Expert Power Control 8221-1 / 8226-1

12-fold switched PDU with integrated current metering and monitoring

Front and rear side of Expert Power Control 8221-1 and Expert Power Control 8226-1

Features

- 12 Power Ports individually switchable directly on the device, via HTTPS, SNMP, command line tool and RS232 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
- Paired switching of outlets possible, e.g. output 1 of bank 1 simultaneously with output 1 of bank 2
- Programmable turn-on/turn-off sequence
- 2 energy meters per bank and for 8226-1 also per load outlet; one meter continuously, the other resettable
- Metering of energy, current, power factor, phase angle, frequency, voltage and active / apparent / reactive power
- A clearly visible LED display per bank for total current, IP address, sensor data and error reports
- 12-channel watchdog, an individual watchdog (ICMP/TCP) can be assigned for each Power Port
- 2 independent power inputs of 230 V for the same or different phases
- Integrated overvoltage protection prevents damage of device and of connected consumers (L-N 10 kA), status retrievable over network
- 2 interfaces for optional sensors for environmental monitoring (temperature, humidity and air pressure)
- Event-based port switching possible by set sensor thresholds
- Internal beeper for acoustic alarm for 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
- Telnet, Radius and Modbus TCP support
- Access control via IP Access Control List
- Android and iOS app Gude Control allows access from anywhere
- Low internal power consumption, typ. 5 W / 7 W (8221-1 / 8226-1)
- Developed and manufactured in Germany

Order Code | Product | Feature | Operating Voltage | Max. Current
---|---|---|---|---
8221-1 | Expert Power Control 8221-1 | 2 x 6 outlets IEC C13, energy metering per bank | 230 V | 2 x 16 A
8226-1 | Expert Power Control 8226-1 | 2 x 6 outlets IEC C13, energy metering per bank and per outlet | 230 V | 2 x 16 A

Technical Details

- Dimensions: 19 inch, 1 rack unit
- LxHxD: 43.9 x 4.4 x 19.5 cm (without brackets)
- Weight: ca. 2.9 kg
- Operating temperature: 0-50 °C
- Storage temperature: -20 - 70 °C
- Relative humidity: 0 - 95 % (non-condensing environment)
Deployment of Expert Power Control 8226-1 by example of a data center

The following data center scenario serves as an application example for Expert Power Control 8226-1: A standard 19 inch rack with 12 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.

As for the extension of the IT infrastructure, typical objectives arising are e.g.:

- Enhancement of energy efficiency
- Metering of energy consumption on rack and server level in real time
- Implementation of a reliable environment monitoring
- Prevention of down-times and of system critical conditions
- To ensure instant remote access in case of need
- Support of commonly used authentication and encryption protocols

Expert Power Control 8226-1 is mounted in a free RU space of a 19 inch rack. Both IEC C20 power supplies (max. 16 A, 230 V) allow a total switching power of 7500 W for the servers. Thanks to the integrated sensor interfaces, environment monitoring is easily realized by connecting plug-and-play sensors: Sensors 7104, 7105 and 7106 make it possible to retrieve temperature, humidity and air pressure data from different corners of the rack. Selectable threshold and reporting settings enable users to dispose of relevant monitoring data for their power supply infrastructure. Hence, appropriate actions can be taken before problems occur. Moreover integrated energy meters allow precise measuring and logging of power consumption, both on unit and on outlet level.

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Product</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>7101</td>
<td>Temperature Sensor 7101</td>
<td>Cable sensor with splash-proof sensor head (IP64), RJ45 connector, -20°C to +80°C, cable ca. 2.3 m</td>
</tr>
<tr>
<td>7104 *</td>
<td>Temperature Sensor 7104</td>
<td>Cable sensor, RJ45 connector, -20°C to +80°C, cable ca. 2.3 m</td>
</tr>
<tr>
<td>7105 *</td>
<td>Temp., Humidity Sensor 7105</td>
<td>Cable sensor, RJ45 connector, -20°C to +80°C, 0-90% humidity, cable ca. 2.3 m</td>
</tr>
<tr>
<td>7106 *</td>
<td>Temp., Humidity, Air pressure Sensor 7106</td>
<td>Cable sensor, RJ45 connector, 20°C to +80°C, 0-90% humidity, 300-1100 hPa, cable ca. 2.3 m</td>
</tr>
<tr>
<td>7201</td>
<td>Temperature Sensor 7201</td>
<td>Box case with RJ45 socket, -20°C to +80°C</td>
</tr>
<tr>
<td>7202</td>
<td>Temp., Humidity Sensor 7202</td>
<td>Box case with RJ45 socket, -20°C to +80°C, 0-90% humidity</td>
</tr>
<tr>
<td>0804</td>
<td>IEC Extension Cable 0804</td>
<td>Extension cable for IEC C13 to C14, length: 3 m</td>
</tr>
<tr>
<td>0807</td>
<td>Cable Holder 0807</td>
<td>13 fixation bridges for load cables at the rear side</td>
</tr>
</tbody>
</table>

* Sensors also available with calibrated temperature range: 7104-2, 7105-2, 7106-2