BELDEN
SENDING ALL THE RIGHT SIGNALS

Product Bulletin

PB 134E

Belden® Power Distribution Units (PDUs)

The new highly flexible range of standard and non-standard Belden Power Distribution Units helps to reduce downtime in the Data Center environment while at the same time improving energy efficiency and overall system reliability.

Belden offers a full range of Power Distribution Units (PDUs) including basic intelligent and monitored PDUs. In addition to maximum flexibility, the range allows data center operators to save costs and achieve maximum uptime.

- Belden PDU devices are fitted with multiple outlets designed to distribute electric power, especially to racks of computers and networking equipment located within the Data Center.
- This new range gives you peace of mind for mission critical Data Center applications by providing reliable power distribution.
- The PDUs from Belden take care of your needs, whether basic reliable power distribution is required, or when intelligent management for mission critical applications is demanded.

As Data Center managers are embracing Power Usage Effectiveness (PUE) as a key measure of efficiency, the use of Data Center Infrastructure Management (DCIM) tools allows them to intelligently monitor and manage the critical infrastructure of their environment. Belden PDUs can be assigned an IP address and use SNMP to send data to the DCIM for efficient consumption reporting, problem alarming, and capacity planning and forecasting.

All PDUs fully complement the Belden family of networking products, and are totally compatible with all Belden IBDN connectivity products and solutions. Used as part of a fully integrated Belden IBDN solution, in which all components work together seamlessly, they deliver superior performance and are fully supported by the most trusted name in the industry.

Belden remote monitoring PDUs make monitoring very simple. Just access a snapshot reading of the power usage through any Internet connection. No external software is needed, and it can be monitored through SNMP (Network Monitoring Protocol), XML and HTML for easy tracking of critical data. All data is presented in a graphical format for easy analysis of trends. Alarms based on critical values are provided via SNMP traps or pre-defined emails.

Intelligent monitoring PDUs allow local or remote viewing and alarms for issues that can arise at the outlet, breaker, circuit and aggregate level. With the advantage of seeing current and/or power usage feedback in an instant, the chances of overloading a PDU when adding, removing or adjusting equipment is minimized.

All of this knowledge can help Data Center managers record and display information to watch for trends that can lead to better efficiency and less downtime.

A new product to serve your needs.
Be certain.

Complete flexibility: with a range of Data Center specific Belden PDUs to choose from, you can select exactly the right solution for your critical applications while at the same time helping to achieve maximum uptime and energy efficiency.

Applications

The new Belden range of durable and versatile PDUs was specifically designed to accommodate power requirements for critical applications in the Data Center environment and consists of the following:

- **Basic PDU without Monitoring** offers simple, but highly reliable power distribution for equipment racks and other Data Center applications.
- **Basic PDU with Local Power Monitoring** distributes power and provides real-time assessment of the power consumption via a local display; allowing for the identification of current and voltage fluctuations and quick troubleshooting.
- **Intelligent PDU with Local and Remote Current Monitoring** for critical applications, Belden's intelligent PDUs offer instant management and control for maximum precision and accuracy. Remote management allows you to view current usage via a local LED display or via an IP connection instantly. Belden Intelligent PDUs offer alarms for issues that can arise at outlet, breaker, circuit and aggregate level.
- **Intelligent PDU with Local and Remote Power Monitoring** tracks performance on site, or has the ability to be monitored over a network or via the Internet. Power, voltage, current, power factor and True RMS of the overall PDU can also be monitored locally via LED display.

  Monitoring power of the complete unit reduces the risk of overloading a PDU and Installed Equipment. It is possible to set alarms or conditional alerts (SNMP traps or sending emails) to pre-set monitored critical values. In this way you can prevent an overload of the power supply.

  Intelligent PDUs have the ability to add environmental sensors enabling you to monitor and understand conditions in the rack beyond power usage. Users are able to customize the alarm function, to report on user defined information relating to changes in temperature, humidity and door position.

  The intelligent PDU gives you the possiblity to analyse trends in power consumption since data is logged locally on the PDU for up to one month and conveniently visible in a graph.
- **Intelligent PDU with Local and Remote Power Monitoring and with Remote Outlet Switching** has the same features as per above with the added capability of remote outlet switching. With the ability to access the PDU remotely this power strip enables you to remotely switch individual outlets on and off. This provides more control over the power supply of your equipment. One of the benefits of this PDU is the ability to react effectively to a triggered alarm and shut down an individual outlet remotely.
- **Intelligent PDU with Local and Remote Power Outlet Monitoring with Remote Outlet Switching** – this PDU has the same features as per above intelligent PDUs with the extra capability of monitoring power usage of individual outlets on the PDU, as opposed to monitoring the complete PDU. This PDU allows you to monitor and react specifically to conditions at an individual outlet, indicated by an alarm or conditional alert by email or SNMP trap. The specific identified outlet can be controlled remotely.

