

VerifEye® Series 7000 12 Circuit Advanced Branch Circuit Monitor



71D12
Wall Mount



70D12
Embedded (Panel Mount)



Solid Core CT



Split Core CT



Hinged Split
Core CT



Rogowski
Rope CT



70D12-N4X
UL508 Panel

Description

The VerifEye® Series 7000 12 Circuit Advanced Branch Circuit Monitor is an ideal fit for applications requiring more than a single, three-phase meter, but less than the full capacity of the 48-circuit models of the Series 7000 family. The meter's versatile power metering functionality continues the VerifEye mission of lowering the total cost of collecting data by reducing install complexity, and increasing flexibility. The plug-and-play integration ensures the hundreds of data points are immediately captured and made available for countless applications.

The Series 7000 supports all industry standard communications protocols including RS-485, BACnet MS/TP, BACnet IP, Modbus TCP and Ethernet for maximum flexibility. The integrated USB port may be used for local configuration.

The Series 7000 monitors current, voltage, instantaneous power, demand and energy consumption of each circuit in a panelboard, including the main feed. Phase loss alarms allow the meter to trigger an alarm relay when the voltage drops below a user defined threshold.

Applications

- Real-time power monitoring for:
 - Commercial
 - Retail
 - Industrial
 - Higher Education/Campuses
- REIT management
- Data centers
- Tenant submetering

Features

- 12 independent, user defined inputs
 - 12 individual panel circuits
 - (4) 3-phase loads
 - Solid core CTs (100A & 200A)
 - Split core CTs (50A to 800A)
 - Hinged split core CTs (50A to 400A)
 - Rogowski coil CTs (5A to 4000A)
 - User configured combination
- Line powered from 90-600V, phase-to-phase
- ANSI & IEC metering system accuracy including branch CTs
- Supports solid core, split core and Rogowski Coil CTs
- Meter board features:
 - Easy access terminals for CT wiring, removable connectors
 - Easily route cable and view LEDs from any angle
- Stores up to 60 days of 15 min interval kWh data, available as CSV download
- Reports volts, amps, power, demand, and energy for each circuit
- Provides multi-phase totals for loads with any combination of 1-, 2-, and 3-pole breaker positions.
- User-configurable alarm thresholds register for under voltage and phase loss
- Selectable phase orientation and number of circuits
- Limited 5-year warranty

NOTE: Factory commissioning on the Series 7000 Meters is highly recommend as remote configuration of the meters is not an option offered by Leviton Technical Support.

Capabilities

Measured Parameters*

- Bidirectional energy measurements
- Volts
- Amps
- kW
- kVAR
- kVA
- aPF
- dPF
- kW demand
- kVA demand
- Import (Received)
- kWh, Export (Delivered)
- kWh
- Net kWh
- Import (Received) kVAh
- Export (Delivered) kVAh
- Net KVAh, Import (Received)
- kVARh, Export (Delivered)
- kVARh
- Net kVARh
- THD Theta
- Frequency

