

# LINKEO DATA CENTRE PDUS

DELIVERING VALUE EACH STEP OF THE WAY





#LegrandImprovingLives

# LEGRAND GROUP: A GLOBAL PLAYER

Legrand Group is a global leader. The scope of its offering, its technological expertise, its international presence, and the power of its brands put Legrand in a unique position to deliver value to you and to your customers.

## It also sets the Group on a global mission: #LegrandImprovingLives.

Every day, Legrand stands by the meaning and values of its Group's purpose statement. They are integral to the development of each product and solution. They guide each decision at Legrand. They express its commitment to its customers, to its employees, to its partners, and to society as a whole.

Legrand transforms the spaces where people live, work, and meet. It provides simple, innovative, and sustainable solutions and services. And it tailors them to numerous applications.

New Linkeo Data Centre PDUs embody this global approach. And deliver value each step of the way...



## **L**legrand



## **RELIABLE, SUSTAINABLE & SCALABLE DATA CENTRE SOLUTIONS**

With award-winning solutions from strong data centre players like Borri, Minkels, Modulan, Raritan, Server Technology, Starline and Zucchini, you benefit from optimal uptime of mission-critical operations. Our team of local specialists design and build innovative solutions including enclosures, cooling, power, structured cabling and access management to meet your unique requirements.



# A STRONG COMMITMENT TO GREEN DATA CENTRES

Sustainability has been everybody's challenge for years.

**#LegrandImprovingLives** means creating **a more sustainable world for everybody.** It is the Group's ambition to actively contribute to the development of a low-carbon society, in keeping with the RoHS directive (2015/863/UE) and the LEED Green Building Rating System.

In keeping with its CSR guidelines, not only does Legrand work on **reducing its carbon footprint** to fight climate change, but it gives priority to **the development of a circular economy approach**, limiting the quantity of materials used and promoting the reuse of materials. In connection with professional associations BICSI and The Green Grid, it aims to set the standard for energy efficient design.

Every day, Legrand Group takes more steps on the path to green data centres.

As a proof of our circular economy approach, we provide customers with certified environmental declarations (Product Environmental Profiles - PEP).

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Your usual Sales office www.legrand.com Product Environmental Profile Linkeo Data Centre Intelligent Metered PDU



## ZERO PLASTIC AND BULK PACKAGING

Legrand is determined to phase out single-use plastic, limit waste production, and maximise waste processing. Linkeo Data Centre PDUs are delivered without plastic film, facilitating the disposal of used cardboard.





## **HIGH QUALITY AND RELIABILITY**

Increasing MTBF is a major stake for data centre operators. Hence, Linkeo Data Centre PDUs undergo stringent third-party testing and ISO certification under a CB scheme. In the manufacturing process, each PDU is individually tested in order to ensure the highest degree of assembly quality and electrical safety, and the longest operating times within harsh environments.

## **ENERGY-EFFICIENT DESIGN**

In connection with professional associations BICSI and The Green Grid, Legrand aims to set the standard for energyefficient design. Linkeo Data Centre PDUs are manufactured with an internal electrical busbar architecture. This design limits metals and materials applied for PDU assembly and reduces heat within each operating unit. By reducing cooling needs in the white space, it contributes to reducing the environmental footprint of the PDUs. Furthermore, by making it possible to supervise energy supplied to cabinets, and monitor the supply, charge, and status of batteries in real time, the PDUs also significantly contribute to data center anergy efficiency.





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POWER DISTRIBUTION UNITS, LINKEO DATA CENTRE

Accessories and Power Cords

# **DELIVERING VALUE**

## Each step of the way

Legrand Data Centre Solutions leverage expertise in white space power from leading brands like Raritan and Server Technology. As a result, Linkeo Data Centre PDUs provide extensive features tailored to the needs of the ever-increasing requirements of data centres.

Legrand delivers user value at a competitive cost, facilitating deployment and daily management while improving reliability.

## UPTIME

Innovative design with hot swappable, upgradeable elements guarantees optimised uptime.



## **GLOBAL AVAILABILITY**

Legrand's manufacturing and logistical power make it possible to deliver standard PDUs in 15 days\*.

\*ex-works, depending on quantities

## COST

Smart design and new innovative set-up options contribute to great value for money.