Your Benefits

In addition to maximum flexibility of choice to suit specific requirements, Belden's new PDU range can help provide information to enable cost savings. This is particularly true for the monitored PDUs, which can provide a real-time assessment of the power, voltage, current, power factor and True RMS, via a local display.

Thanks to the metered PDU's ability to identify current fluctuations, maximum energy efficiency can be achieved. PDU performance can be tracked on-site or via Ethernet using Belden's monitored power strips. For even greater protection, environmental sensors can be added. Power can be monitored locally or via IP (SNMP enabled), reducing the risk of overloading and keeping power to the servers.

Used as an integral part of a Belden network solution, this new range of PDUs can support the overall efficiency and reliability of an IBDN data network.

Product Features

The range consists of the following six PDU families:

- BN = Basic
- BL = Local Power Monitoring
- IC = Intelligent Current Monitoring
- IP = Intelligent Power Monitoring
- IS = Intelligent Power Monitoring & Switching
- IO = Intelligent Power Monitoring per outlet & Switching

Environmental: RoHS, RoHS2 compliant

Single and three phase power options are available:

- The advanced power strips can monitor and manage power by receptacle over the Internet or Ethernet connections.
- The ability to attach sensors such as Humidity and Dew Point allow the PDU to link to management software for the Data Center to enable quick isolation of changes in environment.

Regulatory:

- CE Marked
- Complies with EN 55022:
  IT equipment – Radio disturbance characteristics
- Complies with EN 55024:
  IT equipment – Immunity characteristics
- Complies with IEC 60950-1:
  IT equipment – Safety – Part1: General requirements

Description	Basic PDU	Basic Local Power Monitoring	Intelligent Current Monitoring	Intelligent Power Monitoring	Intelligent Power Monitoring & Switching	Intelligent Power Monitoring per Outlet & Switching
Monitoring	–	Power	Current	Power	Power	Power
Local Display	–	✓	✓	✓	✓	✓
IP Monitoring	–	–	✓	✓	✓	✓
SNMP Enabled	–	–	✓	✓	✓	✓
Log Data at PDU 1 month	–	–	–	✓	✓	✓
Add External Sensors	–	–	–	✓	✓	✓
Switching on/off Specific Outlet	–	–	–	–	✓	✓
Monitor Specific Outlet	–	–	–	–	–	✓

Power supply: Single phase, three phase

Rack PDUs Mounting versions & compatibility: Horizontal fits 19" racks, vertical Zero U units fit vertically into 42U to 47U racks

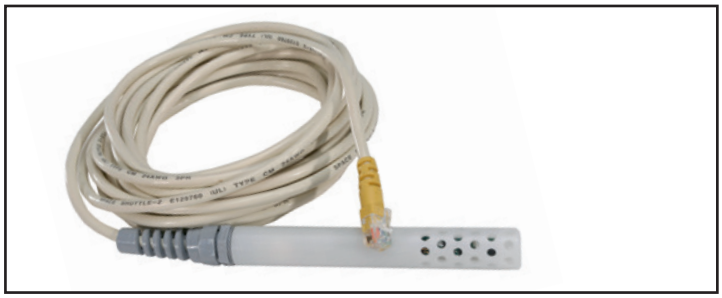
Ordering Information

Cord length:

- Standard 3 meters, other lengths available on request.

Monitoring ability:

- The Rack PDU has the ability to be assigned an IP address and send data to the DCIM for consumption reporting, problem alarming, and capacity planning and forecasting.



9318-0503 – Remote sensor assembly for temperature, air flow and humidity

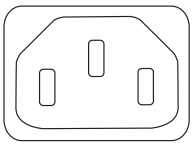
Accessories

Sensor ability to connect external monitoring sensors including:

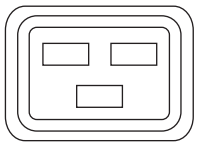
- Temperature
- Humidity
- Smoke detection
- Airflow
- Door positioning

Description	Part Number
Remote Temperature Sensor with 3.66 m (12 ft.) wire	9318-0501
Remote Temperature/Air Flow/Humidity Sensor with 3.66 m (12 ft.) wire	9318-0503
Remote Door Position Sensor	9318-0504
Remote Water Detection Sensor	9318-0505

