switch Settings:

[1.5 , 1.6 , 1.7 , 1.8] = [OFF , OFF , OFF , OFF]