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# **DELIVERING CHOICE**

## The Linkeo Data Centre PDU Line

From Basic to Switched solutions, this PDU line has been carefully designed to adapt to the diversity of our customers' configurations. Developed on a common platform, it provides solutions that fit your current needs and expectations, while anticipating for maintenance as well as future scaling and upgrades. Depending on your needs, here is an overview of possible configurations:



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\*LPMM = Local Power Meter Module

# **DELIVERING PERFORMANCE**

## A PDU platform for digital excellence

## **The Linkeo Data Centre PDU**

**platform** has been designed to meet the daily challenges encountered in data centres to facilitate deployment and maintenance, to improve uptime and to provide accurate monitoring, while reducing human error hazards.



## **Providing accurate monitoring**

### +/-1% accuracy

You can monitor your power data with accurate metering thanks to PDUs LPMM (Local Power Meter Module) or metered/switched PDUs. As a result you have reliable inputs for decision.

## **Improving uptime**

**60°C rating aluminum chassis** The compact aluminum chassis withstands high ambient temperatures.

**Hydraulic magnetic circuit protection** The Linkeo Data Centre platform offers hydraulic magnetic miniature circuit breakers with high ambient temperature tolerance for tripping, and high interruption capacity.

## **Facilitating deployment and maintenance**



**330° rotating input cord** The large rotating range reduces tension on input. It facilitates perfect cable orientation and rack integration.

## **Reducing human error**



Hot swappable controller architectures The metering controller can be removed and replaced without turning down the PDU.



**High-density outlet modules** Providing more compact form factors and better airflow in the rack.



Cord locking system

For absolute safety, our autolocking outlets provide 100 Newton retention force. No risk of accidental disconnection due to human error or vibration.

This cord locking system is compatible with all standard C14 and C20 plugs. There is no need for specific cords.



Numbered outlets Individual circuits and power outlets are numbered from the input to facilitate power cord dressing.





**PDU Color-Coding** When extra identification is needed, color-coded circuits and chassis are available on demand.

Power cords with server side locking

Secured on the Legrand PDU side thanks to the standard cord locking system, it is also important to secure the full chain and the server side. Legrand power cords with unique rotary locking mechanisms on C13 and C19 fit any C14 and C20 server inlets.

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# **DELIVERING RANGE**

## Expanding functions from basic to intelligent

## **Basic PDU**



## SERVICES PROVIDED

## **Basic functions**

- Reliable power distribution
- Matching configuration of servers
- Protection against overloads (on models equipped with circuit breakers)

## Limitations

- If you look for visibility on power capacity and IT loads
- -> go for a basic PDU with Local Power Meter or for an intelligent PDU
- If you look for remote management
   -> go for an intelligent PDU

## **KEY FEATURES**

- Internal circuitry design against overheating at peak loads
- Hydraulic magnetic circuit protection
- 60°C rating aluminum chassis
- Locking outlet capabilities against accidental disconnects

## Outlet numbering

# Basic PDU with local power meter



## SERVICES PROVIDED

## **Basic functions**

+

## LOCAL METERING

- Local measurement of energy consumed at rack level
- Instant visibility on power IT loads Instant visibility of available capacity on a given unit
- Screen to read the data locally

### Limitations

- If you look for data aggregation or DCIM capability
   -> go for an intelligent PDU
- Local technician needed to understand infrastructure behavior at the rack level
- This configuration will not support an upgrade to intelligent PDU

## **KEY FEATURES**

- Visibility of all energy data: Amps, kWh, Volts, Power Factor
- Hot swappable: the metering controller can be removed and replaced without turning down the PDU
- Local alerts if load exceeds 80% of available capacity per line/circuit (beeping)
- Phase, circuits, and branch measurements with +/-1% metering accuracy

## Intelligent metered PDU



## **SERVICES PROVIDED**

Basic functions + Local metering

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### **ADVANCED MONITORING**

- Remote real-time monitoring on web user interface
- Configurable alerts when a measurement is exceeded
- Aggregation of power metering data at various unit points (inlets. circuits...)
- Data aggregation in DCIM ability

## **KEY FEATURES**

- Cyber security features for seamless integration into the enterprise network architecture
- Cascading features to streamline connectivity
- Hot swappable electronic components in case
   of failure
- 2 levels of alerts physically visible on the PDU (LED bar) and remotely (web interface and email/sms alert configuration)
- · Modular concept: with or without controller

