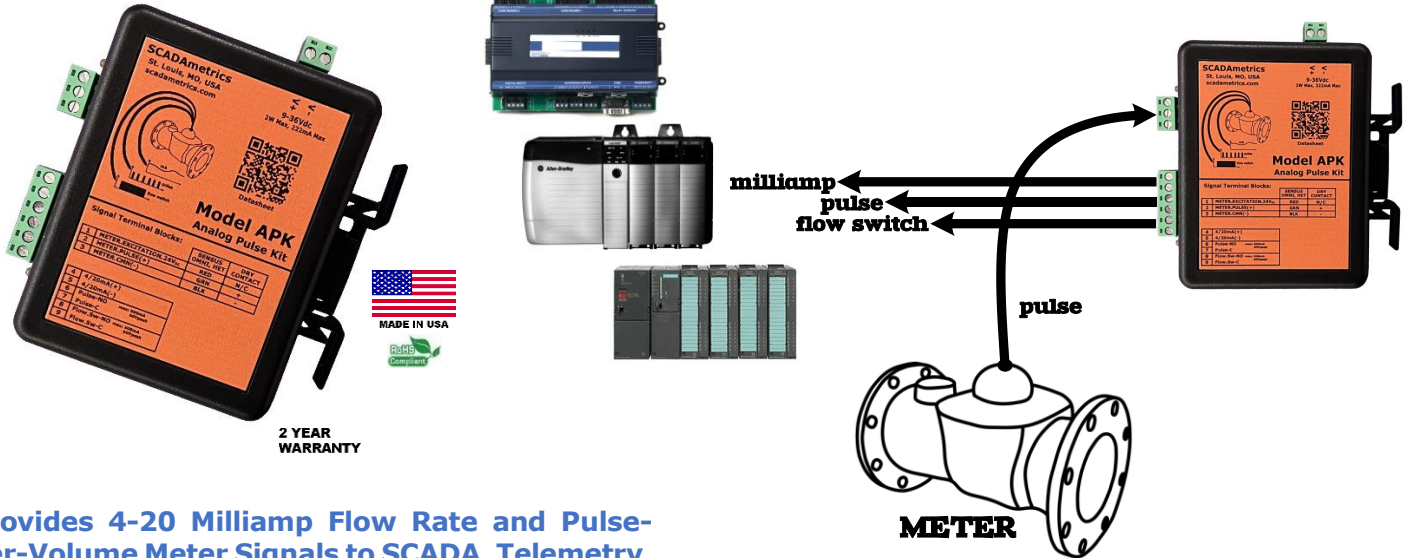




Analog Pulse Kit

Model APK

Building or Factory
Automation Controls



Provides 4-20 Milliamp Flow Rate and Pulse-per-Volume Meter Signals to SCADA, Telemetry, and Building Automation Systems!

SCADAMetrics® is pleased to introduce a new member to its DINstrumentation™ series – **Analog Pulse Kit!**

This new electronic signal generator for water meters provides a 4-20 milliamp (flow) output, a dry contact pulse (per volume) output, and a dry contact flow switch output!

Certain flow meters, such as the Sensus® OMNI™-Series, feature a digital pulse output signal. The SCADAMetrics **Analog Pulse Kit** was designed to expand upon this signal to provide an efficient flow meter interface to SCADA, Telemetry, and Building Automation Systems.

Furthermore, the **Analog Pulse Kit** was designed using SCADAMetrics' signature approach of providing users with the capability to easily set the instrument's meter-specific behavior in-the-field, as opposed to only at the factory. All meter-specific customization is accomplished using 16 integrated DIP-switches, which are set according to our lookup table. The obvious benefits to our approach are accelerated project schedules and shortened lead-times.

The **Analog Pulse Kit** utilizes the digital pulse output from the water meter to generate a 4-20mA rate-of-flow signal and a secondary dry-contact pulse-per-volume signal. It also generates a dry-contact flow switch signal, which can be used, for example, to trigger ON/OFF a chemical disinfection pump.

