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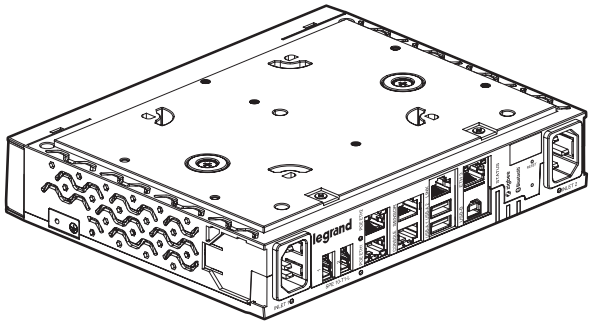
Pod Master

Cat.No: 6 461 31



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1. INTRODUCTION

The Pod Master offers an ideal solution for monitoring and controlling power supplies, environmental data and door access in data center white space, at cabinet or POD (Performance Optimized Datacenter) level.

The Pod Master collects data and controls the following devices:

- Up to 60 Base PDUs or Smart Ready PDUs. «Base PDU» and «Smart Ready PDU» are synonymous; both terms refer to the same type of product.
- Up to 240 wireless sensors (Cat.No 6 460 03 for temperature and humidity, Cat.No 6 460 04 for contact closure)
- Raritan wired sensors and actuators (e.g. intelligent door access control system, motion/vibration/leak/temperature/humidity sensors etc.)

Its innovative design offers the following advantages in particular:

- Real-time monitoring via a user-friendly, responsive Web user interface. DCIM Agnostic and OpenAPI platform for data collection.
- Fast deployment using Zigbee radio technology and a mobile app (for Android 10 and IOS 13 or later) to guide you through commissioning.
- Cost-effective: no need for a screen on the PDUs anymore thanks to the mobile app and no need for patch cords to connect the PDUs in cascade thanks to Zigbee radio communication.
- Secure: Zigbee 3.0 uses a mesh network topology, which allows devices to relay signals from one device to another. It optimises communication between devices automatically. If a device or communication link fails, the network reroutes data itself via alternative paths.

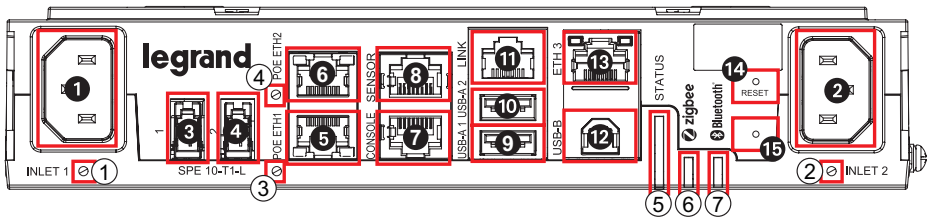
For large deployments, it is possible to create a loop of up to 12 Pod Masters, with each end of the loop being connected to a network switch. This helps to reduce the number of network ports used and secure network access.

2. GENERAL SPECIFICATIONS

2.1 Overview of the Pod Master

Front view:

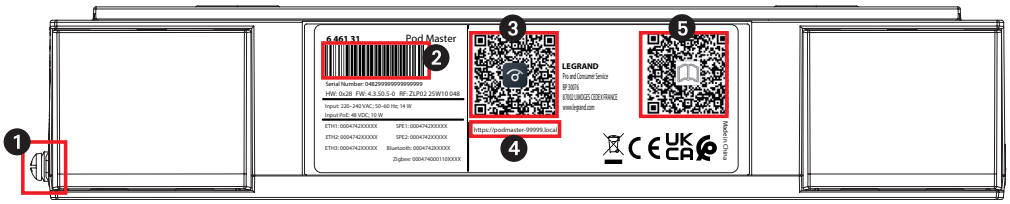
1. IEC C14 connector No.1
2. IEC C14 connector No.2
3. Single pair Ethernet port No.1
4. Single pair Ethernet port No.2
5. POE+ 10M/100M/1000M Ethernet port No.1
6. POE+ 10M/100M/1000M Ethernet port No.2
7. Console port: RJ45 connector
8. Sensor port: RJ45 connector
9. USB-A port No.1 (USB 2.0 powered port)
10. USB-A port No.2 (USB 2.0 powered port)
11. Link port: RJ45 connector
12. USB-B port
13. 10M/100M Ethernet port No.3
14. Reset button
15. Software restore button



1. LED indicator for C14 connector No.1
2. LED indicator for C14 connector No.2
3. LED indicator for POE+ Ethernet port No.1
4. LED indicator for POE+ Ethernet port No.2
5. General status indicator
6. LED indicator for Zigbee function
7. LED indicator for Bluetooth function

Rear view:

1 Earthing screw
2 Serial number barcode
3 QR code for the PodView app
4 URL to connect to the Pod Master on the local network
5 QR code for the documentation



2.2 Power supply

The Pod Master is powered via two C14 connectors and/or two POE+ Ethernet ports.
You can connect between one and four of these inputs to appropriate power sources.

