

PDU SWITCHED NODE 0U, 3 PHASE 16A, 24 C13 + 6C 19 LOCKING OUTLETS, IEC 60309

Cat. No: 6 461 29



| | |
|--|-------------|
| 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. PACKAGING | 7 |
| 13. STANDARDS AND REGULATIONS | 8 |

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:
 - BASE version, enabling the deployment of intelligent PDUs without the need for a controller with a display on each unit.
 - NODE version, with a controller that includes an LCD display and a LAN connection.
- The BASE version, to be monitored and controlled, is designed to be combined with either:
 - A Pod Master. Up to 60 Base PDUs can be connected to a Pod Master in wireless mode, or up to 32 PDUs can be daisy-chained in wired mode downstream to a Pod Master.
 - A Node PDU. Up to 31 Base PDUs can be daisy-chained in wired mode downstream to a Node PDU.

Note: Both modes limit the number of switch ports required for PDU management.
- Hot swappable controller. Allow the replacement on a Node PDU or the adding on a Base PDU without powering down connected equipment.
- Metering at inlet and circuit level with +/- 1% accuracy.
- 2 levels of alerts physically visible on the PDU thanks to LED bar and remotely in Web User interface.
- 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.
- The circuits of the 32A PDUs are protected with hydraulic magnetic circuit breakers. 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 | Yes - Remotely on/off control of each outlet via the Web User Interface - Outlet's state is also visible on the product itself thanks to a small LED adjacent to each outlet. LED lits green when the outlet is ON. |
| With display | Yes (Node) |
| Networking | Ethernet port. 10/100 BaseT |

2. GENERAL SPECIFICATIONS (CONTINUED)

| | |
|------------------------|--|
| 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, Hotswappable for Node and for any Base with "Hot Swap" marking |

3. INPUT

| | |
|-----------------------|-------------------------------|
| Input Plug | IEC 60309 16A 3P+N+E |
| Cord Length | 3m - 9.84 ft |
| Cord Entry | Rotating (330°), bottom front |
| Cable Type | HO7RNF 5G2.5 LSZH |
| Maximum Input Current | 16A |
| Nominal Input Voltage | 400V, 3-phase |
| Rated Input Voltage | 346 - 415V |
| Input Frequency | 50/60Hz |
| Power Capacity | 11.1kW at 400V |

4. OUTPUT

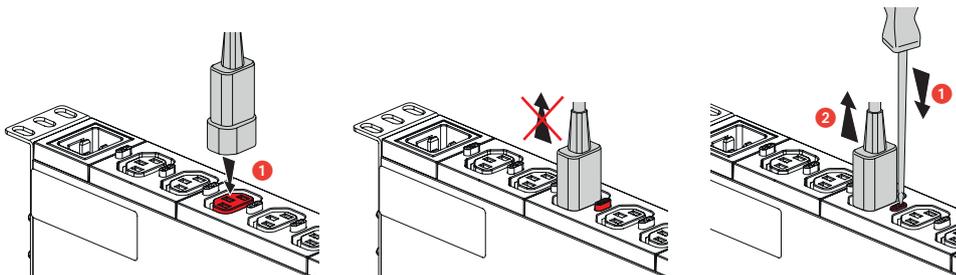
| | |
|------------------------|----------------|
| Nominal Output Voltage | 230V |
| Outlet type | 24 C13 + 6 C19 |
| Cord locking system | Yes |
| Cord Retention | 100 N |
| Circuit breakers | No |
| Circuit breakers type | No |

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.).

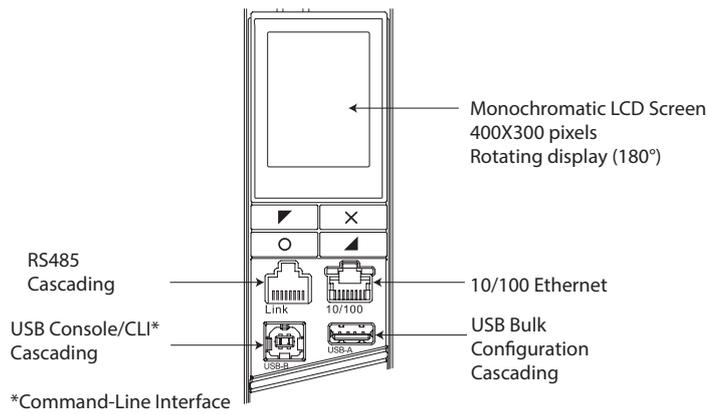
Pull-out force 100 N.