## Intelligent switched PDU



## **SERVICES PROVIDED**

Basic functions + Local metering + Advanced monitoring +

## SWITCHED MONITORING

 Remote outlet control for power load shedding and IT asset reboot

## **KEY FEATURES**

- Cyber security features for seamless integration into the enterprise network architecture
- Cascading features to streamline connectivity
- Hot swappable electronic components in case
   of failure
- 2 levels of alerts physically visible on the PDU (LED bar) and remotely (web interface and email/sms alert configuration)
- Modular concept: with or without controller
- LED on each outlet to see the outlet status (on/off)

# **DELIVERING INNOVATION**

# An intelligent PDU controller platform

The Linkeo Data Centre intelligent PDU is based on a DCIM Agnostic and Open API platform. It is available in a standard Metered and a Switched intelligent version. Each power configuration can be acquired with only the BASE, or with the NODE, IP controller mounted for extra connectivity. Standard PDU portfolio is available with both BASE-only and BASE+NODE configurations.

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- Including RS485 industrial bus for linking up to 32 units (data pushed to a Lead NODE unit with RJ45 cable)
- Including RF Chip for Zigbee and green power wireless applications

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## **NODE: HOT SWAPPABLE** (W. FIRMWARE)

**Robust and full hot swappable IP Controller** 

- Full IP Controller
- Cybersecurity tested
- Full Hot swappable to allow maintenance or replacement without powering down connected equipment
- NODE IP cascading through USB up to 16 units (full data management)

## Zigbee wireless connectivity

Highly secure and power-saving radio frequency technology

Sensor direct pairing

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- Empowering future wireless mesh network deployment
- Providing the highest level of security:
  Encryption and message integrity with application
- key exchange
- Protection against most challenging internet concerns including Distributed Denial-of-Service attacks (DDoS)

## **FLEXIBLE DEPLOYMENT APPLICATIONS**

## The Linkeo Data Centre Intelligent PDU allows various deployment methods

to accommodate different data centre environments and constraints

To optimise your IT deployments, the most innovative method is the RS485 cascading.

It reduces both your CAPEX, by cutting down the number of IP controllers needed, and your OPEX, by diminishing your production costs (fewer ethernet switch ports).

## RS485 CASCADING

- Daisy chain up to 31 BASE PDUs downstream to a NODE PDU with RJ 45 patch cables (RS 485 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
- Reduce CAPEX and deploy intelligent PDUs without the need to have a PDU controller in every unit
- Reduce your OPEX, using less ethernet switch ports



Deployment illustration with one daisy chain on feed A and one daisy chain on feed B



## 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 a "port forwarding" method or a one IP address for each PDU with a "bridging" method
- Reduce your OPEX, using fewer ethernet switch ports





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Deployment illustration with one daisy chain on feed A and one daisy-chain on feed B

## **STANDALONE**

- Use only NODE PDUs
- Each NODE PDU is connected to your network



# DELIVERING ERGONOMY

# Easy rack instrumentation, control & monitoring

**The Linkeo Data Centre Intelligent PDU** has been designed to provide you with the best experience, from installation to effective data measuring and management.



## SENSORS

- Pair up to 8 sensors per PDU, whether it is a Node PDU or a Base PDU
- Zigbee technology natively embedded in Node and Base PDUs





### **TEMPERATURE & HUMIDITY**

**Temperature & Humidity Wireless Sensor** Monitors rack airflow delivery to optimise cooling infrastructure, prevent equipment damage and reduce energy cost.



**Contact Closure Wireless Sensor** Manages door contact and alerts in case of door opening/closing; tracks work orders to identify human error.

## **» MAIN BENEFIT**

Wire-free deployment = ease and cost savingsReduce sensor deployment time and

- maintenance
- Easily move sensors from rack to rack

## **METERING AND SWITCHING TO CONTROL YOUR POWER**

### Advanced monitoring with accuracy

Preventing outages in your data centre starts with ensuring access to reliable and accurate monitoring data. Linkeo Data Centre intelligent PDUs have +/- 1% measurement accuracy with all types of loads, in real time. You can rely on your PDUs supplying the required information as and when needed.

### Metered intelligent PDUs for consumption monitoring

Our Metered iPDUs incorporate input metering, which allows for accurate measurement of the unit's energy consumption. They make it easy to understand power and manage your data centre growth.