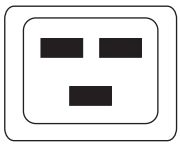
Receptacles & Plugs



IEC C13 Receptacle



IEC C19 Receptacle



IEC C20 Plug

3P+N+E Plug

P+N+E Plug

Note: Locking receptacles also available

Ordering Information

European Part Number	Number of Outlets	Power Supply	Inlet Plug	Mounting Style	Receptacle 1	Receptacle 2	Cord Style	Circuit Breaker	Color
 Part Number: EP101001									
Basic PDU									
EP101001	8	16 A, 230 V, 1 Phase	P+N+E (1 Phase), Blue	Horizontal/Vertical	8 x IEC320 C13	N/A	3 m with P+N+E	N/A	Black RAL9005
 Part Number: EP102002									
Basic PDU with Local Unit Level Power Monitoring									
EP102001	30	16 A, 230 V, 1 Phase	P+N+E (1 Phase), Blue	Vertical	24 x IEC320 C13	6 x IEC320 C19	3 m with P+N+E	N/A	Black RAL9005
EP102002	8			Horizontal/Vertical	8 x IEC320 C13	N/A		N/A	
EP102003	30	32 A, 230 V, 1 Phase		Vertical	24 x IEC320 C13	6 x IEC320 C19		Yes	
 Part Number: EP103005									
Intelligent PDU with Local & Remote Unit Level Current Monitoring									
EP103001	30	16 A, 230 V, 1 Phase	P+N+E (1 Phase), Blue	Vertical	24 x IEC320 C13	6 x IEC320 C19	3 m with P+N+E	N/A	Black RAL9005
EP103002	30							Yes	
EP103003	42	32 A, 230 V, 1 Phase			36 x IEC320 C13			Yes	
EP103004	30	16 A, 230/400 V WYE, 3 Phase	3P+N+E (3 Phase), Red		24 x IEC320 C13		3 m with 3P+N+E	N/A	
EP103005	18	32 A, 230/400 V WYE, 3 Phase			12 x IEC320 C13			Yes	
EP103006	30				24 x IEC320 C13			Yes	
 Part Number: EP104004									
Intelligent PDU with Local & Remote Unit Level Power Monitoring and Optional Environmental Monitoring									
EP104001	30	32 A, 230 V, 1 Phase	P+N+E (1 Phase), Blue	Vertical	24 x IEC320 C13	6 x IEC320 C19	3 m with P+N+E	Yes	Black RAL9005
EP104002	30	16 A, 230 V, 1 Phase						N/A	
EP104003	12		C20 (1 Phase), Black	Horizontal	12 x IEC320 C13	N/A	3 m with C20	N/A	
EP104004	30	32 A, 230 V, 1 Phase	P+N+E (1 Phase), Blue	Vertical	24 x Locking IEC320 C13	6 x Locking IEC320 C19	3 m with P+N+E	Yes	
EP104005	42				36 x IEC320 C13	6 x IEC320 C19		Yes	
EP104006	30	16 A, 230/400 V WYE, 3 Phase	3P+N+E (3 Phase), Red		24 x IEC320 C13		3 m with 3P+N+E	N/A	
EP104007	30	32 A, 230/400 V WYE, 3 Phase						Yes	
EP104008	30				24 x Locking IEC320 C13	6 x Locking IEC320 C19		Yes	

Ordering Information

European Part Number	Number of Outlets	Power Supply	Inlet Plug	Mounting Style	Receptacle 1	Receptacle 2	Cord Style	Circuit Breaker	Color
 Part Number: EP105001									
Intelligent PDU with Local & Remote Unit Level Power Monitoring, Remote Outlet Switching and Optional Environmental Monitoring									
EP105001	24	16 A, 230/400 V WYE, 3 Phase	3P+N+E (3 Phase), Red	Vertical	21 x Locking IEC320 C13	3 x Locking IEC320 C19	3 m with 3P+N+E	N/A	Black RAL9005
EP105002	24	32 A, 230/400 V WYE, 3 Phase						Yes	
EP105003	24	16 A, 230 V, 1 Phase	P+N+E (1 Phase), Blue				3 m with P+N+E	N/A	
EP105004	24	32 A, 230 V, 1 Phase			20 x Locking IEC320 C13	4 x Locking IEC320 C19		Yes	
 Part Number: EP106003									
Intelligent PDU with Local & Remote Outlet Level Power Monitoring, Remote Outlet Switching and optional Environmental Monitoring									
EP106001	24	16 A, 230/400 V WYE, 3 Phase	3P+N+E (3 Phase), Red	Vertical	21 x Locking IEC320 C13	3 x Locking IEC320 C19	3 m with 3P+N+E	N/A	Black RAL9005
EP106002	24	32 A, 230/400 V WYE, 3 Phase						Yes	
EP106003	24	16 A, 230 V, 1 Phase	P+N+E (1 Phase) Blue				3 m with P+N+E	N/A	
EP106004	8		C20 (1 Phase) Black	Horizontal	8 x Locking IEC320 C13	N/A	3 m with C20	N/A	
EP106005	24	32 A, 230 V, 1 Phase	P+N+E (1 Phase), Blue	Vertical	20 x Locking IEC320 C13	4 x Locking IEC320 C19	3 m with P+N+E	Yes	

Always Stay Ahead with Belden

In a highly competitive environment, it is crucial to have reliable partners who are able to add value to your business. When it comes to signal transmissions, Belden is the number one solutions provider. We understand your business and want to know your specific challenges and targets to see how effective signal transmission solutions can push you ahead of the competition. By combining the strengths of our four leading brands, Belden®, GarrettCom®, Hirschmann™ and Lumberg Automation™, we are able to offer the solution you need. Today it may be a single cable, a switch or a connector, thus solving a specific issue; tomorrow it can be a complex range of integrated applications, systems and solutions.