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

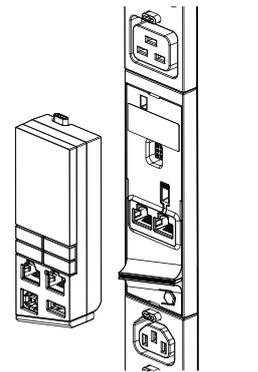


5. CONTROLLER

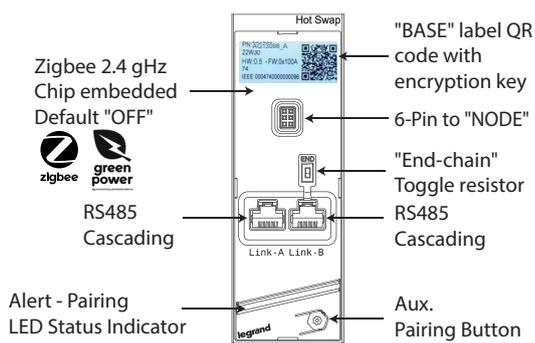
Node Controller



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



Base

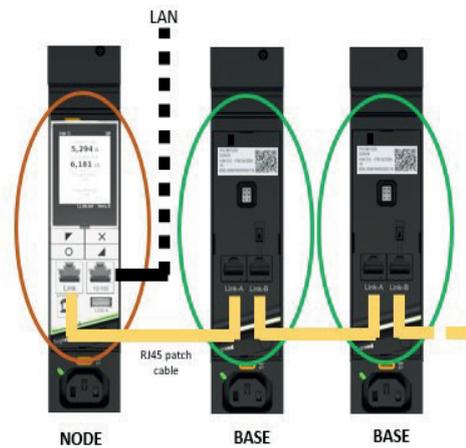
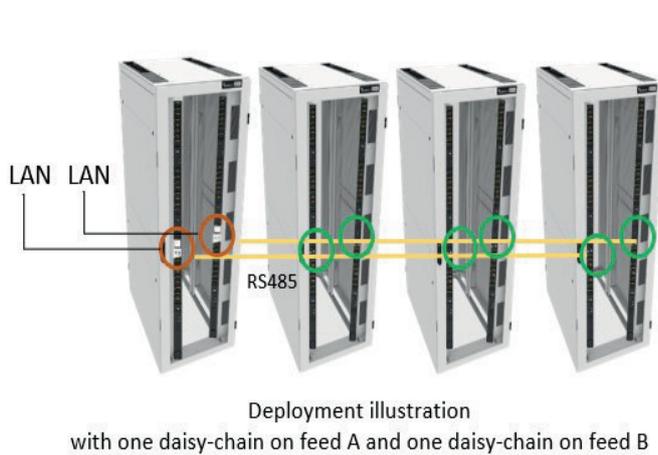


| | |
|------------------------------------|---|
| Networking | Via a Pod Master or the controller of a Node PDU |
| Wireless control (radio frequency) | Button for pairing |
| LED indicator | RGB LED for visual indication and replicating configured alerts ● Normal operation ● Warning threshold exceeded ● Critical threshold exceeded and factory return ● Pairing in progress ○ Firmware update in progress ● Identification function (available only with a Pod Master) |

6. CASCADING MODES

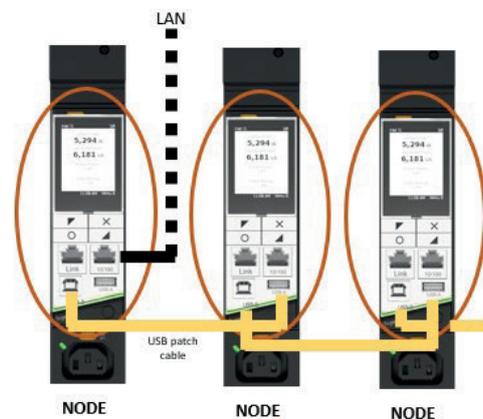
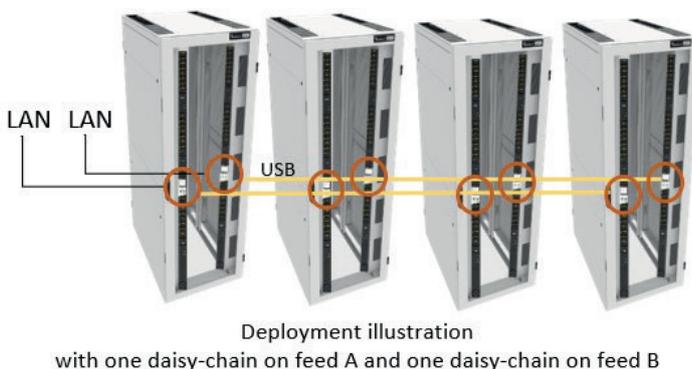
6.1 RS485 - Cascading

