

PDU HD METERED NODE 0U 1 PHASE 16A 18 C13 + 4 C19 LOCKING OUTLETS , IEC 60309

Cat. No: 6 461 03



| CONTENTS | Page |
|--|------|
| 1. KEY FEATURES | 1 |
| 2. GENERAL SPECIFICATIONS | 1 |
| 3. INPUT | 2 |
| 4. OUTPUT | 2 |
| 5. CONTROLLER | 3 |
| 6. CASCADING MODES | 4 |
| 7. MECHANICAL FEATURES | 5 |
| 8. ENVIRONMENTAL CHARACTERISTICS | 5 |
| 9. ELECTRICAL DIAGRAM | 5 |
| 10. DIMENSIONS | 5 |
| 11. MOUNTING SOLUTIONS | 6 |
| 12. STANDARDS AND REGULATIONS | 7 |

1. KEY FEATURES

Linkeo Data Center intelligent PDUs provide electric power for IT equipment in 19" enclosures. They are connected devices enabling remote access to all measurements and alerts.

- Modular concept : available in 2 versions, NODE version with all functions (controller with LCD screen and LAN connection) and BASE version. Deploy intelligent PDUs without the need to have a PDU controller in every unit.
- Cascading possibilities to save switch ports connections. Daisy-chain up to 31 BASE PDUs downstream to a NODE PDU.
- Hot swappable controller. Allow the replacement on a NODE PDU or the adding on a BASE PDU without powering down connected equipment.
- 2 levels of alerts physically visible on the PDU thanks to LED bar and remotely in Web User interface.
- Metering at inlet and circuit level with +/- 1% accuracy.
- User-friendly and responsive Web User Interface. Data aggregation capabilities in DCIM.
- Each C13 and C19 outlets are numbered and equipped with a cord locking system.
- Equipped with hydraulic magnetic circuit protection. Hydraulic magnetic circuit breakers are not affected by ambient temperature.
- Easy installation thanks to 330° rotating cable input and button-type brackets.

2. GENERAL SPECIFICATIONS

| | |
|-------------------------------------|--|
| Energy Metering | Voltage (V), Current (A), Active Power (kW), Apparent Power (kVA), Energy (kWh), Power Factor |
| Metering Accuracy | ±1% |
| Metering per Input Phase | Yes |
| Metering per Branch Circuit Breaker | Yes |
| Metering per Outlet | No |
| Remote Outlet Switching | No |
| With display | Yes (Node) |
| Networking | Ethernet port. 10/100 BaseT |
| RS485 Cascading | Yes Daisy chain up to 31 BASE PDUs downstream to a NODE PDU by RS485 bus (ethernet RJ45 patchcord). Max length: 250m in total and 30m between each PDU. |
| USB Cascading | Yes Daisy chain up to 16 NODE PDUs via USB connection. Max length: 75m in total and 5m between each PDU. |
| Remote management | HTTP(s), SSH, Telnet, SNMP version v2/v3, SMTP, JSON-RPC, Modbus over TCP |
| Built-in processor | ARM Cortex A5 500MHZ (Microchip ATSAMA5D21C), 32MByte SPI Flash, 256MByte DDR3 RAM. |
| Wireless connectivity | Yes, Zigbee 2.4 GHz chip embedded |
| Compatible Sensors | Wireless sensors (Green Power) - Temperature/Humidity (cat number 6 460 03) - Contact closure (cat number 6 460 04) A maximum of 8 sensors can be paired to 1 PDU |
| Replaceable controller | Yes - Hot swappable for node - Cold swappable for base |

3. INPUT

| | |
|-----------------------|-------------------------------|
| Input Plug | IEC 60309 16A 2P+E |
| Cord Length | 3m - 9.84 ft |
| Cord Entry | Rotating (330°), bottom front |
| Cable Type | HO7RNF 3G2.5 LSZH |
| Maximum Input Current | 16A |
| Nominal Input Voltage | 230V, Single-phase |
| Rated Input Voltage | 200 - 240V |
| Input Frequency | 50/60Hz |
| Power Capacity | 3.7kW at 230V |