* All parameters for each phase and system total

Accuracy

- 0.2% ANSI C12.20-2010 Class 0.2

Wide Range Power

- 90-346 Volts AC Line-to-Neutral
- 600V Line-to-Line, Cat 3

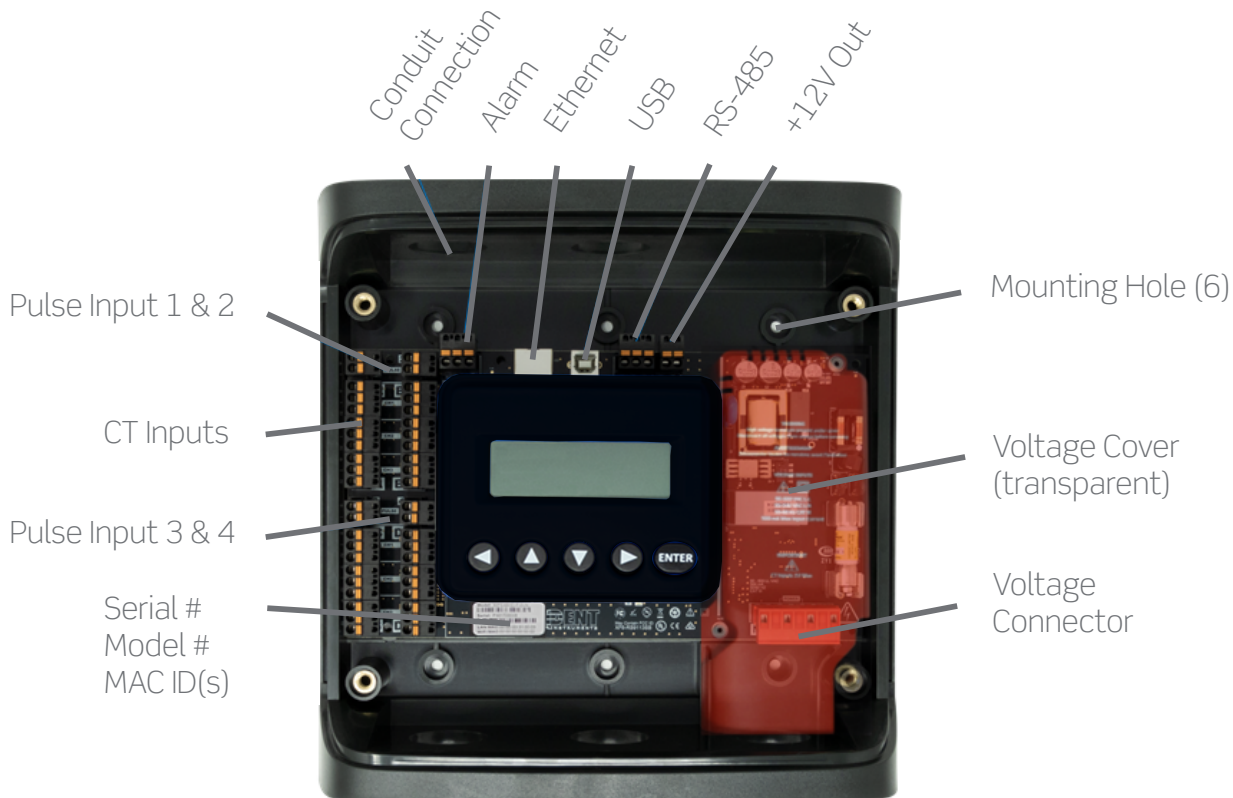
Highly Configurable

- 1P/2W, 2P/3W, 3P/4W (WYE), 3P/3W (Delta)

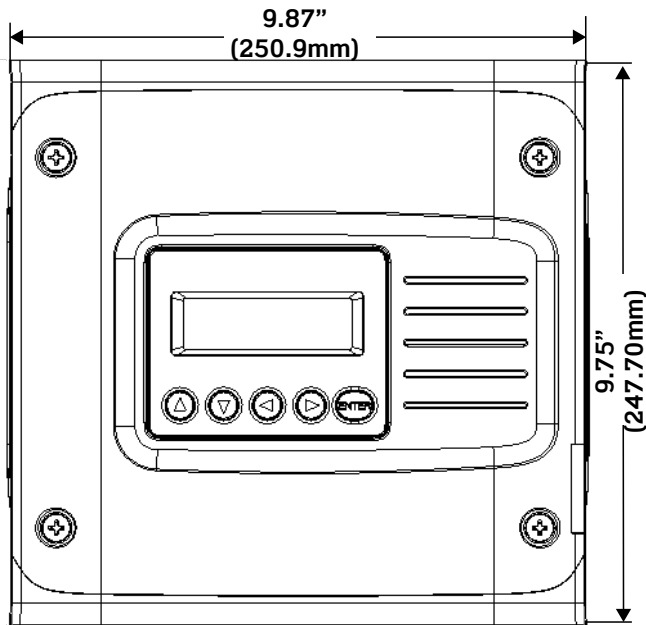
User Interface Options

- Meter front panel display unit
- Power Meter Viewer software with either USB direct to the meter or PC/Ethernet