- **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:

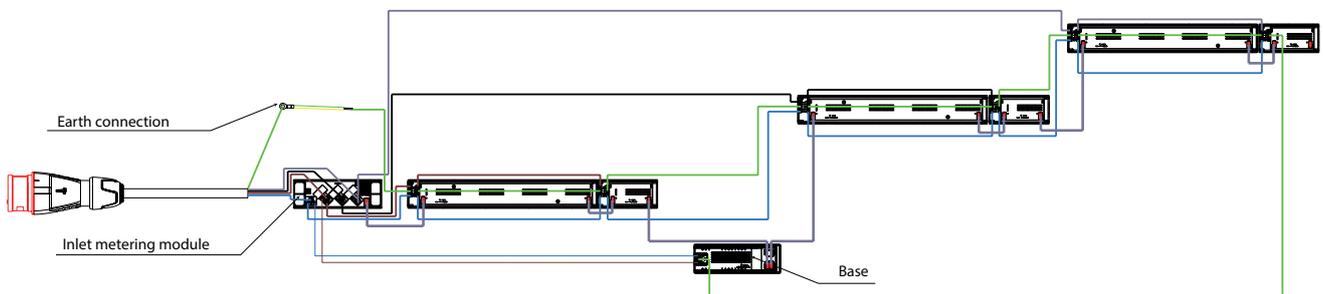
DC01-A-m galvanised steel

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

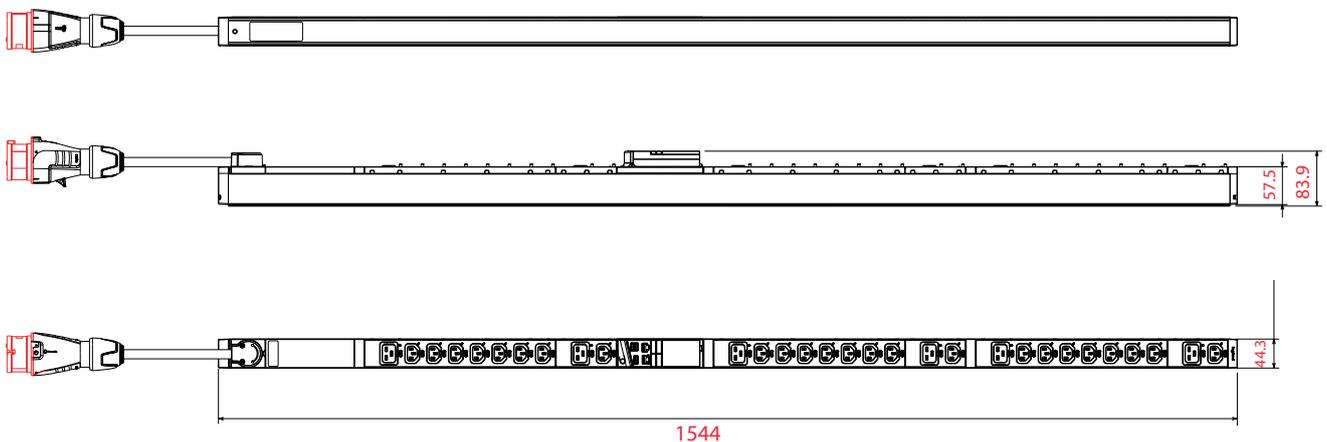
8. ENVIRONMENTAL CHARACTERISTICS

| | |
|-----------------------------------|---------------|
| Storage and transport temperature | -20 to +70°C |
| Operating temperature | +5°C to +60°C |
| Operating Relative Humidity | 5% to 95% |
| Operating Elevation | 0 - 2000 m |

9. ELECTRICAL DIAGRAM



10. DIMENSIONS



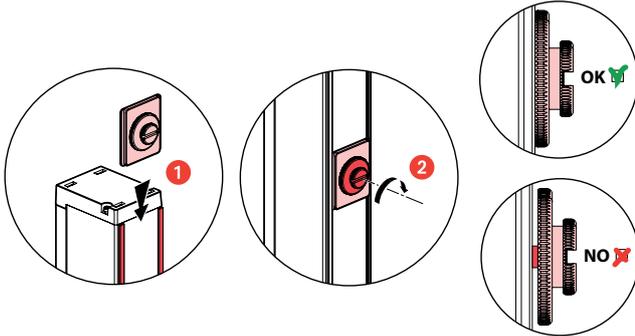
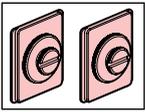
11. MOUNTING SOLUTIONS