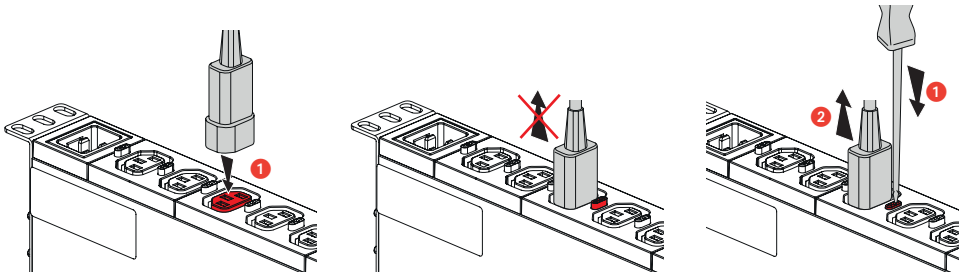
4. OUTPUT

| | |
|------------------------|----------------|
| Nominal Output Voltage | 230V |
| Outlet type | 18 C13 + 4 C19 |
| Cord locking system | Yes |
| Cord Retention | 100 N |
| Circuit breakers | No |
| Circuit breakers type | No |

Cable locking system on C13/C19 sockets

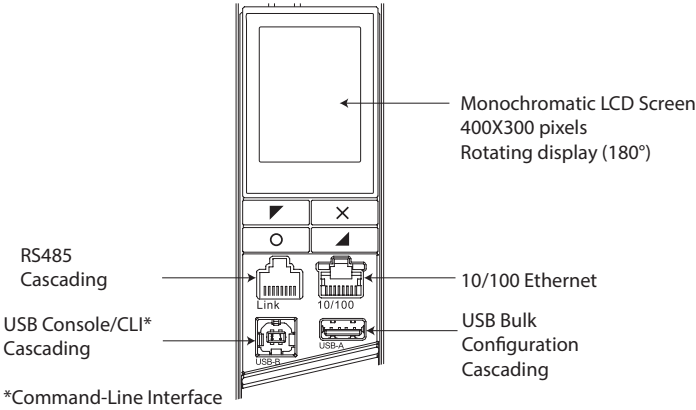
The cable is locked mechanically into the socket to prevent any unintended disconnection (caused by maintenance, vibrations, etc.).
Pull-out force 100 N.

This universal solution is compatible with any standard compliant cord type on the market.

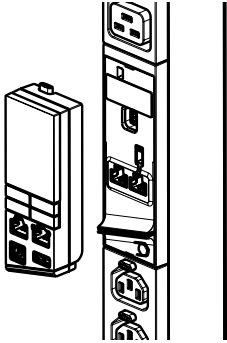


5. CONTROLLER

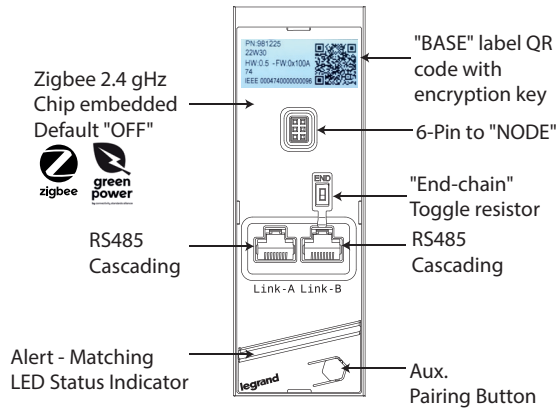
Node Controller



Node controller is plugged on the base and is hot swappable.



