

DATASHEET

PDU 5.0

Main

| | |
|----------------------------------|---|
| Product or component type | Rack PDU |
| PDU range: | |
| Basic | No power monitoring |
| Basic Plus | Upgradeable to power monitoring |
| Metered | Power monitoring per phase and breaker |
| Monitored | Power monitoring per phase, breaker and outlet |
| Switched | Power Monitoring per phase and breaker. Switchable per outlet |
| Managed | Power Monitoring per phase, breaker and outlet. Switchable per outlet |
| Inline Meter | Power monitoring for existing Basic PDUs |
| Country of origin | The Netherlands |
| Registered WEEE code | 230039411 |
| HS code | 85369095 |

Specifications*

| | |
|--|---|
| Input Voltage | 230 VAC (1 phase) 230 / 400 VAC (3 phase) |
| Input current | 10 A / 16 A / 32 A / 63 A |
| Load capacity | 1P 16A 3.7 kVA / 1P 32A 7.4 kVA / 3P 16A 11.1 kVA / 3P 32A 22.2 kVA / 3P 63A 43.6 kVA |
| Network frequency | 50/60 Hz |
| Cable length | From 0.5 meter to 25 meter (standard 3 meter) |
| Cable specification | 1P 16A 3G2,5 / 1P 32A 3G6 / 3P 16A 5G2,5 / 3P 32A 5G6 / 3P 63A 5G10 Low smoke zero halogen |
| Cable plug or chassis input | Input position is customisable (top, bottom, front rear) 1P 16A; IEC60309 1P+N+PE 6hr , CEE 7/3, C14, C20, BS 1363, Wieland GST18I3, T13, T23, Terminal connection, Phoenix QPD 1P 32A; IEC60309 1P+N+PE 6hr, Terminal connection, Phoenix QPD 3P 16A; IEC60309 3P+N+PE 6hr, Wieland GST18I5, Terminal connection, Phoenix QPD 3P 32A; IEC60309 3P+N+PE 6hr, Terminal connection, Phoenix QPD 3P 63A; IEC60309 3P+N+PE 6hr |
| Chassis length | Minimum 209 mm up to maximum 2400 mm |
| Chassis width | 65 mm |
| Chassis depth | 52.5 mm / 105 mm |
| Net weight | Configuration dependent |
| Chassis | Anodised aluminium chassis with laser engraving Optional: personalised engraving, feed indication, load balancing, item code and more |
| Mounting position | Vertical 0U / Horizontal 1.5U |
| Mounting options | Rack manufacturer independent, custom mounting solutions possible |
| Colour configurable | Black / Red / Blue / Green / Yellow / Orange / Silver |
| Outlet type | IEC Lock; C13, C19, Combi (C13 / C15 / C19 / C21) IEC320 C13, IEC320 C19, CEE 7/3 (Schuko), CEE 7/5 (UTE), BS 1363, GST 18I3, T13, T23, IEC60309 16A 250V 1P+N+PE, exit lead w/ IEC60309 1P/3P+N+PE 6hr |
| Outlet quantity | Basic & Metered PDU: up to 108 outlets Monitored , Switched , Managed PDU: up to 60 outlets |
| Circuit breaker options | Thermal, hydraulic magnetic, MCB or melt fuse |
| Surge protection option | Dehn type 3 hot-swappable surge protection device |
| Dimensions communication module | 25 mm x 55 mm x 135 mm |

*Disclaimer: Features, physical specifications and connectivity are configuration dependent.



Connectivity and Communication

EnerTree



EnerTree is a completely new developed high performance software platform that can be used to monitor and manage PDUs, UPS and cooling. EnerTree can also provide seamless integration with any DCIM or power management software. The EnerTree Platform is available as desktop or server install (required hardware: Gateway module¹). EnerTree Lite is available as embedded software (required hardware: Controller module²).

Protocols

Communication: Web interface (HTTP/HTTPS), REST API, MODBUS/TCP, SNMP v1/v2c/v3, SNMP TRAPS, IPv4/IPv6, SMTP, Syslog, Command Line Interface, Data export to MS SQL / MySQL / MariaDB.
Security: Configurable strong passwords, user and user role permissions, Active Directory®, LDAP/S integration, up to 256-bit AES encryption, secure boot, SSH, SSL/TLS 1.3 and HTTPS.

Measurements

Accuracy* ±0.5%

Input, branches & outlets

Total: Current (A), Current Peak (A), Neutral Current (A), Neutral Current Peak (A), Active Power (W), Apparent Power (VA), Reactive Power (VAR), Energy (Wh), and Apparent Energy (VAh).