### Easier data collection in the cabinet

- No need for technical teams to take on-site measurements
- Easy access to equipment energy consumption

### Unit power overview

- Gives an overview of rack power capacity and energy use
- · Clearly shows remaining capacity in the cabinet
- Provides insight regarding decisions about future growth

## Switched intelligent PDUs for easier power management

Our Switched iPDUs integrate **input metering and output level switching**, providing granular power switching of each device connected to the iPDU, thus **improving availability**.

It makes it easier to **manage multiple facilities remotely,** contributing to avoid financial and environmental costs associated with travel to sites.

## **Remote outlet management**

- Prevents human errors
- Prevents overloads by checking that devices are only plugged in on available circuits

## Output control

- Configurable outlet rebooting schedule
- Avoided power waste by scheduling power loads
- Remote hard-reboot

## Your situation at a glance

## User-friendly and responsive Web User Interface

- Metering, outlet control and peripherals data at glance
- Easy to configure
- No-fuss peripheral commissioning
- Dynamic HTML to support multi devices

### **Configurable alerts**

4 thresholds per parameter:

- Measurement: above or below
- Priority: high or low

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Metering, outlet control and peripherals data at glance





# **DELIVERING SECURITY**

# Intelligent PDU firmware management & cyber security mandate

The platform used for Linkeo Data Centre PDUs is a combination of hardware

and software technologies benefitting from Raritan's long experience.

It helps to maximise data centre efficiency by delivering security, advanced alerting,

intelligence, and visibility into your power chain.

Best-in-class in cybersecurity, it has been tested internally and by third party according to stringent compliance audit.

# UNIFYING SYSTEM FOR MORE INTELLIGENCE

The platform provides complete visibility to your power chain, making it easier to connect, configure, and manage your data centre.

- Firmware designed and maintained in-house for complete control
- Interoperable, open architecture for quickly future proofing application development

## DELIVER UNPARALLELED SECURITY

The platform delivers improved security across your data facility with the latest network security protocols, bestin-class data encryption, strong password policies, and login protection.

- Deploy a power infrastructure that matches your enterprise network and IT security requirements
- Ensure secured and encrypted communications
- Control user access and safeguard against errors and malicious intents



## SIMPLIFY YOUR PATH TO DCIM

The platform is built on a developer friendly platform which allows for easy automation and seamless transfer of infrastructure insights and alerts directly to BMS and DCIM software.

- Seamlessly discover, import, manage,
- and control your Linkeo Data Centre devices in Energy Management Software
- Develop more automation and efficient alerting to help improve data centre operations



## **BUILD A FUTURE-PROOF INFRASTRUCTURE**

It brings reliability to the forefront by focusing on continuous uptime for your data centre with battletested hardware and firmware with billions of hours of runtime.

- Continuous firmware development to enrich your existing hardware deployment
- Field-based innovation from customer feedback to deliver relevant applications and support your business growth with a future-proof solution

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## OUR PLATFORM

## USER INTERFACE/API Responsive HTML GUI

## APPLICATIONS

Environmental Monitoring, User Access Monitoring, Rule Based Alerting, Asset Management, Power and Energy Management

## NETWORK SECURITY

Certificates, Firewall, DDOS Attack Protection, Strong Configurable Passwords, Enterprise Authentication

## OPERATING SYSTEM

Proprietary Firmware Design, Hardened Linux CentOS, IoT Enabled

## CONTROLLER Base and Hot Swappable Node

**Base and Hot Swappable Node** 

## HARDWARE

In-house Mechanical, Electrical and PCBA Design. Best-in-class Testing and Assembly. Perfect Fit to Any Rack Environment

## Power Distribution Units (PDU), Linkeo Data Centre **Basic and Basic with Local Power Meter**



To provide  $\sim$  electric power for IT equipment in 19" enclosures 32 A PDUs are equipped with hydraulic magnetic circuit protection with high current interruption capacity. Hydraulic magnetic circuit breakers are not affected by ambient temperature

30° rotating cable input for a perfect orientation of the cable and no interference in the cabinet EC 60320 C13 and C19 outlets. Each C13 and C19 outlets are numbered gradually from the input and equipped with cord locking system to avoid any accidental disconnection (100 Newton retention force). High Density (HD) PDUs provide a high density of C13 outlets to optimise outlet quantity and PDU length. High ambient temperature rating: 60°C

Aluminium chassis Zero-U PDUs for vertical mounting in the cabinet. Supplied with standard and button-type mounting brackets.

