**VeriEye™ Series 4100 Compact Power and Energy Meter Modbus and BACnet**

**Quick Install Guide**

**WARNING:** TO AVOID FIRE, SHOCK, OR DEATH, disconnect power prior to installation.

**CAUTION:** Do not install on the load side of a Variable Frequency Drive (VFD).

- Follow safe electrical work practices. See NFPA 70E in the USA, CSA Z402 in Canada, or applicable local codes.
- Installation, wiring, testing or service must be performed by qualified persons in accordance with all applicable local codes.
- Read and understand the instructions before installing the product. Follow the instructions during installation.
- Install the product in an appropriate electrical and fire enclosure per local regulations.
- DO NOT use the product for life or safety applications.
- DO NOT install the product in hazardous or classified locations.
- DO NOT exceed the product’s ratings or maximum limits.
- The product may use multiple voltage/power sources.
- Use a properly rated voltage sensing device to confirm that all power is off.
- Products rated only for basic insulation must be installed on insulated conductors.
- Current transformer secondaries (current modes) must be isolated or connected to a burden at all times.
- Remove all wire scraps and tools, replace all doors, covers and protective devices before powering the equipment.

To avoid distraction, use parallel wires for control power and voltage inputs.

The following symbols are used in the wiring diagrams on the following pages:

- **°** (1/3 V mode) or 32.1 kΩ
- **£**

**DIMENSIONS**

**PRODUCT IDENTIFICATION**

**SERIES 4100-K**
- Bidirectional metering, Modbus full data set, pulse and alarm outputs.
- For all S4100 Series (bidirectional) models, observe correct CT orientation.

**SERIES 4100-S**
- Bidirectional metering, BACnet full data set, pulse input and alarm outputs.

**PRODUCT DIAGRAM**

**To avoid distortion, use parallel wires for control power and voltage inputs.**

The following symbols are used in the wiring diagrams on the following pages:

**SPECIFICATIONS**

**Measurement Accuracy:**
- Real Power and Energy: ±0.5% of Full Scale, ≤2 Wmax
- Power Factor: ±1% C1 (1% C1 EF) ≤ 2% C1 (1% C1 EF)
- Energy: ±0.5% C1 (1% C1 EF) ≤ 2% C1 (1% C1 EF)

**Input Voltage Characteristics:**
- RMS Rated: 480 VAC max.; 600 VAC min.
- Input Frequency Range: 50/60 Hz

**Input Current Characteristics:**
- RMS Rated: 300 VAC L-N, 480 VAC L-L
- Environmental: Operating Temperature: -30 to 70 °C (G21 158 °F)
- Humidity Range: 6% RH (non-condensing)
- Altitude of Operation: 3 km max.

**Agency Approvals:**
- UL Listed, C-UL Listed
- C-Tick
- CE Marked
- CE Maximum: 300 V L-N
- CE/EN 61010-1: CAT III 50/60 Hz
- CE/EN 61010-0: 0.2 %
- Center of Gravity: 109 mm (4.3")
- Terminal Block Wire Size: 24 to 14 AWG (0.2 to 2.1 mm²)
- Terminal Block Screw Torque: 0.37 ft-lb (0.5 N-m) nominal/0.44 ft-lb (0.6 N·m) max.
- Dimension of Area of Enclosure: 107 mm (4.2")

**WARNING:** LOSS OF CONTROL. Networked devices can interfere with critical control functions.

**SUPPORTED SYSTEM TYPES**

**SYSTEM TYPE**

<table>
<thead>
<tr>
<th>System Type</th>
<th>Voltage Disconnect Switch</th>
<th>Current Transducer</th>
<th>Potential Transformer</th>
<th>Protection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Phase Wye</td>
<td>Earth Ground</td>
<td>Current Transformer</td>
<td>Potential Transformer</td>
<td>Protection containing a voltage disconnect switch with or without circuit breaker. The disconnect switch must be rated for the available short circuit current at the connection point.</td>
<td>Voltage Disconnect Switch</td>
</tr>
<tr>
<td>Three Phase Wye</td>
<td>Earth Ground</td>
<td>Current Transformer</td>
<td>Potential Transformer</td>
<td>Protection containing a voltage disconnect switch with or without circuit breaker. The disconnect switch must be rated for the available short circuit current at the connection point.</td>
<td>Voltage Disconnect Switch</td>
</tr>
</tbody>
</table>

**CAUTION:** DO NOT USE CURRENT OUTPUT (e.g. 5A) CTs ON THIS PRODUCT.

**NOTE:** This product is designed only for use with 1Y or 333V current transformers when the energy pulse output contacts are closed.

**RISK OF EQUIPMENT DAMAGE**

**NOTICE**

- **S4100-K**
  - 2.4 "(61 mm)
  - 9.2 " (233 mm)
- **S4100-S**
  - 2.4 " (61 mm)
  - 5.1 " (130 mm)

**PRODUCT INFORMATION**

**Series 4100-K**
- Bidirectional metering, Modbus full data set, pulse and alarm outputs.
- For all S4100 Series (bidirectional) models, observe correct CT orientation.

**Series 4100-S**
- Bidirectional metering, BACnet full data set, pulse input and alarm outputs.
For all Series 4100 meters, CTs are polarity sensitive. Observe orientation.

- 1-Phase Line-to-Neutral 2-Wire System 1 CT
- Use System Type 17 (L+N)

- 3-Phase 3-Wire System 1 CT
- Use System Type 17 (L)

- 3-Phase 4-Wire System 3 CT to PT
- Use System Type 12 (L+N)

- 4-Phase 4-Wire System 3 CT to PT
- Use System Type 12 (L+N)

RS-485 COMMUNICATIONS (S4100-K & S4100-S)

Daily-changing Devices to the Power Meter

- The RS-485 bus is a 2-wire, non isolated RS-485 signal ground and the comm output shield terminal. Use with contacts that do not require

- The service type to be monitored

DISPLAY SCREEN DIAGRAM

- LCD Screen: Screen Name or Units
- Buttons: Alarms Indicator
- Diagnostics Alert
- Numeral: Data
- (Left) Back
- (Right) Next
- (Up) Select
- (Down) Select

INITIAL SETUP INSTRUCTIONS

- Use this section to enter:
  - Modbus or BACnet communication parameters
  - CT (Current Transformer) input current ranges
  - The service type to be monitored

These instructions assume the meter is set to factory defaults. If it has been previously configured, all optional values should be checked. For more options (i.e., potential transformer ratios, etc.) and the full setup instructions, see the full installation guide for the specific model at www.atlview.com

A. To Navigate to the Setup screens:

1. Press [ ] repeatedly until the 15F screen appears.
2. Press [ ] to get to the 15PS screen.
4. Use [ ] or [ ] to select the parameter you want to set.
5. After you set the parameters you want, use [ ] or [ ] to set the next Setup screen or exit the Setup screens (return to SETUP).