Input connector	2 x C14
Maximum input current	0.4 A
Input voltage	220–240 VAC
Nominal input voltage	230 V
Input frequency	50/60 Hz
Power	10 W at 230 V

Input connector	2 x PoE Ethernet ports
Maximum input current	2 A
Input voltage	44–57 VDC
Nominal input voltage	48 VDC
Power	10 W at 48 VDC

2.3 Radio frequency characteristics

	Bluetooth®	zigbee certified product
Frequency band	2400 to 2480 MHz ISM	2400/2483.5 MHz with 16 channels (11 to 26)
Maximum RF power	20 dBm/100 mW	20 dBm/100 mW
Range	15 m	15 m

2.4 Recommended installation for the Pod Master in terms of radio performance

The Pod Master has been designed, tested and qualified to communicate wirelessly in a data center environment within a maximum radius of 15 m from:

- the devices it is paired with (PDUs and sensors) using Zigbee technology
- mobile devices (phone, tablet) using Bluetooth technology

The range and stability of radio communication depend on the operating environment. Whilst the installation recommendations below are not an essential requirement, they do help to optimise communication:

- Installation in a high, central position:

When installed in a high, central position, the Pod Master offers extensive, uniform radio coverage, ensuring optimum signal transmission.

- Unobstructed position:

Whether installed inside or outside a cabinet, the Pod Master must be positioned at a reasonable distance from metal components and active devices to ensure optimum operating conditions.

- Near the equipment to be monitored:

Positioning the Pod Master near the primary PDUs ensures fast and effective communication.

Note: Zigbee 3.0 uses a self-healing mesh network topology that allows devices to relay signals from one device to another. The mesh improves network reliability and ensures scalability.

- In an optimised radio environment:

The Pod Master is installed in an unobstructed area away from major technical equipment such as UPSs, motors, transformers or ventilation systems.

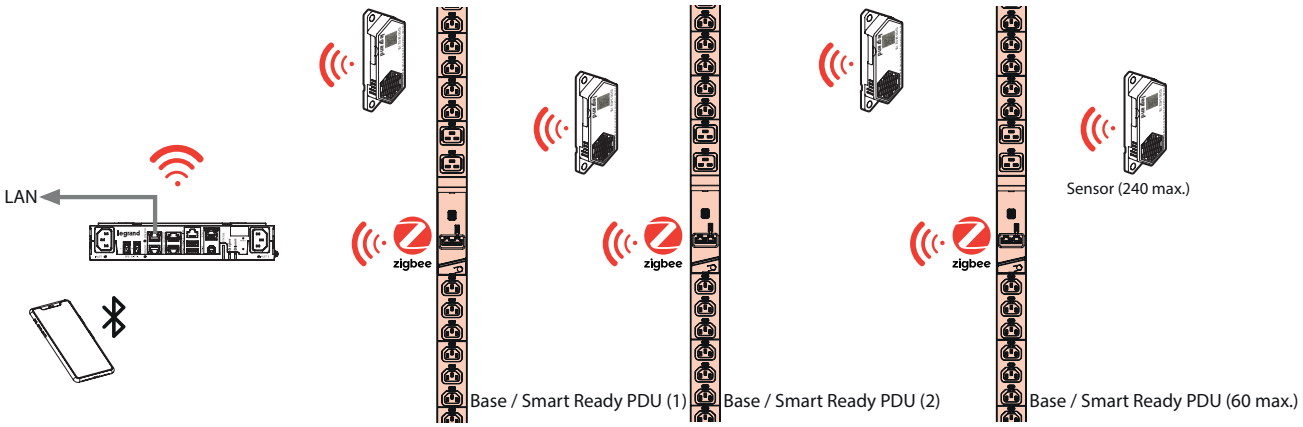
2.5 Remote control

- Built-in Web interface.
- Easy integration into BMS or DCIM supervisory tools with protocols like SNMP, Modbus over TCP/IP and JSON-RPI.