| Pack   | Cat.Nos  | Basic PDU  | Pack        | Cat.Nos              | Basic HD PDU  |
|--------|----------|--|-------------|----------------------|---|
| 1      |          | Single phase - 16 A<br>230 V - 50/60 Hz power supply<br>18 C13 outlets + 6 C19<br>3 m power supply cord with IEC 60309 16A plug<br>20 C13 outlets + 4 C19<br>C20 inlet (can receive power cables Cat.No 6 469 05<br>and 6 469 06)  | 1           | 6 469 71<br>6 469 72 | Single phase - 32 A<br>230 V - 50/60 Hz power supply<br>24 C13 outlets + 12 C19<br>3 m power supply cord with IEC 60309 32A plug<br>36 C13 outlets + 6 C19<br>3 m power supply cord with IEC 60309 32A plug<br>Three phase - 16 A   |
| 1<br>1 |          | Single phase - 32 A<br>230 V - 50/60 Hz power supply<br>20 C13 outlets + 4 C19<br>3 m power supply cord with IEC 60309 32A plug<br>12 C13 outlets + 12 C19<br>3 m power supply cord with IEC 60309 32A plug  | 1           | 6 469 11<br>6 469 10 | 400 V - 50/60 Hz power supply<br>24 C13 outlets + 12 C19<br>3 m power supply cord with IEC 60309 16A plug<br>36 C13 outlets + 6 C19<br>3 m power supply cord with IEC 60309 16A plug<br>Three phase - 32 A  |
| 1      |          | Three phase - 16 A<br>400 V - 50/60 Hz power supply<br>21 C13 outlets + 3 C19<br>3 m power supply cord with IEC 60309 16A plug<br>24 C13 outlets + 6 C19<br>3 m power supply cord with IEC 60309 16A plug  | 1<br>1<br>1 | 6 469 74             | 400 V - 50/60 Hz power supply<br>24 C13 outlets + 12 C19<br>3 m power supply cord with IEC 60309 32A plug<br>36 C13 outlets + 12 C19<br>3 m power supply cord with IEC 60309 32A plug<br>36 C13 outlets + 6 C19   |
| 1      | 6 469 66 | Basic PDU with Local Power Meter<br>Local Power Meter module monitors voltage (V),<br>current (A), active power (kW) and energy (kWh)<br>Phase and circuits measurements: +/- 1% metering<br>accuracy<br>Data's display on SLCD screen<br>Buzzer alarm<br>Hot swappable architecture<br>Single phase - 32A<br>230 V - 50/60 Hz power supply<br>20 C13 outlets + 4 C19<br>3 m power supply cord with IEC 60309 32A plug | 1           | 6 469 70             | 3 m power supply cord with IEC 60309 32A plug<br><b>Basic HD PDU with Local Power Meter</b><br>Local Power Meter module monitors voltage (V),<br>current (A), active power (kW) and energy (kWh)<br>Phase and circuits measurements: +/- 1% metering<br>accuracy<br>Data's display on SLCD screen<br>Buzzer alarm<br>Hot swappable architecture<br>Three phase - 16 A<br>400 V - 50/60 Hz power supply<br>36 C13 outlets + 6 C19<br>3 m power supply cord with IEC 60309 16A plug |



6 469 08

To provide  $\sim$  electric power for IT equipment in 19" enclosures 32 A PDUs are equipped with hydraulic magnetic circuit protection with high current interruption capacity. Hydraulic magnetic circuit breakers are not affected by ambient temperature 330° rotating cable input for a perfect orientation of the cable and no interference in the cabinet IEC 60320 C13 and C19 outlets. Each C13 and C19 outlets are numbered gradually from the input and equipped with cord locking system to avoid any accidental disconnection (100 Newton retention force)

High Density (HD) PDUs provide a high density of C13 outlets to optimise outlet quantity and PDU length