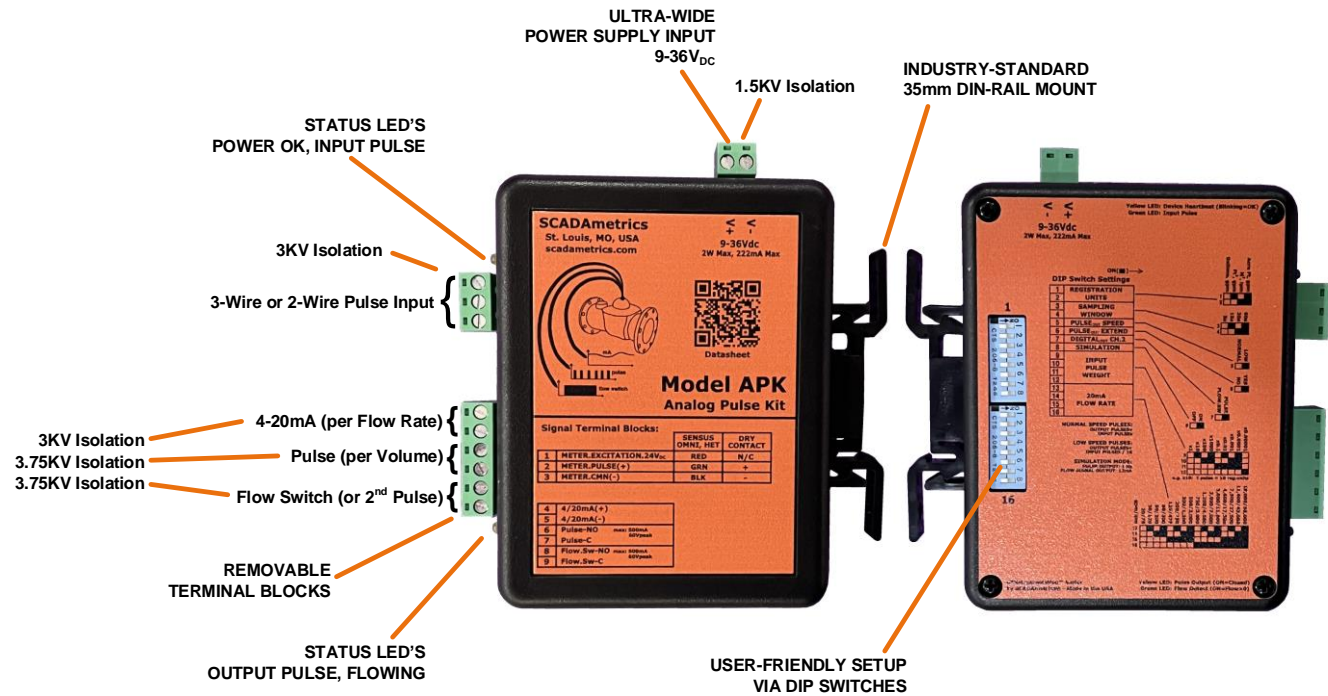
For Sensus® OMNI™ and HET Propeller Meters, the **Analog Pulse Kit** provides the necessary 24VDC auxiliary power supply for these unique, 3-wire pulse-type meters.

For flow meters whose pulse output signal is too short-duration (milliseconds) or too high-frequency (Hz) to be detected by certain low-pulse-bandwidth BMS systems, the **Analog Pulse Kit** provides a **Pulse Extension** feature, which lengthens the duration of each pulse by a factor of 10; and the **Analog Pulse Kit** also provides a **Low-Speed Pulse Output** feature, which decreases the pulse output frequency (Hz) by a factor of 10.

Key Features -

- 4-20mA Flow-Proportional Output (3KV Isolation).
- Dry-Contact, Volume-Proportional Output (3.75KV Isolation).
- Dry-Contact Flow-Switch Output (3.75KV Isolation).
- Compatible with Most Late-Model, Pulse-Type Flow Meters.
- 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-V0 recognized materials.
- Simulation-Mode Feature: Emits 12mA and 1 Hz Pulse.

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!