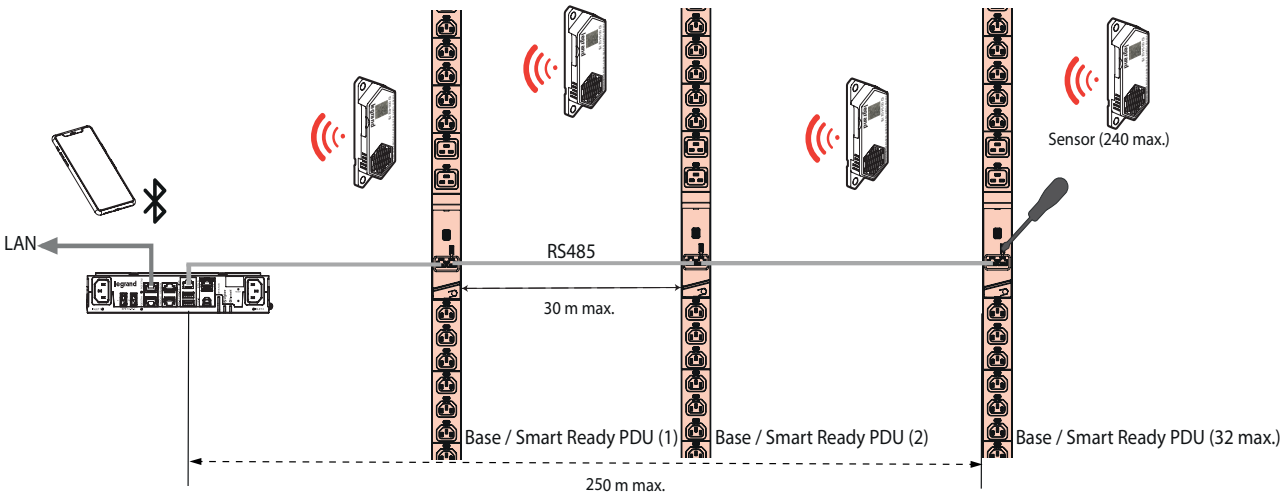
3. CONNECTIONS

3.1 Wireless connection

The PDUs, wireless peripheral devices and the Pod Master are paired in a mesh network and communicate wirelessly via the Zigbee 3.0 protocol.



3.2 Wired connection with the PDUs - RS485



In a wired connection, the Base / Smart Ready PDU at the end of the line must have the switch for the connector that is not connected in the OFF position.

4. MECHANICAL CHARACTERISTICS

Colour	Black
Material	Polycarbonate PC
IP	20
IK (impact resistance)	04

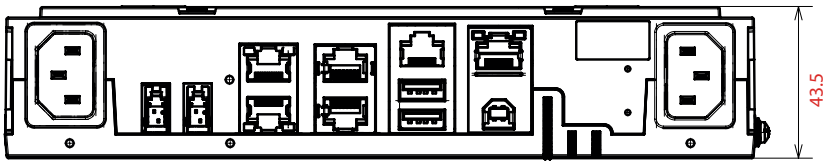
The Pod Master has two magnets for installing on a magnetic metal surface, either on the ceiling or on a vertical surface.
In particular, it can be installed on the roof of a Nexpand cabinet without taking up any 19" rack space.

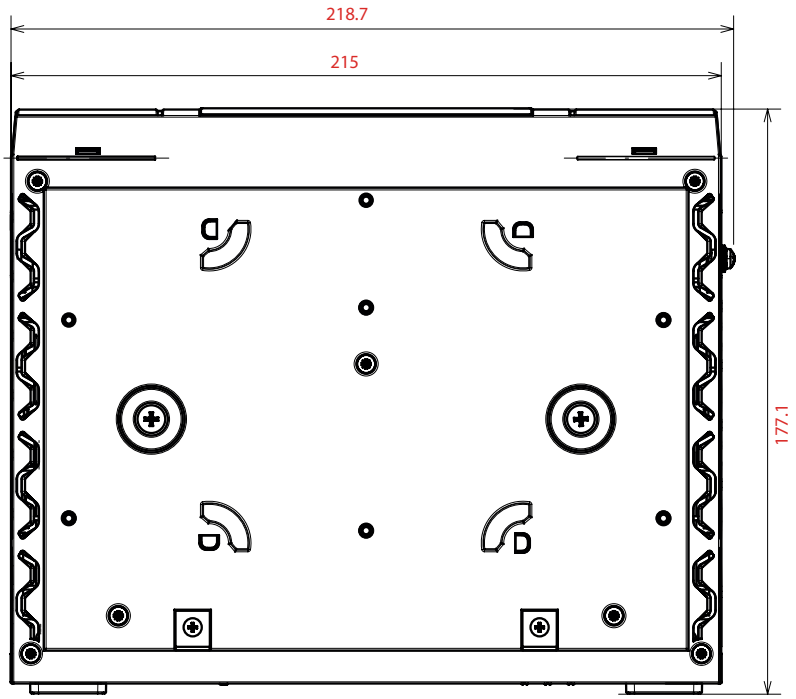
Mechanical characteristics of the two magnets:

