

PRELIMINARY

POWERSCOUT™ 48 HD

NETWORKED MULTI-CIRCUIT METERING

REVENUE GRADE INSTRUMENTS FOR SUPERIOR ENERGY MEASUREMENT



48
channels



APPLICATIONS

- Data Centers
- Tenant Submetering
- Bi-Directional Metering
- Real-Time Power Monitoring in Commercial, Retail, and Industrial environments

FEATURES

- 48 channels: Multi-circuit submeter monitors voltage, current, power, energy, and many other electrical parameters on any combination of single and/or three-phase systems
- Two independent voltage inputs allow the PowerScout HD meter to be used on two systems simultaneously
- Line-Powered: 90-600V Phase-to-Phase Power Supply
- Revenue grade. ANSI C12.20-2010 Class 0.2
- Available with UL 94-V0 enclosure or as a circuit board to be mounted in an enclosure of your choice
- Mounting plate included on circuit board only version to help facilitate easy, safe installation
- Safest installation ever: High-Voltage Cover offers additional level of protection
- The PowerScout HD uses either BACnet or Modbus protocol and features 2 digital pulse output ports. All models feature both serial and Ethernet.
- Positive and negative Modbus registers/BACnet objects allow for the PowerScout to be used on bi-directional metering projects
- Mix-and-match a full range of Split Core or RōCoil™ Rogowski-style CTs, including several revenue-grade options
- Display shows real-time information about the meter configuration and metered data
- PhaseChek™ confirms proper CT orientation
- UL Listed (enclosure version) or UL Recognized (circuit board only version)
- CE Mark

MAXIMUM FLEXIBILITY FOR MONITORING

The PowerScout 48 HD is a versatile, multi-channel instrument. The modular design allows it to be configured for monitoring multiple electrical circuits or for current-only monitoring of branch circuits. It can be supplied with any of DENT's internally-shunted split-core or RōCoil CTs. Monitor any combination of up to 16 three-phase or 48 single-phase electrical devices with a single PowerScout HD. With data updates every 1 second and ANSI C12.20-2010 Class 0.2 revenue grade accuracy (depending on CT), the PowerScout 48 HD is well-suited for data center monitoring, tenant submetering, and for accountability metering in commercial, retail, and industrial facilities.

INDUSTRY-STANDARD MODBUS OR BACNET

The PowerScout 48 HD supports both Modbus (SunSpec IEEE-754) and BACnet communications protocols. Communications interface can be accomplished through standard serial RS-485 or Ethernet using either Modbus, BACnet MS/TP, Modbus TCP, or BACnet IP data formats. Additionally, the PowerScout 48 HD features two pulse outputs. A USB port is standard for easy meter configuration.

EASY INSTALLATION

Every PowerScout is line powered and designed to operate on any voltage from 90-600VAC. Unique to the PowerScout 48 HD are two independent voltage inputs. Modbus & BACnet protocols are field-selectable and any combination of split-core or flexible RōCoil CTs can be used. Configure the meter using the ViewPoint HD software utility and a direct USB connection prior to installation. Eliminate expensive trips back into the field: patented* PhaseChek™ ensures proper CT-to-phase installation the first time.

*U.S. Patent and Trademark Office Patent No. 7,612,552

POWERSCOUT™ 48 HD SPECIFICATIONS

TECHNICAL

SERVICE TYPE	Single Phase, Split Phase, Three Phase-Four Wire (WYE), Three Phase-Three Wire (Delta)
POWER	From L1 Phase to L2 Phase. 90-600VAC RMS CAT III 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	80-346 Volts AC Line-to-Neutral, 600V Line-to-Line, CAT III. Two voltage reference inputs.
CURRENT CHANNELS	48 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 RoCoil CTs
MEASUREMENT TYPE	True RMS using high-speed digital signal processing (DSP) with continuous sampling
LINE FREQUENCY	50/60 Hz
WAVEFORM SAMPLING	1.8 kHz
PARAMETER UPDATE RATE	1 second
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
RESOLUTION	Values reported in IEEE-754 single precision floating point format (32 bit).
DISPLAY	4-line display, tri-color backlight (PhaseChek™)
ALARMS	Voltage Phase Loss Alarm (SPDT Relay - 30 VDC)
PULSE OUTPUT	Open Collector, 5mA max current, 40V max open voltage