Engineering Specifications -

Dimensions: 4.5" x 5.0" x 1.275"
 Weight: 6.1 Ounces
 Supply Voltage: 9-36V_{DC}
 Supply Power: 1.25W
 Power Supply Isolation: 1500V_{RMS}

Solid-State Pulse Support: Yes
 Dry-Contact Pulse Support: Yes
 Sensus® OMNI™/HET Support: Yes

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, x1/6, x10/6, x100/6
 Flow Calculation Window: 5s, 15s, 30s, 60s (User-Selectable)
 Programming Method: Integrated DIP Switches, 16-Poles
 Totalizer Max Unscaled Count: 999,999,999

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, do not add an external loop supply, or else damage to the unit will result!

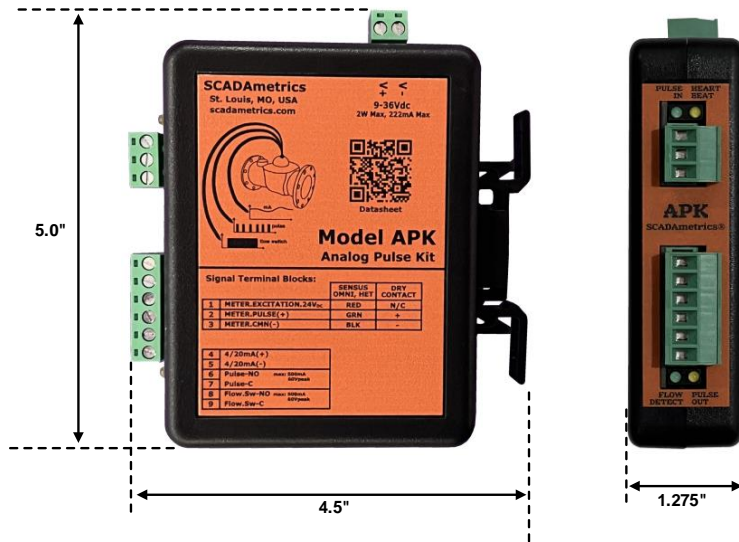
Pulse Output Type: Solid-State Dry-Contact, 1 Output Pulse per Input Pulse
 Flow Switch Output Type: Solid-State Dry-Contact, Closes if Rate-of-Flow > 0
 Pulse Resolution: Normal-Speed Mode: Output Pulse Resolution = Input Pulse Resolution
 Low-Speed Mode: Output Pulse Resolution = Input Pulse Resolution / 10

Closed-Contact Resistance: 0.4 ohm, typical
 Closed-Contact Max Current: 500mA
 Open-Contact Max Voltage: 60V
 Pulse/Flow Switch Isolation: 3750V_{RMS}

Meter Cable Connection: 3-Position, Removable Screw-Down Terminal Block, 12-26 AWG
 SCADA Cable Connections: 6-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 IP40 Specifications, Not Rated for Submersion /Outdoor Use
 Manufacturing Location: USA
 Environmental: ROHS-Compliant, Lead-Free
 Warranty: 2 Years (see www.scadametrics.com for details)

Engineering Dimensions (Inches) -



Meter Terminal Block Hookup (Table.1) -

Terminal	Function	Sensus® OMNI™ or Sensus® HET Prop	Dry-Contact Pulse Input or Transistor Pulse Input
1	Excitation Power (+24V _{DC})	Red	No Connection!
2	Pulse Input (+)	Green	Pulse (+)
3	Pulse Input (-)	Black	Pulse (-)


Wiring Notes:

- Terminal #1 is a 24V_{DC} Excitation Power Supply, which is provided as a convenience for Sensus® OMNI™ and HET Propeller Water Meters only.
- Non-Sensus® Water Meters should connect to Terminals #2 and #3 only.