Material	Neodymium-iron-boron alloy
Classification	Grade N35
Force	80 N +/- 20

5. DIMENSIONS

Dimensions in millimetres:



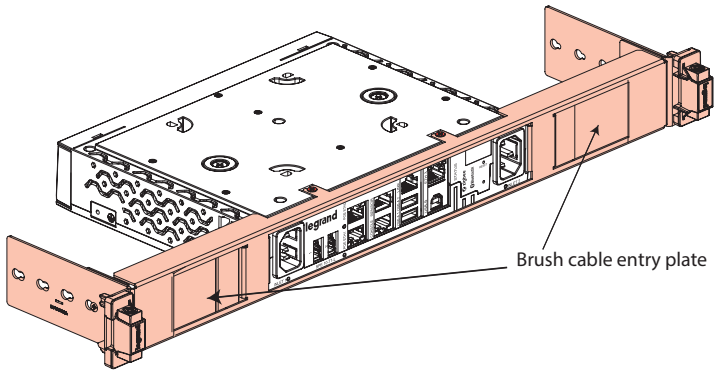


6. MOUNTING ACCESSORIES

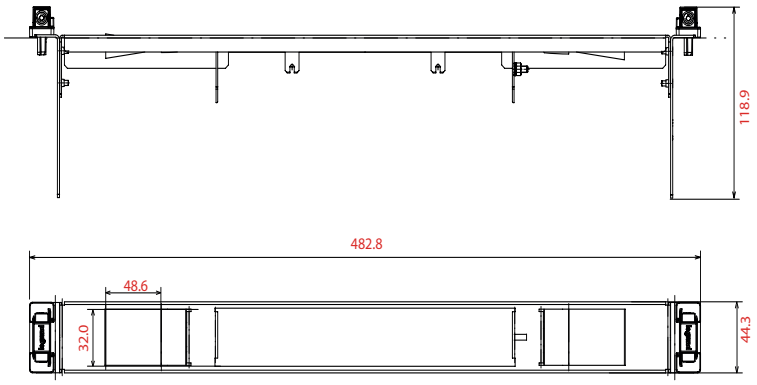
6.1 19" panel 1U - 6 461 35

Screwless, tool-free mounting.

Depth adjustment: 4 positions, offset from 0 to 60 mm in steps of 20 mm.



Dimensions in millimetres:

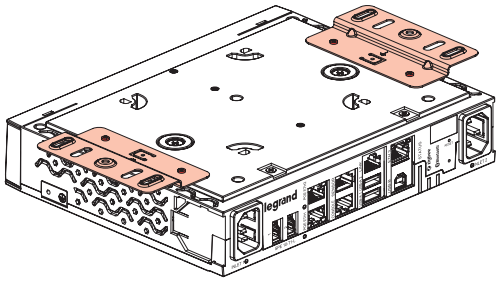


Mechanical characteristics:

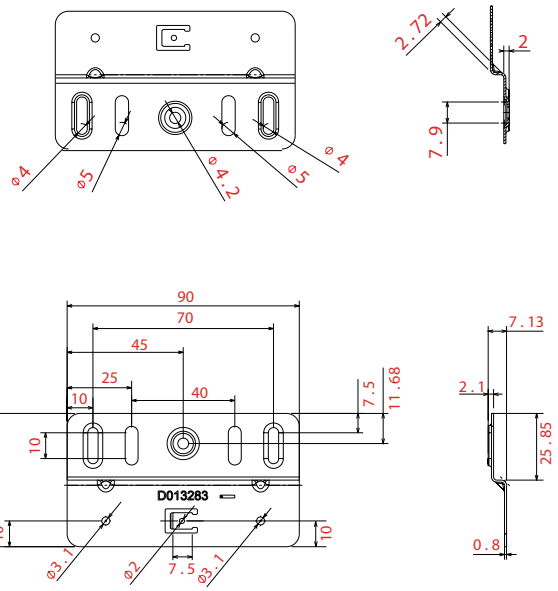
Colour	Black paint (RAL 9005)
Material	DC01 sheet steel, 1.2 mm thick
Surface treatment	Clear zinc-plated according to specification STS027L

6.2 Universal mounting brackets - 6 461 38

Used for installing the Pod Master on a variety of supports (wall, ceiling, cable tray, etc.)