High ambient temperature rating: 60°C

Aluminium chassis Zero-U PDUs for vertical mounting in the cabinet. Supplied with standard and button-type mounting brackets

| Pack | Cat.Nos  | Basic PDU with Local Power Meter  |
|------|----------|---|
| 1    | 6 469 08 | Local Power Meter module monitors voltage (V),<br>current (A), active power (kW) and energy (kWh)<br>Phase and circuits measurements: +/- 1% metering<br>accuracy<br>Data's display on SLCD screen<br>Buzzer alarm<br>Hot swappable architecture<br>Include 4 Basic PDUs with Local Power Meter Cat.<br>No 6 469 66 (p.28)<br>Single phase - 32 A<br>230 V - 50/60 Hz power supply<br>20 C13 outlets + 4 C19<br>3 m power supply cord with IEC 60309 32A plug |
| 1    | 6 469 09 | <b>Basic HD PDU</b><br>Include 4 Basic HD PDUs Cat.No 6 469 75 (p.28)<br>Three phase - 32 A<br>400 V - 50/60 Hz power supply<br>36 C13 outlets + 6 C19<br>3 m power supply cord with IEC 60309 32A plug   |

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## Power Distribution Units (PDU), Linkeo Data Centre Intelligent Metered, Intelligent Switched



To provide  $\sim$  electric power for IT equipment in 19" enclosures Metering at inlet level (+/- 1% metering accuracy) Connected device enabling remote access to all measurements and alerts 2 versions available: NODE version with all functions and BASE version

NODE PDU: with hot swappable full IP controller for connection to LAN. Possible cascading of up to 16 node PDUs with USB cords BASE PDU: without controller. Need to be connected to a NODE PDU for IP connection. Possible cascading of up to 31 base PDUs downstream to a node PDU with RJ 45 patch cables (RS 485 link). BASE is hot swappable and upgradable with a node controller Cat.No 6 461 30 Possibility to add wireless sensors (temperature, humidity...) for environmental monitoring 32 A PDUs are equipped with hydraulic magnetic circuit protection with high current interruption capacity. Hydraulic magnetic circuit breakers are not affected by ambient temperature.

not affected by ambient temperature

330° rotating cable input for a perfect orientation of the cable and no interference in the cabinet IEC 60320 C13 and C19 outlets. Each C13 and C19 outlets are numbered gradually from the input and equipped with cord locking system to avoid any accidental disconnection (100 Newton retention force).

High Density (HD) PDUs provide a high density of C13 outlets to optimise outlets quantities and PDU length.

High ambient temperature rating: 60°C. Aluminium chassis.

19" PDUs and Zero-U PDUs for vertical mounting in the cabinet (supplied with standard and button-type mounting brackets).

| Pack   | Cat.Nos   | Intelligent metered PDUs  | Pack | Cat.Nos                                    | Intelligent switched PDUs   |
|--------|---|---|------|--|---|
| 1      | Base<br>version         Node<br>version           6 461 00         6 461 01           6 461 02         6 461 03 | Single phase - 16 A<br>230 V - 50/60 Hz power supply<br>8 C13 outlets<br>19" PDU<br>C20 inlet (can receive power cables<br>Cat.No 6 469 05 and 6 469 06)<br>18 C13 outlets + 4 C19<br>3 m power supply cord with IEC 60309 16 A<br>plug | 1    | Base Vode<br>version 6 461 20<br>6 461 20  | Outlets switching. Remotely on/off control<br>of each outlet<br>Single phase - 16 A<br>230 V - 50/60 Hz power supply<br>21 C13 outlets - 3 C19<br>C20 inlet (can receive power cables<br>Cat.No 6 469 05 and 6 469 06)<br>Single phase - 32 A |
| 1      | 6 461 04   6 461 05   | Single phase - 32 A<br>230 V - 50/60 Hz power supply<br>20 C13 outlets + 4 C19<br>3 m power supply cord with IEC 60309 32 A<br>plug   | 1    | 6 461 22   6 461 23<br>6 461 24   6 461 25 | 230 V - 50/60 Hz power supply<br>20 C13 outlets + 2 C19<br>3 m power supply cord with IEC 60309 32 A<br>plug<br>21 C13 outlets + 3 C19<br>3 m power supply cord with IEC 60309 32 A   |
|        |   | Intelligent metered HD PDUs   |      |  | plug<br>Three phase - 16 A  |
| 1<br>1 | Base<br>version         Node<br>version           6 461 06         6 461 07           6 461 08         6 461 09 | Single phase - 32 A<br>230 V - 50/60 Hz power supply<br>3 m power supply cord with IEC 60309 32 A<br>plug<br>24 C13 outlets + 12 C19<br>36 C13 outlets + 6 C19  | 1    | 6 461 26   6 461 27<br>6 461 28   6 461 29 | 400 V - 50/60 Hz power supply<br>21 C13 outlets + 3 C19<br>3 m power supply cord with IEC 60309 32 A<br>plug<br>24 C13 outlets + 6 C19<br>3 m power supply cord with IEC 60309 32 A   |
| 1      | 6 461 10   6 461 11   | Three phase - 16 A<br>400 V - 50/60 Hz power supply<br>3 m power supply cord with IEC 60309 16 A<br>plug<br>36 C13 outlets + 6 C19  | 1    | 6 461 18   6 461 19                        | plug<br>Three phase - 32 A<br>400 V - 50/60 Hz power supply<br>24 C13 outlets + 12 C19<br>3 m power supply cord with IEC 60309 32 A<br>plug   |
| 1      | 6 461 12   6 461 13<br>6 461 14   6 461 15  | Three phase - 32 A<br>400 V - 50/60 Hz power supply<br>3 m power supply cord with IEC 60309 32 A<br>plug<br>24 C13 outlets + 12 C19<br>36 C13 outlets + 12 C19  |      |  | P.49  |