Signal Terminal Block Hookup (Table.2) -

Terminal	Function	Notes
4	4-20mA +	Settable Range via DIP Switches
5	4-20mA -	
6	Pulse +	Solid-State Dry Contact (N-O) 500mA Max, 60V Max
7	Pulse -	
8	Flow Switch +	Solid-State Dry Contact (N-O) 500mA Max, 60V Max
9	Flow Switch -	

DIP Switch Setup (Figure.1) -


9-36Vdc
 2W Max, 222mA Max

Yellow LED: Device Heartbeat (Blinking=OK)
 Green LED: Input Pulse

1

DIP Switch Settings

1	REGISTRATION UNITS
2	SAMPLING WINDOW
3	PULSE _{OUT} SPEED
4	PULSE _{OUT} EXTEND
5	DIGITAL _{OUT} CH.2
6	SIMULATION
7	INPUT PULSE WEIGHT
8	
9	
10	20mA FLOW RATE
11	
12	
13	
14	
15	
16	

Acre Ft, gpm
 M³, lpm
 Ft³, gpm
 Gallons, gpm

1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	60s
4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	30s
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15s
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5s

5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LOW
	<input type="checkbox"/>	<input type="checkbox"/>	NORMAL

6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	YES
	<input type="checkbox"/>	<input type="checkbox"/>	NO

PULSE
 FLOW/SW

7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PULSE
	<input type="checkbox"/>	<input type="checkbox"/>	FLOW/SW

8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ON
	<input type="checkbox"/>	<input type="checkbox"/>	OFF

9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X100/6
10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X10/6
11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X1/6
12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X0.00001
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X0.0001
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X0.001
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X0.01
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X0.1
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X1000
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X100
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X1

e.g. x10: 1 pulse = 10 reg.units

NORMAL SPEED PULSES:
 OUTPUT PULSES=
 INPUT PULSES

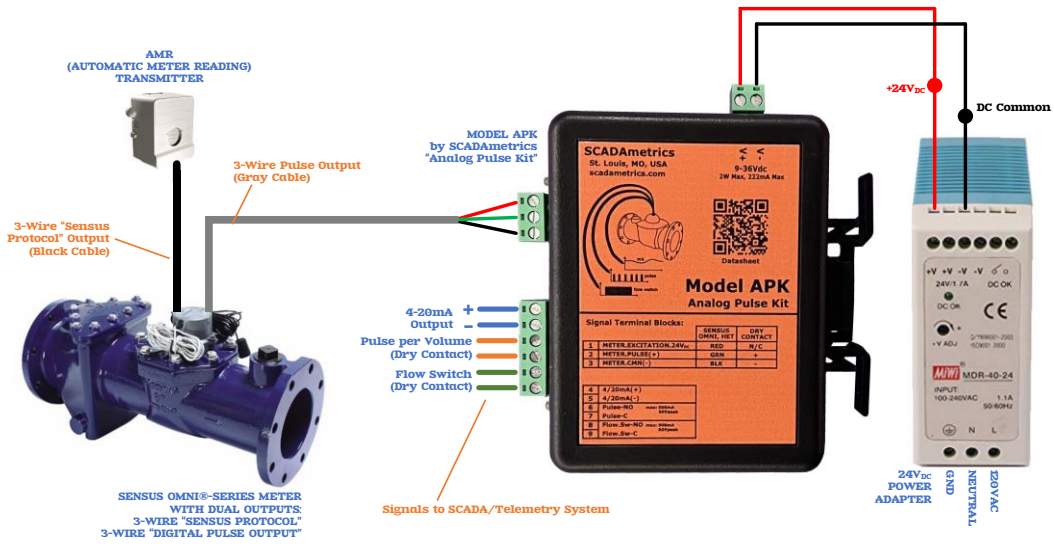
LOW SPEED PULSES:
 OUTPUT PULSES=
 INPUT PULSES / 10

