

# POWERSCOUT™ 3 HD

NETWORKED 3-PHASE METER

REVENUE GRADE INSTRUMENTS FOR SUPERIOR ENERGY MEASUREMENT



3  
channels



DIN Rail Enclosure Pictured (PS3HD-R-D-N). Wall Mount Enclosure (PS3HD-C-D-N) is also available.



## APPLICATIONS

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

## MAINS MONITORING

The PowerScout 3 HD is the final model in the HD family replacing the PowerScout 3037 as DENT Instruments' 3-channel 3-phase meter. The PS3HD brings increased measurement performance and communication options in a single SKU. It can utilize any of DENT's internally shunted, 333 mV output split-core or RôCoil CTs. Monitor a single three phase load or network with other PowerScout HD meters to monitor several loads across your facility.

## REVENUE-GRADE PERFORMANCE

With high speed continuous sampling, data updates rate of 1 Hz and ANSI C12.20-2015 Class 0.2 revenue grade accuracy (depending on CT), the PowerScout 3 HD is well-suited for accountability metering in commercial, retail, and industrial facilities including demand response and tenant submetering.

## LINE OR USB POWERED

PowerScout 3 HD instruments are line-powered with an internal wide-range power supply, allowing line-to-line voltages from 90-600 VAC. For convenience, the PS3HD also includes a USB (Type C) connector which allows the meter to be powered from a host PC or laptop computer during configuration.

## INDUSTRY-STANDARD MODBUS OR BACNET

The PowerScout 3 HD supports both Modbus (based on SunSpec IEEE-754) and BACnet communications protocols. Communications interface can be accomplished through serial RS-485 or Ethernet using either Modbus RTU, BACnet MS/TP, Modbus TCP, or BACnet IP protocols.

## TWO AVAILABLE CONFIGURATIONS

The PowerScout 3 HD is available in a compact enclosure to facilitate mounting in the UL-approved enclosure of your choice using DIN rail or in a wall-mount enclosure that's ready to be installed near your panel or switch gear.

## QUICK SETUP

The PowerScout 3 HD can be configured using one of two interfaces: PC Application ViewPoint HD or Web Browser. Configurations can be saved to a template for re-use. Use the on-board LCD and thumb wheel to verify setup.

## POWERFUL TROUBLESHOOTING

The PowerScout 3 HD meter includes DENT's patented\* PhaseChek™ circuitry for identifying mis-phased and backwards CTs. When used in conjunction with ViewPoint HD, advanced analytics are available including waveform visualization, vector polar plotting and harmonic distortion analysis.

## FEATURES

- 3 channels: 3-phase submeter monitors voltage, current, power, energy, and many other electrical parameters on single or three-phase systems
- Two models available: DIN Rail Mount Enclosure or Wall Mount Enclosure
- Revenue grade. ANSI C12.20-2015 Class 0.2 certification
- Interval Data Recording: Store up to 63 days of 15-minute kWh data
- Continuous sampling; no blind cycles.
- Use with a full range of DENT Split Core or RôCoil™ Rogowski-style CTs, including several revenue-grade options
- Line-Powered: 90-600V Phase-to-Phase Power Supply
- Display shows real-time information about the meter configuration and metered data
- Communicate using either BACnet or Modbus protocol
- User-configurable alarm with isolated output
- Data updates occur every 1.0 seconds
- Patented PhaseChek™ technology confirms proper CT orientation
- UL Listed, CE Mark, BTL Certification

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

# POWERSCOUT™ 3 HD

## KEY HARDWARE/SOFTWARE FEATURES

### EASY DEPLOYMENT

Setting the PowerScout HD up for a new deployment has never been easier, thanks to two features:

#### Network Scan

Using ViewPoint HD Software, you can now quickly scan the local area network and find all the PowerScout HD meters installed on the network. The results page shows each meter's system description and even allows for some basic meter setup directly from the scan window. Use ViewPoint HD to give each meter a "friendly" name, such as "3rd Floor Utility Rm," to identify the right meter even faster.

#### Pre-Configuration

Maybe you have several meters that need to be configured the same way. Or, maybe you don't have the meter in your possession, but need to configure it ahead of time for an installer. It is now possible to build a meter configuration file without having a meter connected. This is especially helpful for teams who handle configuration and installation in two separate steps.

### INTERVAL DATA RECORDING & RTC

The PowerScout HD Series features interval data recording of kWh. The meter's non-volatile memory stores up to 63 days of 15-minute kWh data that can be downloaded in the event of lost communication with the RTU. The CSV data file can be quickly downloaded through a direct USB or Ethernet connection using ViewPoint HD software and can be used to backfill any missing data. This feature works automatically in the background to record data - no configuration necessary.

