

Switchable Power Distribution Units with energy metering per load outlet

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

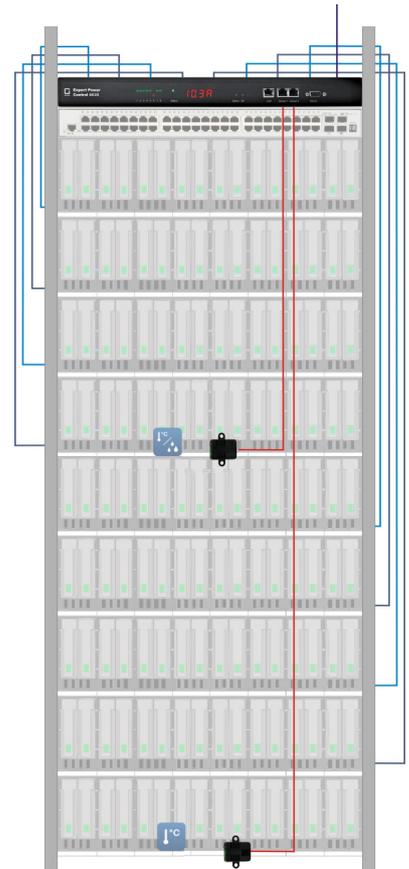


Expert Power Control 8045-2: 12 IEC-Lock outlets on the rear panel prevent unintentional disconnection of the cables

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 management** regarding capacity 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 **overvoltage 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 **authentication and encryption protocols**
- ▶ Prevention of down-times and of system critical conditions by **residual current monitoring (RCM type A)**



1 Switched

The PDUs dispose on the rear side of 4, 8 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 Monitored

Available plug-n-play sensors enable monitoring of environment temperature, humidity and air pressure. Thus, critical system conditions can be anticipated well in advance.



4, 8, 12

8

2

4-, 8- or 12-fold switched PDU with energy monitoring per outlet

**Residual current metering
Overvoltage 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 overvoltage 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 and air pressure)
- 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 IEC C20, max. 16 A, 110-230 V
- Power Ports: 4x, 8x or 12x IEC C13 (Lock), max. 10 A
8x safety socket, max. 16 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: 43.9 x 4.4 x 17.8 cm (without brackets)
- Weight: ca. 2.7 kg
- Operating temperature: 0-50 °C
- Storage temperature: -20 - 70 °C
- Relative humidity: 0 - 95 % (non-condensing environment)

Order Code	Product	Rear connectors	Shared Features
8025-1	Expert Power Control 8025-1	4x IEC C13	Operating voltage: 110-230 V, max.: 16 A Energy metering per power port Residual current metering type A Overvoltage protection (SPD) type 3 2 sensor ports with RJ45 socket HTTPS, SSL, IPv6, SNMPv3, Telnet, Radius, Modbus TCP, MQTT 3.1.1
8035-1	Expert Power Control 8035-1	8x IEC C13	
8035-2	Expert Power Control 8035-2	8x IEC C13 Lock	
8035-3	Expert Power Control 8035-3	8x safety socket type F (DE)	
8045-1	Expert Power Control 8045-1	12x IEC C13	
8045-2	Expert Power Control 8045-2	12x IEC C13 Lock	

Order Code	Product	Feature
7205*	Temp., Humidity Sensor 7205	Plug-n-play sensor, RJ45 connector, -20°C to +80°C, 0-90% humidity
7206*	Temp., Humidity, Air pressure Sensor 7206	Plug-n-play sensor, RJ45 connector, -20°C to +80°C, 0-90% humidity, 300-1100 hPa
7209	Temp., Humidity, Signal Input Sensor 7209	Plug-n-play sensor, RJ45 connector, -20°C to +80°C, 0-90% humidity, 2 passive signal inputs
* Sensors also available with calibrated temperature range: 7205-2, 7206-2		
0804	IEC Extension Cable 0804	Extension cable for IEC C13 to C14, length: 3 m
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