Base

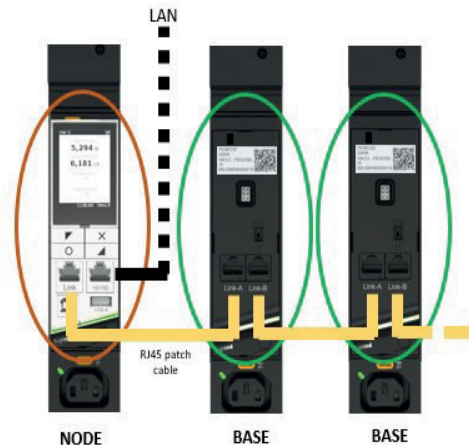
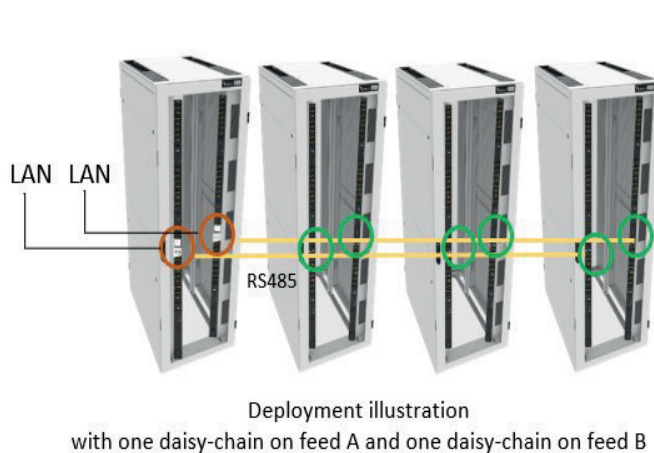


| | |
|------------------------------------|--|
| Networking | Via the NODE controller only |
| Wireless control (radio frequency) | Button for pairing wireless sensors |
| LED indicator | RGB LED for visual indication and replicating configured alerts <ul style="list-style-type: none">Normal operationWarning threshold exceededCritical threshold exceededWireless sensors pairing in progress |

6. CASCADING MODES

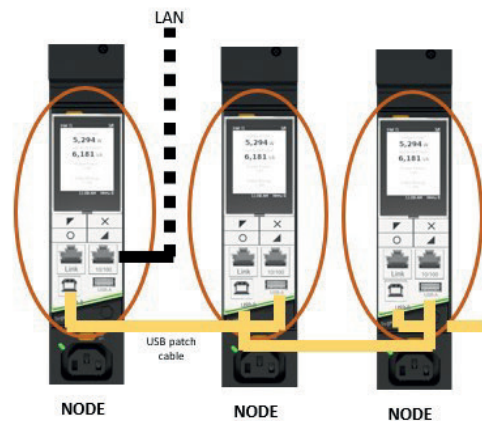
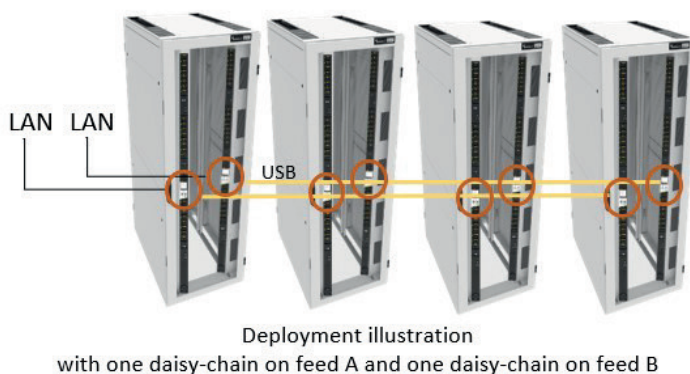
6.1 RS485 - CASCADING

- **Daisy chain up to 31 BASE PDUs downstream to a NODE PDU** with Cat5e or higher RJ 45 patch cables (RS485 link).
- Only the NODE PDU is connected to your network.
- NODE controller aggregates all BASE units data into its user interface.
- Thresholds and alerts are configured directly in the NODE unit.



6.2 USB - CASCADING

- **Daisy chain up to 16 NODE PDUs** using their respective USB ports.
- Only the NODE PDU at the head of your daisy chain is connected to your network.
- Have one IP address for the daisy-chain with "port forwarding" method or one IP address for each PDU with "bridging" method.