In addition, the PowerScout HD Series has a capacitor-backed real-time clock (RTC) to ensure an accurate time stamp on all recorded data. Unlike other systems, there is no battery to change and the capacitor retains calendar time for up to 1 week. The clock can be synchronized with the PC clock during meter setup.



### PHASE LOSS ALARM

The PowerScout HD power meter has the ability to set a Phase Loss Alarm. This alarm can be set through ViewPoint HD software to be triggered by the voltage dropping below a certain set threshold. The perdittance setting is also adjustable within the software to allow momentary drops without triggering an alarm.

### NOW DENTCLOUD COMPATIBLE

Completely integrated with the entire PowerScout HD Series, setting up is as simple as connecting the meter to the internet and then adding the meter to your cloud account. DENTCloud allows direct data visualization through customizable widgets and dashboards. Real-time views of data points, graphs, and trends can be easily created to give you the insights that are important to you.

### NOW TOU CAPABLE

DENT now allows for advanced tariff-based tracking, ensuring that energy consumption is recorded and billed according to the exact pricing schedule in effect. With this capability, building owners can confidently manage energy costs, improve cost recovery, and enhance tenant satisfaction — all while adapting to the evolving energy marketplace.



# POWERSCOUT™ 3 HD SPECIFICATIONS

## TECHNICAL

|                       |  |
|-----------------------|--|
| SERVICE TYPE          | Single Phase, Three Phase-Four Wire (WYE), Three Phase-Three Wire (Delta)  |
| POWER                 | From L1 Phase to L2 Phase. 90-600VAC RMS CAT III 50/60 Hz, 500 mA AC Max   |
| AC PROTECTION         | 0.5 A internal fuse protection. 200 KA interrupt.  |
| VOLTAGE CHANNELS      | 80-346 Volts AC Line-to-Neutral, 600 V Line-to-Line, CAT III.  |
| CURRENT CHANNELS      | 3 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 4000 A with RøCoil CTs  |
| MEASUREMENT TYPE      | True RMS using high-speed digital signal processing (DSP)  |
| LINE FREQUENCY        | 50/60 Hz   |
| SAMPLING              | Continuous 1.8 kHz (no blind cycles)   |
| PARAMETER UPDATE RATE | 1.0 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 element total |
| ACCURACY              | 0.2% ANSI C12.20-2015 Class 0.2  |
| RESOLUTION            | 32-bit floating point  |
| DISPLAY               | 2 x 16-character display with tri-color backlight  |
| ALARM OUTPUT          | Undervoltage (open collector- 30VDC Max.)  |

## COMMUNICATIONS

|                           |  |
|---------------------------|--|
| HARDWARE                  | RS-485 Serial and Ethernet   |
| MAX COMMUNICATION LENGTH  | 1200 meters at 100K bits/second or less  |
| COMMUNICATION RATE (BAUD) | Modbus: 9600, 19200, 38400, 57600, 76800, 115200 baud<br>BACnet: 9600, 19200, 38400, 76800 |
| DATA BITS                 | 8  |
| PARITY                    | None, Even, Odd  |
| STOP BIT                  | 2, 1   |
| SUPPORTED PROTOCOLS       | Modbus RTU, BACnet MS/TP, Modbus TCP or BACnet IP  |

## MECHANICAL

|                       |  |
|-----------------------|--|
| WIRE CONNECTIONS      | 12-28 AWG 600 VAC, Voltage connection must be #14 AWG or larger & 600 VAC rated  |
| MOUNTING              | Wall mount enclosure or TS35/7.5 DIN Rail  |
| 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  | DIN Rail Version<br>(L) 19.08cm x (W) 8.23cm x (H) 3.76cm (7.51" x 3.24" x 1.48")<br>Wall Mount Version<br>(L) 25.70cm x (W) 14.00cm x (H) 5.37cm (10.12" x 5.50" x 2.12") |
| WEIGHT (APPROXIMATE)  | DIN Rail Version<br>363 g (13 ounces), exclusive of CTs.<br>Wall Mount Version<br>635 g (22 ounces), exclusive of CTs  |

## CERTIFICATIONS

|                       |   |
|-----------------------|---|
| UL LISTED             | Conforms to UL Std 61010-1, 3rd Edition & IEC 61010-2-030 1st Edition |
| CE                    | LVD (EN61010-1), EMC (EN61326-1), RoHS 2 (EN50581)                    |
| ANSI C12.20 CLASS 0.2 | NIST Traceable Calibration  |