SIMULATION MODE:
 PULSE OUTPUT: 1 Hz
 FLOW SIGNAL OUTPUT: 12mA

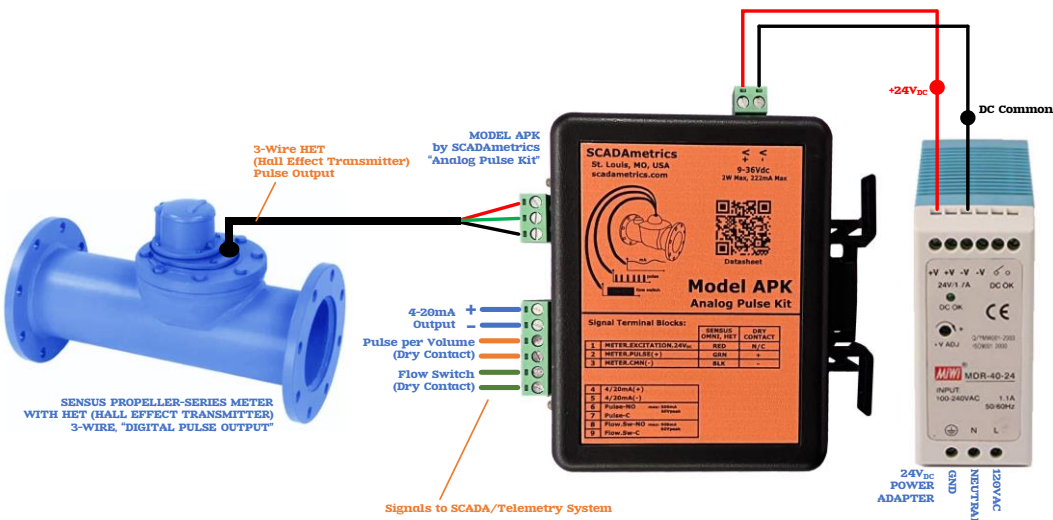
13	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	18,000/68,000
14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11,400/43,000
15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7,300/27,500
16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4,600/17,500
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3,000/11,000
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2,000/7,000
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,200/4,500
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	750/3,000
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	500/2,000
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	300/1,200
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	200/750
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	125/475
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	80/300
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	50/200
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30/120
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20/75

16

QUICK-START GUIDE -



**SENSUS®
OMNI®
WIRING
Fig 2**



**SENSUS®
HET/
PROPELLER
WIRING
Fig 3**

Initial Setup:

- 1. Attach the water meter's two (2) pulse wires (or three (3) pulse wires for Sensus meters) Analog Pulse Kit terminals 1,2,3 (see above table for color-coding).**
- 2. (If Applicable) Connect the 4-20mA output signal to PLC/Controller: Terminals 7(+) and 8(-). Important Note! – The Analog Pulse Kit provides loop power. The user must not add an additional loop power supply, or else damage to the unit will result.**
- 3. (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.**
- 4. (If Applicable) Connect the flow switch signal to the PLC/Controller: Important Note! – The flow switch output is a solid-state, dry-contact type. 500mA max, 60V max. Circuit must be current-limited by external means.**
- 5. Set the DIP Switches, per Figure.1, and per Following Instructions:**

DIP Switches	Function
1-2	Set Registration Units to Match Target Flow Meter: <ul style="list-style-type: none"> • Gallons • Cubic Feet • Cubic Meters • Acre Feet
3-4	Set Sampling Window, Per Typical Pulse Input Frequency: <ul style="list-style-type: none"> • 5s – When Pulse Input Freq > 4 Hz • 10s – When Pulse Input Freq: 2-4 Hz • 30s – When Pulse Input Freq: 1-2 Hz • 60s – When Pulse Input Freq < 0.5 Hz
5	Set Pulse Output Speed: <ul style="list-style-type: none"> • Normal (Output Pulse Speed = Input Pulse Speed) • Slow (Output Pulse Speed Hz = Input Pulse Speed Hz / 10) Recommendation: Use Slow Speed if SCADA, Telemetry, BMS Incapable of Processing Normal Speed Pulses.
6	Enable/Disable Pulse Output Extension Mode: <ul style="list-style-type: none"> • Disable (Output Pulse Width = Input Pulse Width) • Enable (Output Pulse Width = 10 x Input Pulse Width) Recommendation: Enable Pulse Extension Mode If Pulse Width Too Short for Detection by SCADA, Telemetry, BMS System. <p>Note! – If Extended Pulse Width Mode Causes Output Pulses to Overlap, Then User May Also Set Pulse Output Speed to 'Slow'.</p> Possible Examples: <ul style="list-style-type: none"> • Badger Meter HR Default Pulse Width: 50ms • Metron-Farnier Innov8 Default Pulse Width: 50ms

