

PRELIMINARY

POWERSCOUT™ 12 HD

NETWORKED MULTI-CIRCUIT METERING

REVENUE GRADE INSTRUMENTS FOR SUPERIOR ENERGY MEASUREMENT



12
channels

UL
LISTED
E186827

CE

MAXIMUM FLEXIBILITY FOR MONITORING

The PowerScout 12 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 4 three-phase or 12 single-phase electrical devices with a single PowerScout 12 HD. With data updates every 1 second and ANSI C12.20-2010 Class 0.2 revenue grade accuracy (depending on CT), the PowerScout 12 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 12 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. A USB port is standard for easy meter configuration.

EASY INSTALLATION

Every PowerScout is line powered and designed to operate on a broad range of voltages, from 90-600VAC. Modbus or 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™ Technology ensures proper CT-to-phase installation the first time.



APPLICATIONS

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

FEATURES

- 12 channels: Multi-circuit submeter monitors voltage, current, power, energy, and many other electrical parameters on any combination of single and/or three-phase systems
- 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
- Safest installation ever: High-Voltage Cover offers additional level of protection
- The PowerScout HD uses either BACnet or Modbus protocol and 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

POWERSCOUT™ 12 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.
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 RøCoil 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™)

COMMUNICATIONS	
HARDWARE	RS-485, Ethernet, and USB (for ViewPoint HD use 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 4) (user supplied)
HIGH VOLTAGE COVER	IP40
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) 24.8cm x (W) 25.4cm x (H) 7.6cm (9.75" x 10.0" x 3.0")
PCBA DIMENSIONS	(L) 12.7cm x (W) 21.6cm x (H) 6.4cm (5.0" 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	
PS12HD-C-D-N	POWERSCOUT 12 HD, WITH ENCLOSURE + DISPLAY
PS12HD-C-N-N	POWERSCOUT 12 HD, WITH ENCLOSURE, NO DISPLAY
PS12HD-B-D-N	POWERSCOUT 12 HD, NO ENCLOSURE + DISPLAY
PS12HD-B-N-N	POWERSCOUT 12HD, NO ENCLOSURE, NO DISPLAY

POWERSCOUT 12 HD ANATOMY

1.

CT Connections
(12 total)
2.

Ethernet
3.

USB
4.

RS-485
5.

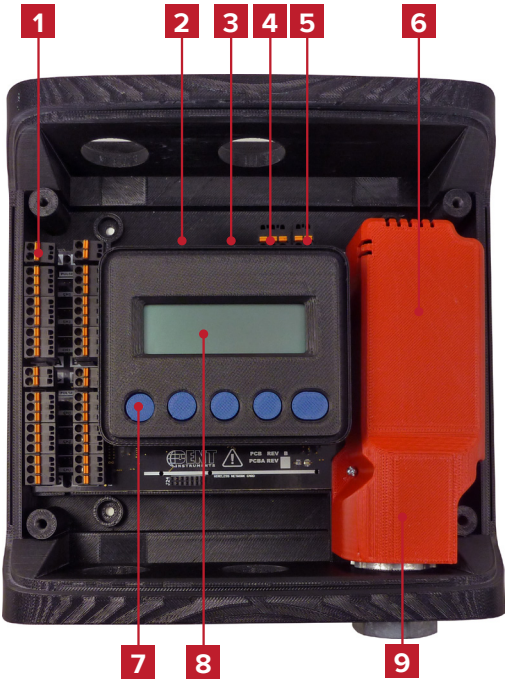
12V Out (2W)
6.

High Voltage
Cover
7.

Navigation
Buttons
8.

Display
9.

Voltage Input
(under cover)



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