COMMUNICATIONS

HARDWARE	RS-485, Ethernet, and USB (for configuration only)
SUPPORTED PROTOCOLS	Modbus (using SunSpec IEEE-754 single precision floating point model), or BACnet
MAX DISTANCE	1200 meters with Data Range of 100K bits/second or less
SUPPORTED BAUD RATES	9600, 19200, 38400, 57600, 76800, 115200 baud
DATA BITS	8
PARITY	None, Even, Odd
STOP BIT	2, 1
DATA FORMATS	Modbus, BACnet MS/TP, Modbus TCP or BACnet IP

MECHANICAL

WIRE CONNECTIONS	12-22 AWG
MOUNTING	Panel Mount/Enclosure
PCBA MOUNTING	0.5" Standoffs #6 (quantity 6) (user supplied)
HIGH VOLTAGE COVER	IP40
MOUNTING PLATE	Available with Circuit Board Only model
OPERATING TEMPERATURE*	-20° to 60°C (-4° to 140°F)
HUMIDITY	5% to 95% non-condensing
ENCLOSURE	ABS Plastic, 94-V0 flammability rating
ENCLOSURE DIMENSIONS	(L) 34.3cm x (W) 25.4cm x (H) 7.6cm (13.5" x 10.0" x 3.0")
PCBA DIMENSIONS	(L) 21.6cm x (W) 21.6cm x (H) 6.4cm (8.5" x 8.5" x 2.5")

CERTIFICATIONS

UL RECOGNIZED	Circuit board only version
UL LISTED	Indoor enclosure version
CE	EN 61000-6-4: Class A
ANSI C12.20 CLASS 0.2	NIST Traceable Calibration

VIEWPOINT HD SOFTWARE

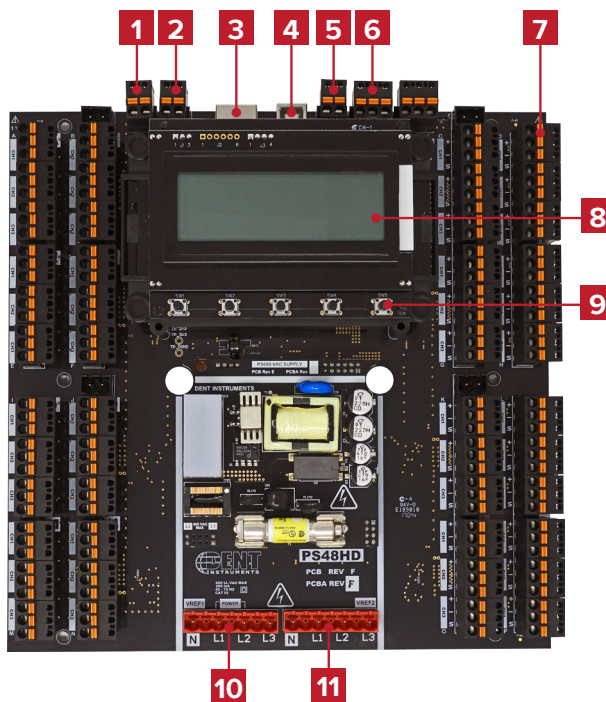
OPERATING SYSTEM	Windows® 10, Windows® 8, Windows® 7
COMMUNICATIONS	Ethernet or USB. One free USB port required on PC.
SECURITY	2 password levels

ORDERING PART NUMBERS

PS48HD-C-D-N	POWERSCOUT 48 HD, WITH ENCLOSURE + DISPLAY
PS48HD-C-N-N	POWERSCOUT 48 HD, WITH ENCLOSURE, NO DISPLAY
PS48HD-P-D-N	POWERSCOUT 48 HD, MOUNTING PLATE + DISPLAY
PS48HD-P-N-N	POWERSCOUT 48 HD, MOUNTING PLATE, NO DISPLAY

POWERSCOUT 48 HD ANATOMY

1. Pulse Out 1
2. Pulse Out 2
3. Ethernet
4. USB
5. 12V Out (2W)
6. RS-485
7. CT Connections (48 total)
8. Display
9. Navigation Buttons
10. Voltage Input 1
11. Voltage Input 2



*At -20°C, LCD display could be illegible. Meter voltage @ -20°C must exceed 100 VAC to power the meter.

ESIS
Industrial Electronics

www.esis.com.au
Ph 02 9481 7420
Fax 02 9481 7267
esis.enq@esis.com.au



DENT Instruments, Inc.
Energy & Power Measurement Solutions

An ISO 9001:2008 Certified Company

925 SW EMKAY DRIVE
BEND, OREGON 97702 USA