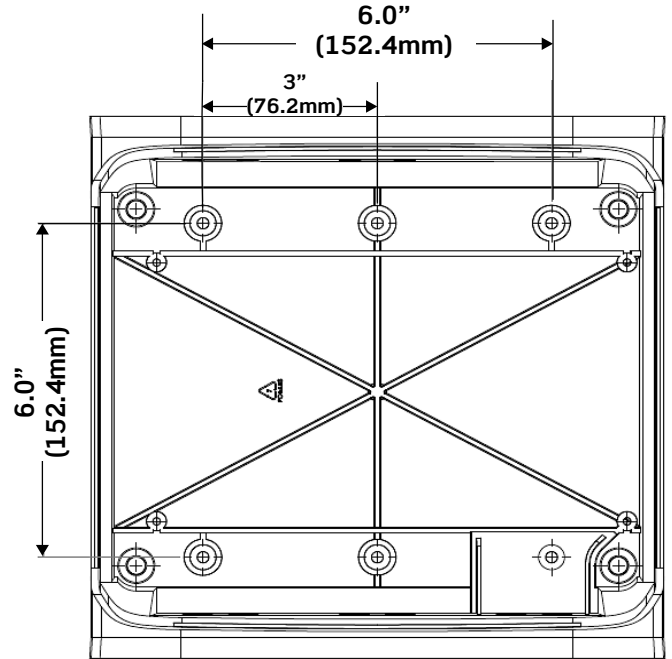
Panel Features



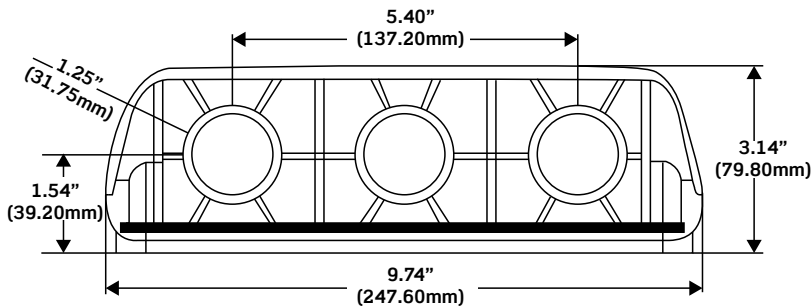
Dimensions - 71D12, 70D12, and 70N12



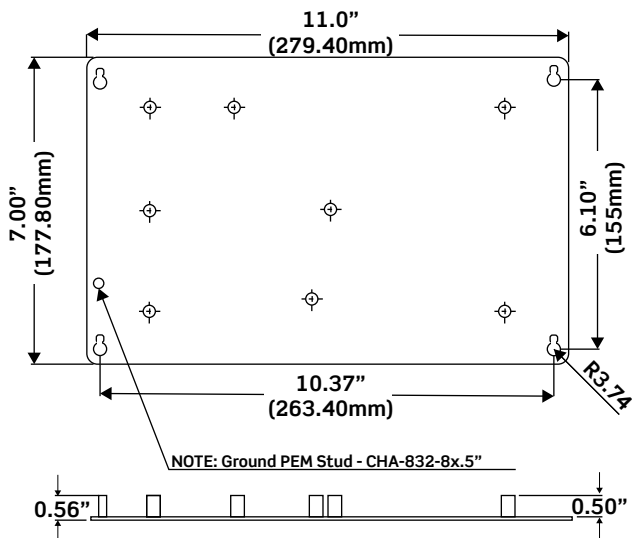
71D12 Enclosure Front