7. MECHANICAL FEATURES

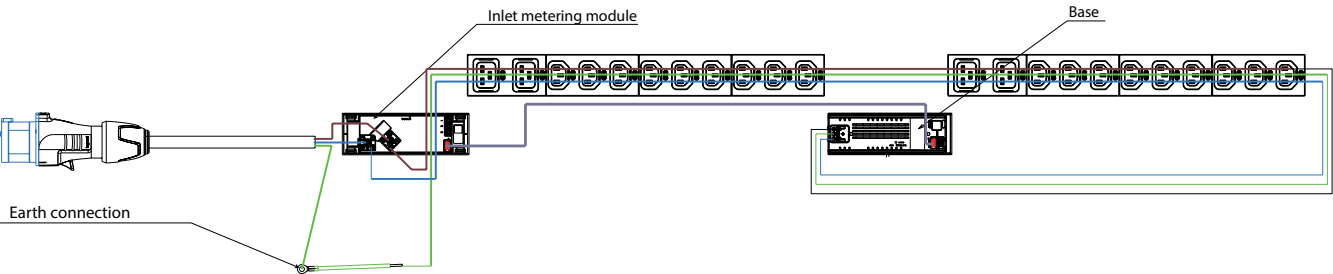
- Casings: 6060 T5-R19 natural anodised aluminium.
- Outlet modules:
PC/ABS
CW507L (CuZn 36) brass
- Fixing brackets:
DC01-A-m galvanised steel

| | |
|--------|--|
| Color | Aluminium grey (casing) / black (outlet modules) |
| Casing | Zero-U, aluminium |
| IP | 20 |
| IK | 04 |

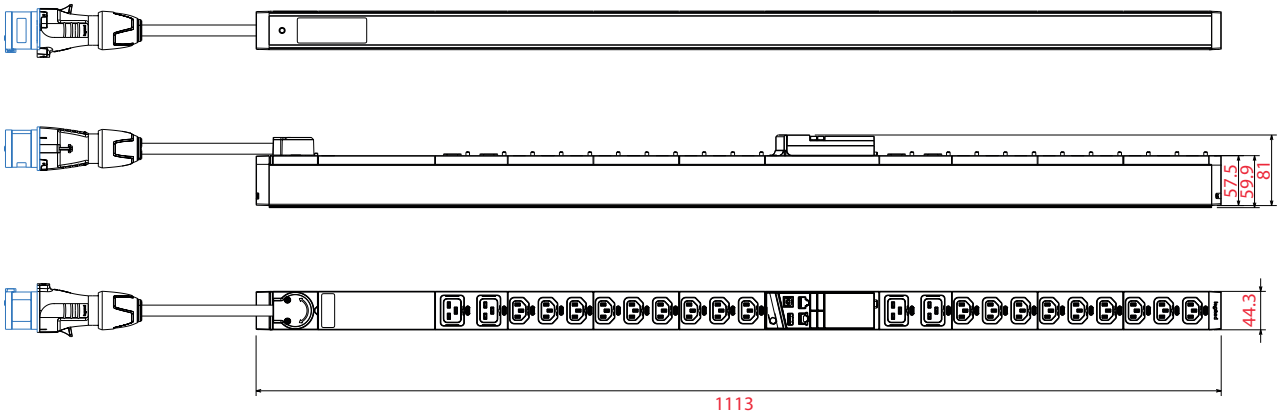
8. ENVIRONMENTAL CHARACTERISTICS

| | |
|-----------------------------------|---------------|
| Storage and transport temperature | -20 to +70°C |
| Operating temperature | +5°C to +55°C |
| Operating Relative Humidity | 5% to 95% |
| Operating Elevation | 0 - 2000 m |