Dimensions in millimetres:



Mechanical characteristics:

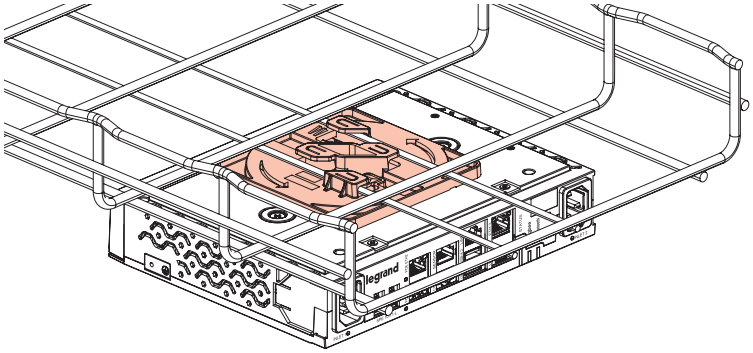
Colour	Grey galvanised steel
Material	DC01 sheet steel, 0.8 mm thick
Surface treatment	Clear zinc-plated according to specification STS027L

6.3 Cablofil adaptor - 0 919 38

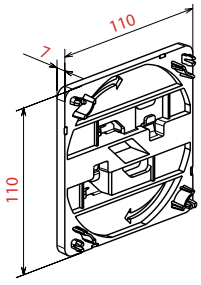
Quick mounting accessory for attaching the Pod Master to a Cablofil cable tray.

Clips directly to the Pod Master and the cable tray without the need for any screws or tools.

Compatible with 30/54/105 mm height cable trays.



Dimensions in millimetres:

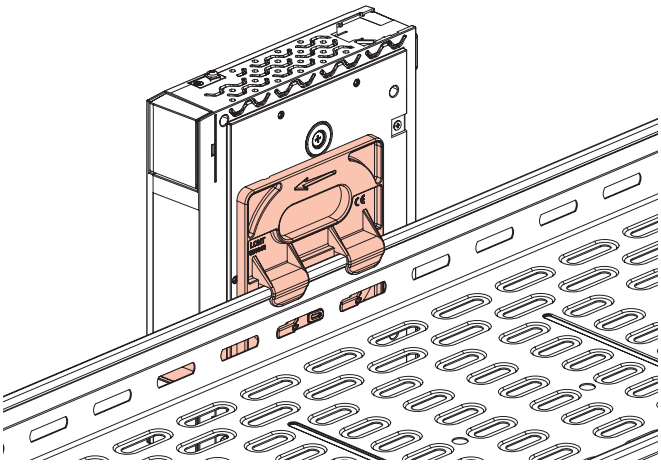


Mechanical characteristics:

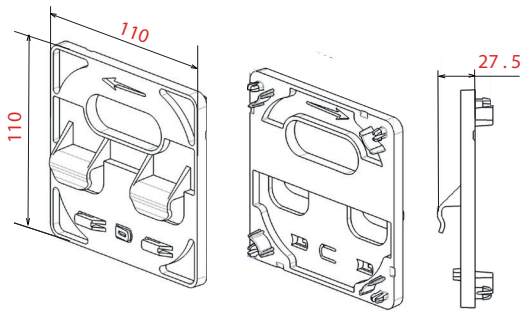
Colour	Grey (RAL 7035)
Material	Acrylonitrile butadiene styrene (ABS)

6.4 P31 adaptor - 0 919 48

Quick mounting accessory for attaching the Pod Master to the side of a P31 cable tray.
Clips directly to the Pod Master and the side of the cable tray without the need for any screws or tools.
Compatible with 50 and 100 mm height cable trays.



Dimensions in millimetres:



Mechanical characteristics:

Colour	Grey (RAL 7035)
Material	Acrylonitrile butadiene styrene (ABS)

7. ENVIRONMENTAL CHARACTERISTICS

Storage and transport temperature	-20°C to 70°C
Operating temperature	5°C to 60°C
Relative operating humidity	5% to 95%
Operating altitude	0–2000 m

8. STANDARDS AND APPROVALS

8.1 Standards

Application	Standards
Safety	IEC 62368-1
Information and communication 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	IEC/EN 62479 EN 50491-5-2 EN 50491-5-3 EN 55035 EN 55032

8.2 Approvals

CE, UKCA, CMIM

RoHS Directive (Restriction of Hazardous Substances)

REACH regulation (Registration, Evaluation, Authorisation and Restriction of Chemicals)