71D12 Enclosure Back

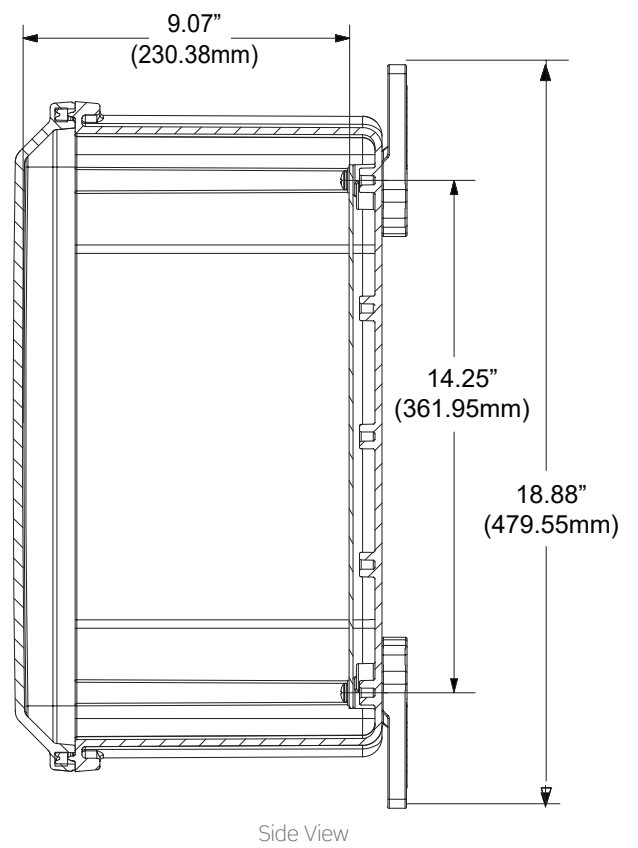
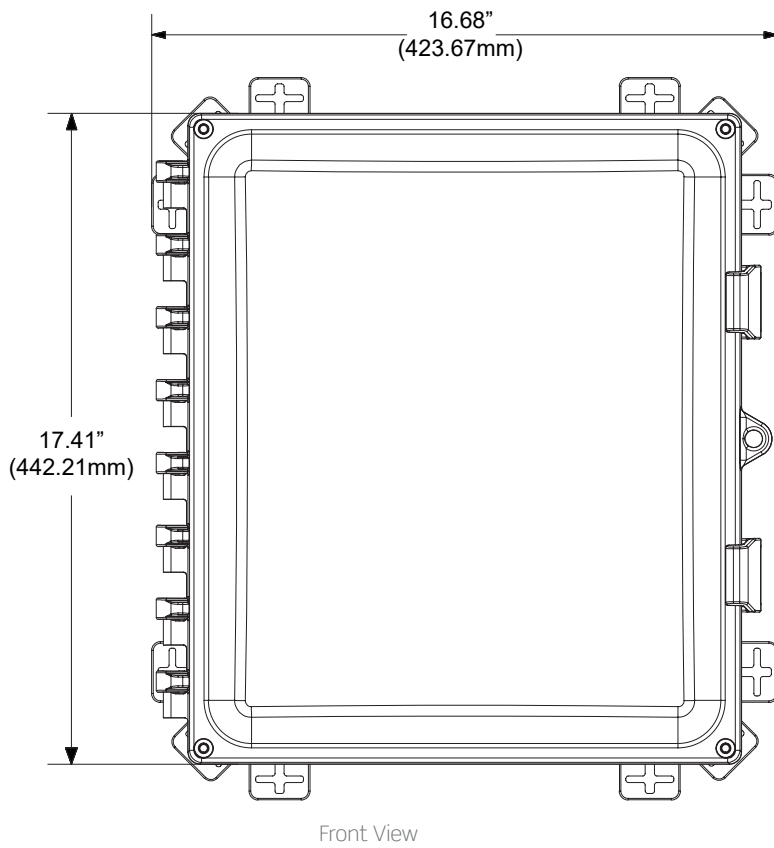
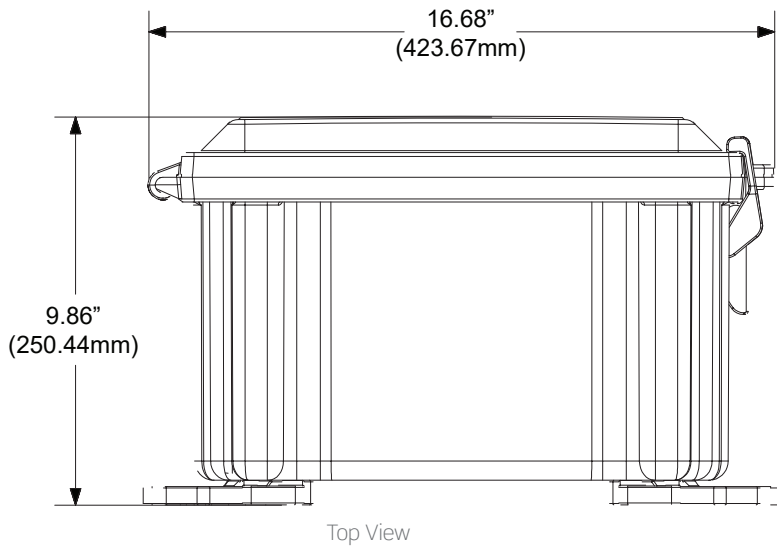


71D12 Enclosure Bottom



70D12 and 70N12 Embedded
(Panel Mount)