## VIEWPOINT HD SOFTWARE

|                   |  |
|-------------------|--|
| OPERATING SYSTEM  | Windows® 11, Windows® 10, Windows® 8, Windows® 7     |
| COMMUNICATIONS    | 10/100 Ethernet and USB 2.0                          |
| WEB PAGE SECURITY | 2 levels of PIN protection (Read/Write or Read-Only) |

## ORDERING PART NUMBERS

|               |   |
|---------------|---|
| PS3HD-R-D-N   | POWERSCOUT 3 HD, DIN Rail Mount Enclosure with Display                    |
| PS3HD-R-D-N-D | POWERSCOUT 3 HD, DIN Rail Mount Enclosure with Display, DENTCloud Enabled |
| PS3HD-R-D-N-T | POWERSCOUT 3 HD, DIN Rail Mount Enclosure with Display, TOU Enabled       |
| PS3HD-C-D-N   | POWERSCOUT 3 HD, Wall Mount Enclosure with Display                        |
| PS3HD-C-D-N-C | POWERSCOUT 3 HD, Wall Mount Enclosure with Display, CW&M OPTION           |
| PS3HD-C-D-N-D | POWERSCOUT 3 HD, Wall Mount Enclosure with Display, DENTCloud Enabled     |

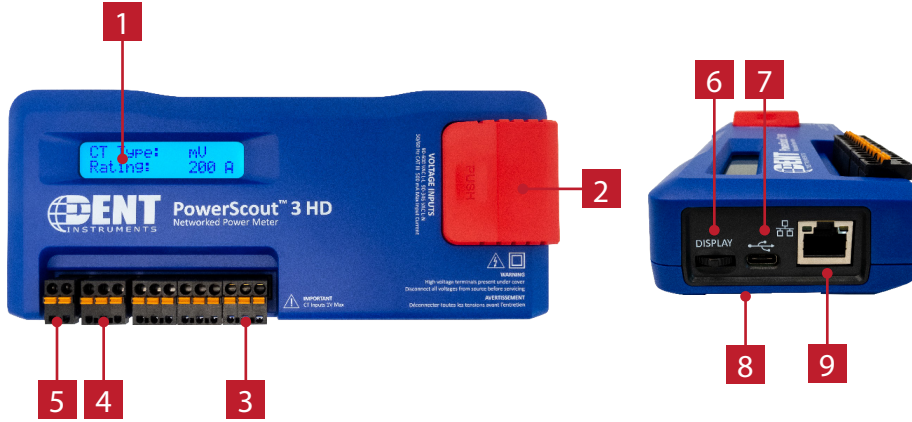
\*At -20°C, LCD display could be illegible. Meter voltage @ -20°C must exceed 100 VAC to power the meter.  
\*\*Colder temperatures require higher voltage to power the meter.

# POWERSCOUT™ 3 HD ANATOMY

## TWO AVAILABLE CONFIGURATIONS

Available to be mounted in the external enclosure of your choice or as a self-contained wall-mounted enclosure option.

DIN RAIL MOUNT ENCLOSURE  
PS3HD-R-D-N

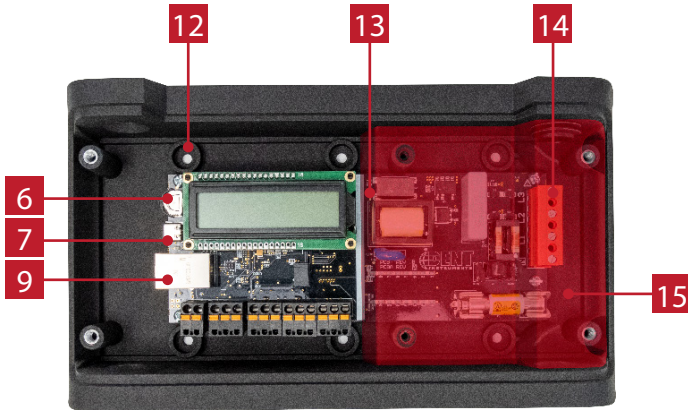


1. Display
2. High Voltage Cover
3. CT Connections (x3)
4. Serial RS-485
5. Alarm
6. Thumb Wheel for Menu Navigation
7. USB-C
8. DIN Rail Channel
9. Ethernet Port

WALL MOUNT ENCLOSURE  
PS3HD-C-D-N



10. 0.5" Conduit Connection (x3)
11. Wall Mount Enclosure Top
12. Mounting Holes
13. PS3HD Circuit Board
14. Voltage Connection
15. High Voltage Cover (transparent in photo)



DISTRIBUTOR:  
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**DENT Instruments, Inc.**  
Energy & Power Measurement Solutions

An ISO 9001:2015 Certified Company  
925 SW EMKAY DRIVE  
BEND, OREGON 97702 USA  
541.388.4774 | 800.388.0770  
www.DENTinstruments.com