9. ELECTRICAL DIAGRAM



10. DIMENSIONS



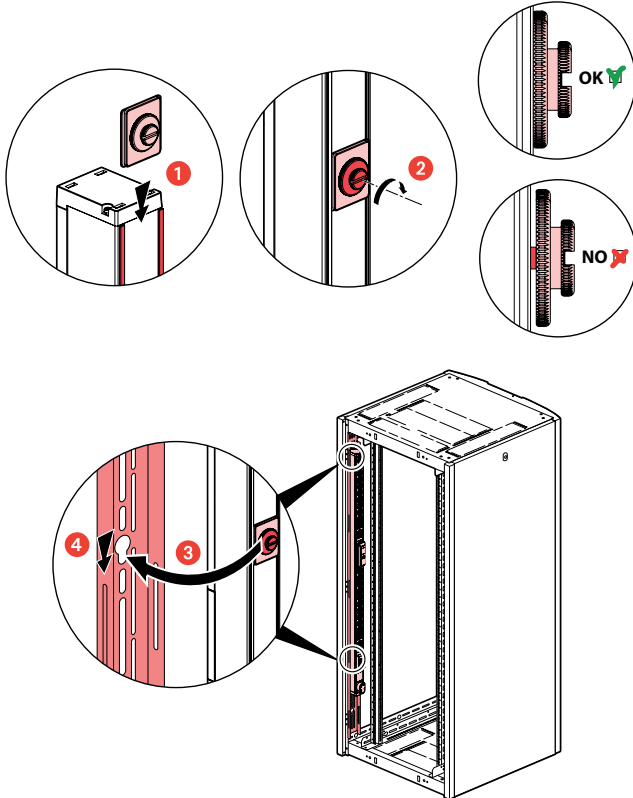
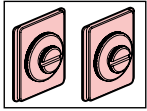
11. MOUNTING SOLUTIONS

11.1 INCLUDED

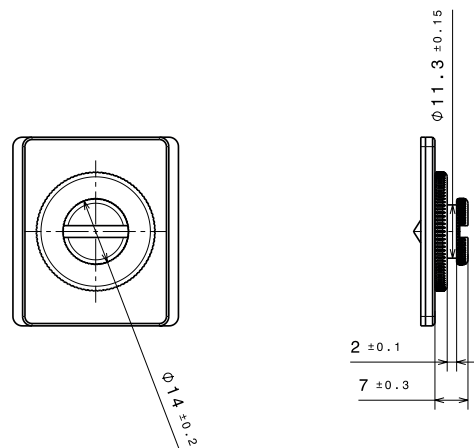
Delivered with 2 different sets for mounting in a rack.

Set of 2 buttons

Screwless fixing. The height of the fixing centre can be set at any point along the full height of the PDU by sliding the button slots into the groove on the rear of the PDU. Tightened using a screwdriver.

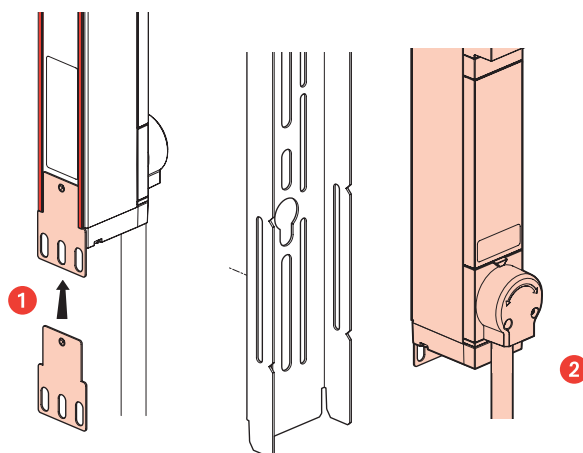
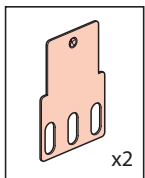


Button dimensions

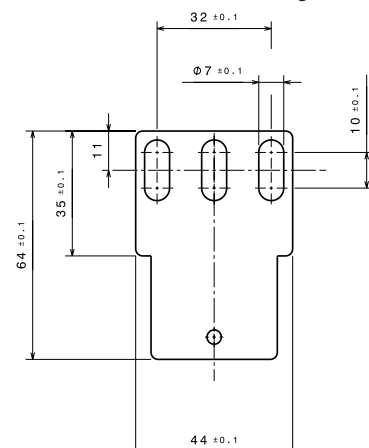


Set of 2 standard fixing brackets

Screw-fixing (screws not included).