7	Configure Digital Output Channel 2: <ul style="list-style-type: none"> Flow Switch Output (Contact Closure When Flow Rate > 0) 2nd Pulse Output (Mirrors 1st Pulse Output) 																								
8	Enable / Disable Simulation Mode: <ul style="list-style-type: none"> Enable (For Debugging Control Panel): <ul style="list-style-type: none"> 4-20mA Output = 12mA (50%) Fixed Pulse Output = 1 Hz Fixed Flow Switch Output = ON / Closed Disable (Run Mode): <ul style="list-style-type: none"> 4-20mA, Pulse, & Flow Switch Operate in Normal Run Mode 																								
9,10,11,12	Set the Input Pulse Weight: <table border="1" style="margin-left: 20px;"> <tr><td>x1</td><td>1 pulse per 1 unit</td></tr> <tr><td>x10</td><td>1 pulse per 10 units</td></tr> <tr><td>x100</td><td>1 pulse per 100 units</td></tr> <tr><td>x1000</td><td>1 pulse per 1000 units</td></tr> <tr><td>x0.1</td><td>1 pulse per 0.1 unit</td></tr> <tr><td>x0.01</td><td>1 pulse per 0.01 unit</td></tr> <tr><td>x0.001</td><td>1 pulse per 0.001 unit</td></tr> <tr><td>x0.0001</td><td>1 pulse per 0.0001 unit</td></tr> <tr><td>x0.00001</td><td>1 pulse per 0.00001 unit</td></tr> <tr><td>x1/6</td><td>1 pulse per 1/6 unit</td></tr> <tr><td>x10/6</td><td>1 pulse per 10/6 unit</td></tr> <tr><td>x100/6</td><td>1 pulse per 100/6 unit</td></tr> </table> <p>...where unit = gal/ft³/m³/AF</p>	x1	1 pulse per 1 unit	x10	1 pulse per 10 units	x100	1 pulse per 100 units	x1000	1 pulse per 1000 units	x0.1	1 pulse per 0.1 unit	x0.01	1 pulse per 0.01 unit	x0.001	1 pulse per 0.001 unit	x0.0001	1 pulse per 0.0001 unit	x0.00001	1 pulse per 0.00001 unit	x1/6	1 pulse per 1/6 unit	x10/6	1 pulse per 10/6 unit	x100/6	1 pulse per 100/6 unit
x1	1 pulse per 1 unit																								
x10	1 pulse per 10 units																								
x100	1 pulse per 100 units																								
x1000	1 pulse per 1000 units																								
x0.1	1 pulse per 0.1 unit																								
x0.01	1 pulse per 0.01 unit																								
x0.001	1 pulse per 0.001 unit																								
x0.0001	1 pulse per 0.0001 unit																								
x0.00001	1 pulse per 0.00001 unit																								
x1/6	1 pulse per 1/6 unit																								
x10/6	1 pulse per 10/6 unit																								
x100/6	1 pulse per 100/6 unit																								
13,14,15,16	Set the 20mA Flow Rate. (4mA Flow Rate Always Equals Zero Flow). If Meter Registration Units = gal, ft ³ , or AF Set 20mA Flow Rate in GPM (gallons per minute). If Meter Registration Units = m ³ Set 20mA Flow Rate in LPM (liters per minute).																								

6. Connect DC voltage source to the Analog Pulse Kit's V+ /V- terminals. Apply Power, and Observe...

- The #1 LED (Green) 'Pulse Input' should blink ON whenever an incoming pulse (contact closure) has been detected.
- The #2 LED (Yellow) 'Heartbeat' should signal with an OCCASIONAL BLINK OFF, signifying that the Analog Pulse Kit is working.
- The #3 LED (Green) 'Flow Detect' will light up SOLID GREEN during periods when Positive Flow is Detected.
- The #4 LED (Yellow) 'Pulse Output' will follow the Pulse Output (LED ON=Contact Closure).

7. RESET PushButton Operation:

- If the RESET PushButton is depressed for 1 second (or more), then the Day Totalizer will be reset to ZERO (0).
- If the RESET PushButton is depressed for 5 seconds (or more), then the Day Totalizer and the Master Totalizers will both be reset to ZERO (0).