## **L**legrand

## Power Distribution Units (PDU), Linkeo Data Centre

Intelligent Metered, Intelligent Switched - bulk



To provide  $\sim$  electric power for IT equipment in 19" enclosures

Metering at inlet level (+/- 1% metering accuracy)

Connected device enabling remote access to all measurements and alerts

2 versions available: NODE version with all functions and BASE version NODE PDU: with hot swappable full IP controller for connection to LAN. Possible cascading of up to 16 node PDUs with USB cords BASE PDU: without controller. Need to be connected to a NODE PDU for IP connection. Possible cascading of up to 31 base PDUs downstream to a node PDU with RJ 45 patch cables (RS 485 link). BASE is hot swappable and upgradable with a node controller Cat.No 6 461 30 Possibility to add wireless sensors (temperature, humidity...) for environmental monitoring

32 A PDUs are equipped with hydraulic magnetic circuit protection with high current interruption capacity. Hydraulic magnetic circuit breakers are not affected by ambient temperature

330° rotating cable input for a perfect orientation of the cable and no interference in the cabinet IEC 60320 C13 and C19 outlets. Each C13 and C19 outlets are numbered gradually from the input and equipped with cord locking system to avoid any accidental disconnection (100 Newton retention force)

High Density (HD) PDUs provide a high density of C13 outlets to optimise outlets quantities and PDU length

High ambient temperature rating: 60°C Aluminium chassis

19" PDUs and Zero-U PDUs for vertical mounting in the cabinet (supplied with standard and button-type mounting brackets)

| Pack | Cat.Nos              | Intelligent metered PDUs   | Pack | Cat.Nos  | Intelligent switched PDUs   |
|------|----------------------|--|------|----------|---|
| 1    | 6 461 56             | Single phase - 32 A<br>230 V - 50/60 Hz power supply<br>20 C13 outlets + 4 C19<br>3 m power supply cord with IEC 60309 32 A<br>plug<br>Include 4 Intelligent metered PDUs Cat.No 6 461 04  |      |          | Outlets switching. Remotely on/off control of each<br>outlet<br>Single phase - 32 A<br>230 V - 50/60 Hz power supply<br>21 C13 outlets + 3 C19<br>3 m power supply cord with IEC 60309 32 A<br>plug |
|      |                      | Base version   | 1    | 6 461 62 | Include 4 Intelligent Switched PDUs Cat.No 6 461 24   |
| 1    | 6 461 57             | Include 4 Intelligent metered PDUs Cat.No 6 461 05   |      |          | Base version  |
|      |                      | Node version   | 1    | 6 461 63 | Include 4 Intelligent Switched PDUs Cat.No 6 461 25<br>Node version   |
|      |                      | Intelligent metered HD PDUs  |      |          |   |
| 1    | 6 461 58<br>6 461 59 | Single phase - 32 A<br>230 V - 50/60 Hz power supply<br>3 m power supply cord with IEC 60309 32 A<br>plug<br>36 C13 outlets + 6 C19<br>Include 4 Intelligent metered HD PDUs<br>Cat.No 6 461 08<br>Base version<br>Include 4 Intelligent metered HD PDUs |      |          |   |
| 1    | 6 461 60             | Cat.No 6 461 09<br>Node version<br>Three phase - 32 A<br>400 V - 50/60 Hz power supply<br>3 m power supply cord with IEC 60309 32 A plug<br>36 C13 outlets + 6 C19<br>Include 4 Intelligent metered HD PDUs<br>Cat.No 6 461 16                           |      |          |   |
| 1    | 6 461 61             | Base version<br>Include 4 Intelligent metered HD PDUs  |      |          |   |