Inputs & Branches: Voltage (V), Voltage Dip / Peak (V), Current (A), Current Peak (A), Active Power (W), Apparent Power (VA), Reactive Power (VAR), Energy (Wh), Apparent Energy (VAh), Total Harmonic Distortion (%), Crest Factor, Frequency (Hz), and Power Factor.

Outlets (optional): Voltage (V), Current (A), Current Peak (A), Active Power (W), Apparent Power (VA), Reactive Power (VAR), Energy (Wh), Apparent Energy (VAh), Total Harmonic Distortion (%), Crest Factor, and Power Factor.

Residual current (optional): IEC/EN 62020 RCM type B Module - Residual Current Total / Peak / AC / DC (mA), 0-2000Hz

Outlet controls

Switched & Managed PDU only

Power-on sequencing with customizable delays. Last known state power-on. Remote switching of individual outlets or groups. Bi-stable latching relays. N-ZVS (Near Zero Voltage Switching).

| Category | EnerTree feature | Platform | Lite |
|-----------------------------|--|----------|---------|
| Performance | Maximum number of PDUs in system | 10.000 | 100 |
| | Maximum number of rings supported | 100 | 1 |
| | Maximum number of PDUs in 1 ring (single IP address) | 100 | 100 |
| | Measurements refresh rate | once/s | once/5s |
| Device management | Auto discovery of new added PDUs in system | ✓ | ✓ |
| | Mass configuration | ✓ | ✓ |
| | Grouping of devices and aggregation of measurements | ✓ | |
| | Supports Schleifenbauer generation 2 and 3 devices | ✓ | |
| User management | Customizable roles and permissions, group management, etc. | ✓ | ✓ |
| Control & alerts | Group switching | ✓ | |
| | Configurable thresholds for all measurements (warnings/alerts) | ✓ | ✓ |
| Data | Dashboarding | advanced | basic |
| | Creation of reports | advanced | basic |
| | Scheduling of reports | ✓ | |
| | Export of data to files or databases | ✓ | ✓ |
| Security | Logging and auditing | advanced | basic |
| | Updating & Back-up (configuration, log files) | ✓ | ✓ |

Communication Hardware

Module / Display



Communication modules are ESD safe and toolless hot-swappable without disruption to outlets (available in 3 types). Remote display using a smartphone with the Rack PDU Display app. Connection via NFC (Near Field Communication). LED ring light for visual status indication including alerts and warnings. Supports 32 sensors.

1 Gateway Module EnerTree Platform



The Gateway module is equipped with 1 Gbps Ethernet RJ45 port with status lights, 2 databus RJ45 ports with status lights and 2 USB-A ports. A second 1 Gbps Ethernet port is supported via USB. All interfaces are zero-touch provisioning (plug and play).

2 Controller Module EnerTree Lite



The Controller module is equipped with 1 Gbps Ethernet RJ45 port with status lights, 2 databus RJ45 ports with status lights and 2 USB-A ports. A second 1 Gbps Ethernet port is supported via USB. All interfaces are zero-touch provisioning (plug and play).

Daisy Chain Module



The Daisy Chain module relays PDU data to a single LAN-connected Gateway or Controller module in a ring. It is equipped with 2 databus RJ45 ports with status lights and 2 USB-A ports. All interfaces are zero-touch provisioning (plug and play).



*See separate accuracy statement

Environment

Ambient air temperature Minimum -5 °C / Maximum 60 °C

Relative humidity Minimum 5% / Maximum 95 %

Warranty

Warranty 2 years repair or replace, warranty can be extended to 3, 4, or 5 years.

Packing Units

Number of Units in Package Maximum 2 PCE in 1 cardboard packaging, optional bulk packaging or packaging free delivery

Package Dimensions 12 cm x 32 cm x dependent on PDU length (HxWxL) ; packaging is always 20 cm longer than the PDU length

Package Weight Configuration dependent

Environmental

 **Lead Free**

 **Mercury Free**

 **RoHS Exemption Information**

 **Ecovadis**

Certifications & Standards

EMC EN 301 489 / EN55032 / CISPR 32, EN55035 / CISPR 35, EN61000-3-2 / IEC 61000-3-2, EN61000-3-3 / IEC 61000-3-3

CE mark LVD IEC 62368-1:2018 / EN 62368-1:2020 / 2011/65/EU (RoHS Directive), 2014/35/EU (Low Voltage Directive) , 2014/30/EU (EMC Directive)

Security EN 18031-1

ISO ISO 9001 : 2015

