# OPUS 7U Rack

## OPUS C Series DC power System in 19" 7U rack

## General information

OPUS C 7U system delivers uninterrupted DC power to demanding industrial, automation, telecom and datacom applications.

OPUS C 7U rack is a compactly integrated DC power system using OPUS MRC convection cooled rectifiers and a comprehensive VIDI controller. Connections are preinstalled for mains, batteries and DC distribution.

OPUS C 7U rack product line consist of 1.6-4.8 kW modules with 48V, 60V 110V and 220V DC output voltages. A24V module provides 1.1 - 3.3 kW output power.

### Features

- Compact design
- Convection cooled with low noise
- Easy installation
- High power density
- Battery connection
- DC load connection and current shunt
- Temperature compensated charging
- Manual and automatic battery tests
- Configurable alarm inputs and relay outputs
- Earth fault monitoring
- Control panel and LCD display for parameter settings
- Remote access to the system via Ethernet or RS-232
- Fully featured WEB interface
- Numerous user configurable alarms and set tings
- Comprehensive log files with real time clock
- 19" rack-mounted or wall mounted

OPUS 7u Rack   Rev A

05/03/14

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# Technical specifications

| Available output voltage versions | | | | | |
|---|---|---|---|---|---|
| Nominal Voltage (Vdc) | 24 | 48 | 60 | 110 | 220 |
| Max. Current Adc) | 37 | 100 | 79 | 43 | 22.4 |
| Max.Output Power (W) | 3300 | 4800 | 4800 | 4800 | 4800 |

| Input | |
|---|---|
| Nominal voltage range | 180-275 VAC, reduced output power at 140-180 VAC |
| Overvoltage shutdown | 290 VAC (automatic restart at 280 VAC) |
| Frequency | 45 to 65 Hz |
| Nominal current/phase | 7.7 A, 24 V version: 5.3 A |
| Maximum current/phase | 9.7 A, 24V version: 6,9 A |
| Inrush current | < 20 A |
| Power factor | 0.99 |

| Output | |
|---|---|
| Static voltage regulation | ± 0.5 % |
| Dynamic voltage regulation | ± 4.0 % |
| Response time | < 1.0 ms |
| Ripple voltage | RMS < 0.03%; peak-to-peak < 0.3% |
| Hold-up time | > 20 ms |
| Efficiency, typical | > 90% |
| System Earth | Floating |

| Connections | |
|---|---|
| Mains connection | Mains switch, 16A MCB and connection terminals |
| Battery connection | 2-pole MCB |
| Load connection | 2-pole Connector |
| Alarms | Connection terminals |
| Ethernet | RJ-45 |
| RS-232 | 9-pin D-SUB |
| PowerCAN | Internal system bus (RJ-45) |

| Mechanical | |
|---|---|
| Dimensions (H*W*D) | Rack 311*438*451 mm<br>Wall 350*482*503 mm |
| Weight | Netto 17 kg |
| Protection class | IP 20,  wall mounting IP21 |

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# Technical specifications

## VIDI + System Features and Alarms

### Main Features

- AC input and DC output voltage measurements
- Load and battery current measurements
- Manual and automatic battery tests
- Float charge, manual, periodic and automatic boost charge
- Charge current limiting
- Active load sharing in parallel operation
- Four configurable and independent alarm relay outputs
- Four configurable and independent alarm inputs
- Five monitoring logs: alarms, events, system power, battery temperature and discharge rate

### Alarms

- Mains failure
- High/low DC voltage
- Rectifier fault
- Load fuse fault
- Battery fuse fault
- Earth fault
- Rectifier over temperature
- Number of other alarms

### Front Plate Control Panel

- LCD display; in normal operation the display shows charge mode, output voltage, load current and number of active alarms
- Monitoring and control of all functions with multi function dialing wheel or with laptop via Ethernet or RS-232 connector
- Three-colour system status LED
- Parameter help system
- Supported languages: English, Finnish, Russian

### Remote Interface

- Access with the most common Web browsers
- Via Ethernet or RS-232 port
- Alarms by E-mail
- Alarms via SNMP traps
- Supported TCP/IP protocols: HTTP, HTTPS, Telnet, SSH, SMTP, SNMPv2, NTP, DHCP
- Modbus TCP/IP protocol support

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# Technical specifications

| Environmental | |
|---|---|
| Cooling | Natural convection |
| Acoustic noise | < 40 dB (A) |
| Operating temperature | -20°C - +45°C |
| Storage temperature | -40°C - +70°C |
| Max. relative humidity | 95% (non condensing) |
| Max. operating altitude | 2000m above sea level |

| Standards and Approvals | |
|---|---|
| Safety | IEC/EN 60950-1 |
| EMC | Emissions: IEC 61000-6-3<br>Immunity: IEC 61000-6-2<br>Harmonic currents: IEC 61000-3-2<br>Fluctuations & Flickers: IEC 61000-3-3 |
| Environment | Operation: ETSI 300 019-2-3 cl T3.2<br>Storage: ETSI 300 019-2-1 cl T1.2<br>Transportation: ETSI 300 019-2-2 cl T2.3 |
| RoHS, WEEE | 2002/95/EC, 2002/96/EC |
| Quality | ISO 9001, ISO 14000 |
| Approvals | CE |

| Options | |
|---|---|
| Temperature sensor | Enables temperature compensated charging+ |

Ordering information:

| Description  number | Product Order number |
|---|---|
| OPUS C 24 3.3 R 7U F | 9220X0005001 |
| OPUS C 48 4.8 R 7U F | 9220X0005007 |
| OPUS C 60 4.8 R 7U F | 9220X0005009 |
| OPUS C 110 4.8 R 7U F | 9220X0004953 |
| OPUS C 220 4.8 R 7U F | 9220X0005011 |

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