SENSUS WATER METERS - PERSONALITY SETTINGS FOR OMNI-SERIES METERS.

Recommended **DIP Switches 1-12:**

Size	Gallons	Cubic Feet	Cubic Meters
1.5" Omni-R2/T2/F2 2" Omni-R2/T2/F2 3" Omni-T2/F2 Omni Meter Emits: 1 pulse per 1.0 gallon 1 pulse per 0.1 ft ³ 1 pulse per 0.01 m ³	DipSw.1= DipSw.2= DipSw.3= DipSw.4= DipSw.5= DipSw.6= DipSw.7= DipSw.8= DipSw.9= DipSw.10= DipSw.11= DipSw.12= Normal Speed Pulse: 1 Pulse / 1 Gal Low Speed Pulse: 1 Pulse / 10 Gal	DipSw.1=ON DipSw.2= DipSw.3= DipSw.4= DipSw.5= DipSw.6= DipSw.7= DipSw.8= DipSw.9= DipSw.10= DipSw.11=ON DipSw.12= Normal Speed Pulse: 1 Pulse / 0.1 FT ³ Low Speed Pulse: 1 Pulse / 1 FT ³	DipSw.1= DipSw.2=ON DipSw.3= DipSw.4= DipSw.5= DipSw.6= DipSw.7= DipSw.8= DipSw.9=ON DipSw.10= DipSw.11=ON DipSw.12= Normal Speed Pulse: 1 Pulse / 0.01 M ³ Low Speed Pulse: 1 Pulse / 0.1 M ³
4" Omni-T2/F2 6" Omni-T2/F2 8" Omni-T2/F2 10" Omni-T2/F2 Omni Meter Emits: 1 pulse per 10 gallons 1 pulse per 1 ft ³ 1 pulse per 0.1 m ³	DipSw.1= DipSw.2= DipSw.3= DipSw.4= DipSw.5= DipSw.6= DipSw.7= DipSw.8= DipSw.9=ON DipSw.10= DipSw.11= DipSw.12= Normal Speed Pulse: 1 Pulse / 10 Gal Low Speed Pulse: 1 Pulse / 100 Gal	DipSw.1=ON DipSw.2= DipSw.3= DipSw.4= DipSw.5= DipSw.6= DipSw.7= DipSw.8= DipSw.9= DipSw.10= DipSw.11= DipSw.12= Normal Speed Pulse: 1 Pulse / 1 FT ³ Low Speed Pulse: 1 Pulse / 10 FT ³	DipSw.1= DipSw.2=ON DipSw.3= DipSw.4= DipSw.5= DipSw.6= DipSw.7= DipSw.8= DipSw.9= DipSw.10= DipSw.11=ON DipSw.12= Normal Speed Pulse: 1 Pulse / 0.1 M ³ Low Speed Pulse: 1 Pulse / 1 M ³

SENSUS WATER METERS - PERSONALITY SETTINGS FOR OMNI AND PROP METERS.

Recommended **DIP Switches 13-16:**

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

Size	Gallons , Cubic Feet , Cubic Meters	4-20mA Span Settings Are Based Solely on Meter Size and Maximum Expected Flow Rates.
1.5" Omni 200 gpm 750 lpm	DipSw.13=ON DipSw.14= DipSw.15=ON DipSw.16=	
2" Omni 300 gpm 1200 lpm	DipSw.13= DipSw.14=ON DipSw.15=ON DipSw.16=	
3" Omni 750 gpm 3000 lpm	DipSw.13= DipSw.14= DipSw.15= DipSw.16=ON	
4" Omni 2000 gpm 7000 lpm	DipSw.13= DipSw.14=ON DipSw.15= DipSw.16=ON	
6" Omni 3000 gpm 11000 lpm	DipSw.13=ON DipSw.14=ON DipSw.15= DipSw.16=ON	
8" Omni 4600 gpm 17500 lpm	DipSw.13= DipSw.14= DipSw.15=ON DipSw.16=ON	
10" Omni 7300 gpm 27500 lpm	DipSw.13=ON DipSw.14= DipSw.15=ON DipSw.16=ON	