Switchable Power Distribution Units with energy metering per load outlet

Controlling and monitoring of connected consumers: From AV installations to data centers


Expert Power Control 8045-2: 12 IEC-Lock outlets on the rear panel prevent unintentional disconnection of the cables

Use case for Expert Power Control series

A **standard 19 inch data center rack** with 8 servers is deployed with customer critical applications running on the servers. The user's target: to implement a **reliable power distribution** as well as an **intelligent device managment** regarding capacitiy and system monitoring - all at a **reasonable cost-benefit ratio**. With the switchable IP power distribution units from GUDE, customers can profit from these **key benefits**:

- Enhancement of **energy efficiency**
- Real time metering of **energy consumption on rack and server level**
- Increased security for connected servers due to **surge protection (SPD type 3)**
- Implementation of a reliable environment monitoring by additional **plug-n-play sensors**
- **Instant remote access** in case of need
- Support of commonly used **authentification and encryption protocols**
- Prevention of down-times and of system critical conditions by **residual current monitoring (RCM type A)**
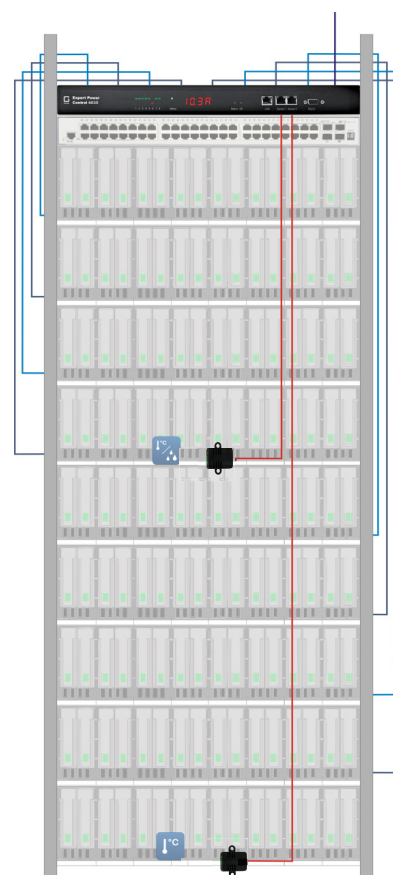
1 Individually Switched

The PDUs dispose on the rear side of 4 or 12 load outlets IEC C13. This allows connected devices to be switched off and on in the event of a fault. Furthermore, the devices can be controlled on schedule due to integrated timer functions.

2 Outlet Metered

Integrated energy meters on outlet level help to ensure a sustainable operation of the infrastructure. In addition, the user receives warnings when fault currents occur. This allows preventive maintenance even before downtime.

3 Sensor Monitored

Available plug-n-play sensors enable monitoring of environment temperature, humidity, air pressure and input sensors (NO/NC). Thus, critical system conditions can be anticipated well in advance.

4- or 12-fold switched PDU with energy monitoring per outlet

Residual current metering
Surge protection type 3

Features

- Up to 12 load outputs individually switchable at the device, via HTTP(S), SNMP, ModbusTCP as well as via command line interface using Telnet, SSH, MQTT or serial interface
- Status and Power-up delay (0...9999 seconds) adjustable individually for each Power Port after power blackout
- Latency time of 1 second prevents simultaneous power-up of multiple Power Ports
- Programmable timetables and turn-on/turn-off sequences
- 2 energy meters for outlet-metering per port: one meter continuously, the other resettable
- Metering of energy, current, power factor, phase angle, frequency, voltage and active / apparent / reactive power
- Residual current metering type A
- A clearly visible LED display for total current, IP address, sensor data and error reports
- An individual watchdog (ICMP/TCP) can be assigned for each Power Port
- Integrated surge protection (SPD) type 3 prevents damage of device and of connected consumers (L-N, L/N-PE), status retrievable over network
- 2 interfaces for plug-n-play sensors for environmental monitoring (temperature, humidity, air pressure, input senors)
- Event-based port switching possible by set sensor thresholds
- Internal beeper for acoustic alarm for set sensor thresholds
- Comfortable configuration by web browser, Windows or Linux tool
- Firmware update via Ethernet during operation
- IPv6-ready

- HTTP/HTTPS, e-mail (SSL, STARTTLS), DHCP, Syslog
- SNMPv1, v2c, v3 (Get/Traps)
- TLS 1.0, 1.1, 1.2
- Radius, Modbus TCP and MQTT 3.1.1 support
- Configuration and control via Telnet
- Access control via IP Access Control List
- Low internal power consumption
- Developed and manufactured in Germany

Electrical Connections

- Power supply NEMA 5-15, max. 12 A, 110-220 V
- Power Ports: 4 or 12 IEC C13 (Lock), max. 12 A
- Ethernet connector RJ45 (10/100 Mbit/s)
- Serial interface RS232 (Sub-D 9-pin)
- 2 RJ45 interfaces for plug-n-play sensors

Technical Details

- Dimensions: 19 inch, 1 rack unit
- LxHxD: 17.28" x 1.73" x 7.01" (without brackets)
- Weight: ca. 102.3 oz
- Operating temperature: 32-122 °F
- Storage temperature: -4 - 158 °F
- Relative humidity: 0 - 95% (non-condensing environment)

Order Code	Product	Rear connectors	Shared Features
7-8025-1	Expert Power Control 8025-1	4x IEC C13	Operating voltage: 110-230 V , max.: 12 A
			Outlet metered
7-8045-1	Expert Power Control 8045-1	12x IEC C13	Residual current metering type A
			Surge protection (SPD) type 3
7-8045-2	Expert Power Control 8045-2	12x IEC C13 Lock	2 sensor ports with RJ45 socket

Order Code	Product	Feature
7205	Temp.,Humidity Sensor 7205	Plug-n-play sensor, RJ45 connector, -6°F to +176°F, 0-90% humidity
7206	Temp., Humidity, Air pressure Sensor 7206	Plug-n-play sensor, RJ45 connector, -6°F to +176°F, 0-90% humidity, 300-1100 hPa
7209	Temp.,Humidity, Signal Input Sensor 7209	Plug-n-play sensor, RJ45 connector, -6°F to +176°F, 0-90% humidity, 2 passive signal inputs
0804	IEC Extension Cable 0804	Extension cable for IEC C13 to C14, length: 118.1 in.
0871	Desk/Wall Bracket 0871	Accessories for mounting a 19-inch device under a tabletop or on a wall
0872	Cable Holder 0872	13 fixation bridges for load cables at the rear side