11.1 Included

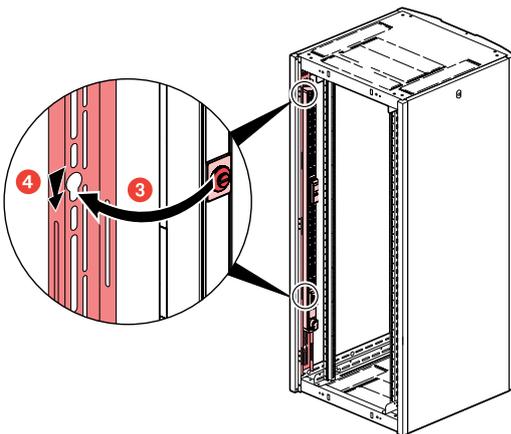
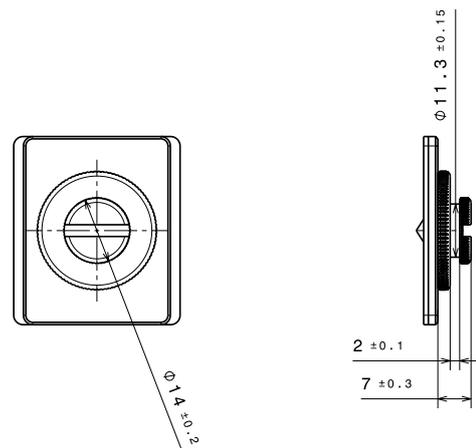
Delivered with 2 different sets for mounting in a rack.

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.

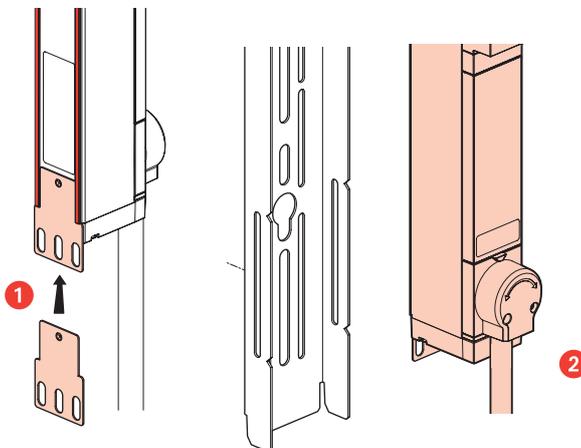
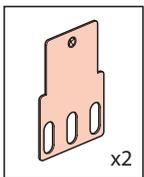


Button dimensions

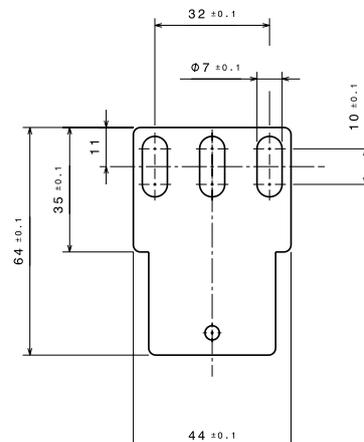


Set of 2 standard fixing brackets

Screw-fixing (screws not included).