Cat.No 6 461 17 Node version

## Power Distribution Units (PDU), Linkeo Data Centre **Accessories and Power cords**

| 6 461 30 |                      | 64603         64101   |                                      | 6 442 07  |
|----------|----------------------|---|--------------------------------------|---|
| Pack     | Cat.Nos              | Accessories for metered and switched<br>Intelligent PDUs  | Pack                                 | Cat.Nos Power cords C14 to C13 plugs  |
| 1        | 6 461 30             | <b>Node PDU controller</b><br>Controller module<br>Plug the controller on a base version of intelligent<br>PDU to transform it into a node version  |                                      | Server side locking<br>Unique rotary mechanism on C13 plug that fits any<br>standard C14 inlet<br>Set of 10<br>Black  |
| 1        | 6 460 03             | Wireless sensors<br>For cabinet environmental monitoring<br>Easy wire-free deployment and maintenance<br>Wireless communication with PDUs (2.4 GHz Zigbee<br>Green Power)<br>Ultra long battery life (5+ years replaceable battery)<br>Different fixing solutions for sensors: with double<br>sided tape, with cable ties, with a swing nut<br>(supplied with the sensors) or with accessory Cat.No<br>6 460 06 for a more stylish installation<br>Temperature & Humidity wireless sensor | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | 6 441 00 Length 0.5 m<br>6 441 01 Length 1 m<br>6 441 02 Length 1.5 m<br>6 441 03 Length 2 m<br><b>Red</b><br>6 441 06 Length 0.5 m<br>6 441 07 Length 1.5 m<br>6 441 08 Length 1.5 m<br>6 441 09 Length 2 m<br><b>Blue</b> |
| 1        | 6 460 04             | Monitors cool air entering and/or hot air being<br>expelled, and optimises your cooling infrastructure<br>Contact closure wireless sensor<br>To be installed inside the rack to manage door<br>contact sensors and alert in case of door opening/   | 1<br>1<br>1                          | 6 441 12       Length 0.5 m         6 441 13       Length 1 m         6 441 14       Length 1.5 m         6 441 15       Length 2 m         Power cords C20 to C19 plugs  |
|          |                      | closing   |                                      | Server side locking   |
| 1        | 6 469 05             | Accessories for all PDUs<br>Power cables<br>Cable IEC 60320 C19 to IEC 60309 16A<br>2P+E plug<br>Rotary locking mechanism on C19 plug that fits any<br>standard C20 inlet to avoid accidental disconnection<br>Length 1.5 m<br>Length 3 m   | 1<br>1<br>1                          | <ul> <li>Unique rotary mechanism on C19 plug that fits any standard C20 inlet Set of 10</li> <li>Black</li> <li>6 442 02</li> <li>6 442 03</li> <li>ength 1 m</li> <li>Length 1,5 m</li> <li>Length 2 m</li> </ul>          |
| 1        | 9 812 27             | Brackets<br>1 set of Zero-U PDU mounting bracket for Nexpand  | 1<br>1<br>1                          | Red           6 442 07         Length 1 m           6 442 08         Length 1,5 m   |
| 1        | 9 812 28             | Nexpand rack<br>Locking caps<br>To block the use of an outlet. A key is necessary to  | 1<br>1<br>1                          | 6 442 09       Length 2 m         6 442 13       Length 1 m         6 442 14       Length 1,5 m         6 442 15       Length 2 m   |
| 6<br>6   | 6 468 94<br>6 468 95 | remove the cap and free the access<br>Light grey RAL 7035<br>Set of 6 locking caps for C13 outlet + 1 key<br>Set of 6 locking caps for C19 outlet + 1 key   |                                      |   |

## LINKEO DATA CENTRE PDU Legrand is here to support you



With its worldwide reach, and particularly its local sales and tech support teams from Legrand Data Centre Solutions, Legrand is here to help you in your data centre design and deployment with integrated solutions.

Linkeo Data Centre PDUs have integration capabilities in Group rack offerings (Linkeo Data Centre racks, Nexpand racks)







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