Dimensions of standard fixing bracket



Fixing centres (min.-max.) with standard brackets : 1125mm -1145mm

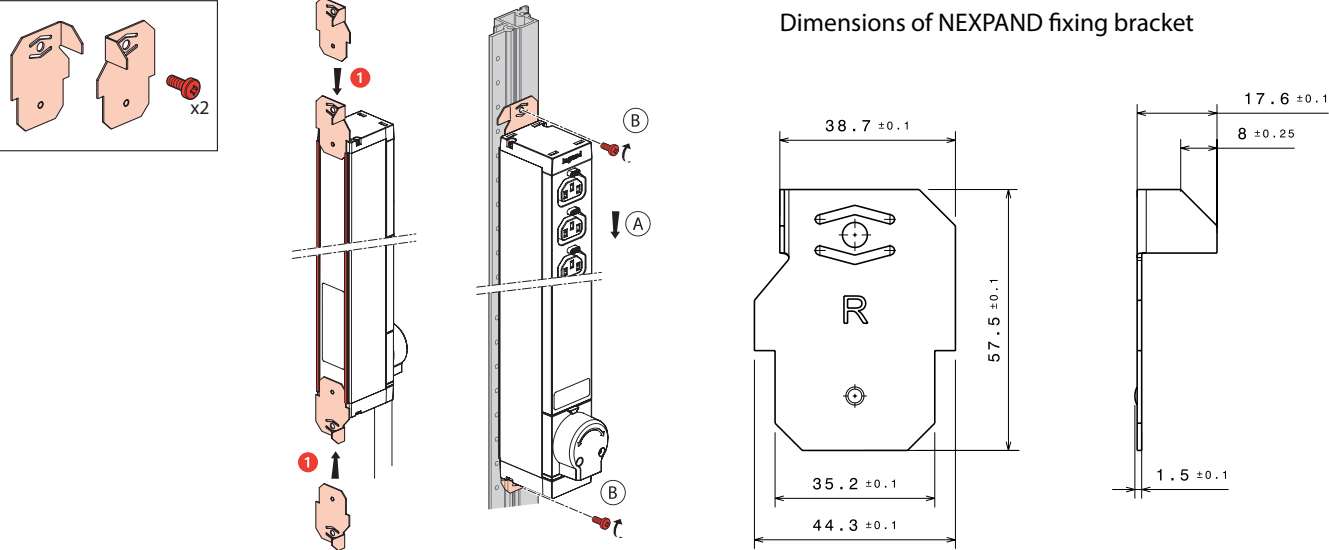
11.2 OPTION

Brackets for Nexpan racks

Screw-fixing (2 screws included).

Ref. 981227 Set of 2 brackets (for 1 PDU)

Ref. 981228 Set of 20 brackets (for 10 PDUs)



12. STANDARDS AND REGULATIONS

12.1 STANDARDS

| Application | Standards |
|--|--|
| Safety | IEC 62368-1 |
| C13 and C19 connectors for electrical equipment | IEC 60320-2-2 IEC 62368-1 |
| Circuit breakers | Not applicable |
| Industrial plugs | Not applicable |
| Information and communication technology equipment | IEC 62368-1 |
| Electromagnetic compatibility for radio equipment and services | EN 301489 (ETSI EN 301 489-1 V2.2.3, ETSI EN 301 489-17 V3.2.4) |
| Radio transmission equipment | ETSI EN 300 328-1 (V2.2.2 2020-02-08) |
| Electromagnetic compatibility | EN 62311 (2008) EMF EN 50491-5-2 EN 50491-5-3 EN 55035 EN 55032 EN 61000-4-11 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-3-2 |

12.2 REGULATORY APPROVALS

CE, UKCA, CMIM
RoHS directive (Restriction of Hazardous Substances)
REACH regulations (Registration, Evaluation, Authorisation & restriction of Chemicals).