Dimensions of standard fixing bracket



Fixing centres (min.-max.) with standard brackets: 1556mm -1576mm

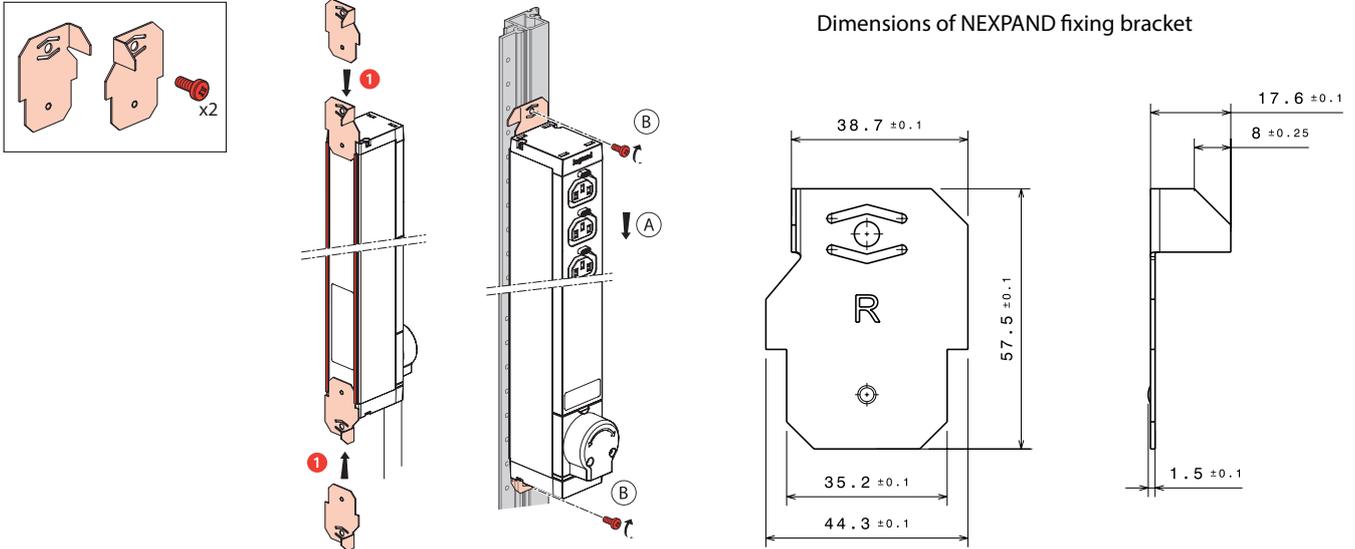
11.2 Option

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).

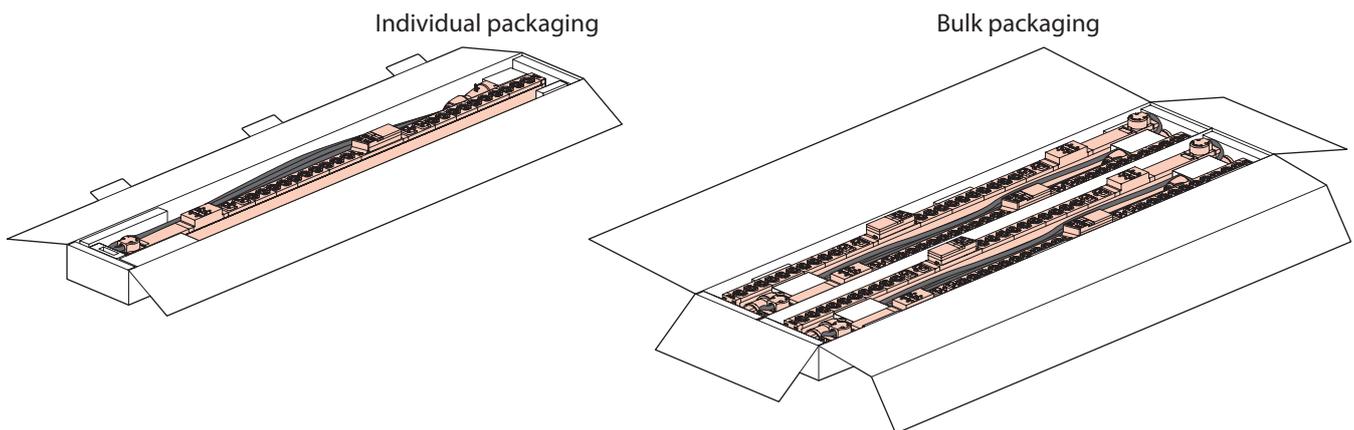


12. PACKAGING

| | Individual packaging | Bulk packaging* |
|----------|----------------------|-----------------|
| Cat. Ref | 6 461 29 | CTO |

Lincoo Data Center PDUs can be delivered in two different types of packaging

- Individual packaging : 1 PDU in 1pack
- Bulk packaging : a set of 4 PDUs in 1 pack



Bulk packaging aims to facilitate and lighten the management of products, but also to reduce the environmental impact.

- Unpack and deploy PDUs faster
- Save time and money for waste treatment: bulk packaging saves more than 50% cardboard per PDU compared to individual packaging.
- Contribute to reducing carbon emission : bulk packaging makes it possible to ship up to 86% more units on a single pallet compared to individual packaging (56 PDUs versus 30)

* The bulk packaging option is open to PDUs between 1126mm and 1765mm in length.

Single-use plastic is eliminated in both individual and bulk packaging.

13. STANDARDS AND REGULATIONS

13.1 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 | IEC 60309-1 |
| 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 |

13.2 Regulatory approvals

CE, UKCA, CMIM

RoHS directive (Restriction of Hazardous Substances)

REACH regulations (Registration, Evaluation, Authorisation & restriction of CHemicals).