Dimensions - 71D12-N4X



Specifications

| Panelboard Monitoring System | |
|-------------------------------------|---|
| Electrical | |
| Service Type | 1P/2W, 2P/3W, 3P/4W, 3P/3W (Delta) |
| Power | From L1 Phase to L2 Phase, 90-600VAC RMS CAT 3 50/60Hz, 500mA AC Max |
| AC Protection | 0.5A Fuse 200kA interrupt capacity |
| Power Out | Unregulated 12VDC output, 200 mA, self-resetting fuse |
| Voltage Channels | 90-347 Volts AC Line-to-Neutral, 600V Line-to-Line, CAT 3 |
| Current Channels | 12 channels, 0.525 VAC max, 333 mV CTs, 0-4,000+ Amps depending on CT |
| Maximum Current Input | 150% of current transducer rating (mV CTs) to maintain accuracy. Measure up to 4000A with Rogowski Coil CTs. |
| Measurement Type | True RMS using high-speed Digital Signal Processing (DSP) with continuous sampling |
| Line Frequency | 50/60Hz |
| Mechanical | |
| Wire Connections | 12-22 AWG 600 VAC, voltage connection must be #14 AWG or larger & 600 VAC rated |
| Mounting | Panel Mount/Enclosure |
| High Voltage Cover | IP30 |
| PCBA Mounting | 0.5" standoffs #6 (quantity 6, user supplied) |
| Communications | |
| Hardware | RS-485, Ethernet and USB (for configuration only) |
| Supported Protocols | Modbus RTU, BACnet MS/TP, Modbus TCP or BACnet IP |
| Max Distance | Modbus RTU - 1200 meters (4000 ft) max, other network protocols follow standard network management practices |
| Data Bits | 8 |
| Parity | None, Even, Odd |
| Stop Bit | 2,1 |
| Environmental | |
| Operating Temperature | -4° to 140°F (-20° to 60°C) At -4°F, LCD display could be illegible, meter voltage at -4°F must exceed 100 VAC to power the meter |
| Operating Humidity | 5-95% non-condensing |
| Codes & Standards | |
| Accuracy & Billing | ANSI C12.20 Class 0.2, NIST traceable calibration |
| Listing/Safety | CE EN 61000-6-4: Class A, UL Listed (Indoor enclosure version only), UL Recognized (Circuit board version only) |
| Other | |
| Enclosure Dimensions | 9.75" H x 9.87" W x 3.14" D (247.70mm x 250.90mm x 79.80mm) |
| Panel Mount Dimensions | 7.00" H x 11.00" W x 0.56" D (177.80mm x 279.40mm x 14.22mm) |

Ordering Information

Series 7000 12 Circuit Advanced Branch Circuit Monitor

| Cat. No. | Description |
|-----------|--|
| 70D12-000 | Series 7000 Embedded Branch Circuit Monitor Platform, 12 inputs with display |
| 71D12-000 | Series 7100 Branch Circuit Monitor, 12 Inputs with display, NEMA 1 enclosure |

VerifEye UL508A Configured Panel Solutions

| Cat. No. | Description |
|-----------|---|
| 70D12-N4X | VerifEye 70D03, 3P Disconnect (NEMA 4X Enclosure) |

Compatible CT Options*

| Cat. No. | Description | Accuracy |
|-----------|---|----------------|
| CDV01-W15 | Solid Core CT, 333mV:100A, 0.60" | 0.2% |
| CDV02-W20 | Solid Core CT, 333mV:200A, 0.78" | 0.2% |
| CTV5X-WA4 | Hinged Split Core CT, 333 mV: 50A, .40" Window | 0.5% |
| CTV01-KD0 | Split Core CT, 333mV:100A, 1" Window | 0.5% |
| CTV01-WC9 | Hinged Split Core CT, 333 mV: 100A, .94" Window | 1.0% |
| CTV02-KD0 | Split Core CT, 333mV:200A, 1" Window | 0.5% |
| CTV02-WC9 | Hinged Split Core CT, 333 mV: 200A, .94" Window | 1.0% |
| CTV04-KD1 | Split Core CT, 333mV:400A, 1.25" Window | 1.0% |
| CTV04-WD5 | Hinged Split Core CT, 333 mV: 400A, 1.42" Window | 1.0% |
| CTV08-KG1 | Split Core CT, 333mV:800A, 3.0"x3.5" Window | 1.0% |
| CRV50-LR2 | 5-4000A Rogowski Coil CT 16", 4.5" Inner Coil Diameter, 131mV/1000A @ 60Hz, 109.2mV/1000A @ 50Hz | <0.2% accuracy |
| CRV50-LR4 | 5-4000A Rogowski Coil CT 24", 7.65" Inner Coil Diameter, 131mV/1000A @ 60Hz, 109.2mV/1000A @ 50Hz | <0.2% accuracy |

*The Series 7000 Embedded Branch Circuit Monitors are compatible with 333mA CTs, sold separately.

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Visit our Website at: www.leviton.com/verifeye

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