

OPUS WRS

Wall-mounted Charging Rectifier System



General information

OPUS WRS is a wall-mounted charging rectifier for industrial market applications. Together with vented or valve regulated lead-acid (VRLA) batteries as well as NiCd batteries it provides uninterrupted DC power for critical loads. OPUS WRS can also be used as a stand-alone power supply without batteries. With compact design, comprehensive monitoring features and alarm functions OPUS WRS provides a cost-effective solution to wide range of applications where high reliability and availability is required.

OPUS WRS product line consist of 1600W module with 48V, 60V 110V, 125V and 220V DC output voltages. A 24V module provides 1100W output power.

Features

- Compact design and low weight
- 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 settings
- Comprehensive log files with real time clock

Technical specifications

Available output voltage versions

Nominal Voltage (Vdc)	24	48	60	110	125	220
Max. Current (Adc)	45.8	33.3	26.6	14.5	12.8	7.2
Max. Output Power (W)	1100	1600	1600	1600	1600	1600

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	7.7 A, 24 V version: 5.3 A
Maximum current	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 MCB
Alarms	Connection terminals
Ethernet	RJ-45
RS-232	9-pin D-SUB
PowerCAN	Internal system bus (RJ-45)

Mechanical

Dimensions (H*W*D)	520*386*191 mm
Weight	App. 12kg
Protection class	IP21

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

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 Immunity: IEC 61000-6-2 Harmonic currents: IEC 61000-3-2 Fluctuations & Flickers: IEC 61000-3-3
Environment	Operation: ETSI 300 019-2-3 cl T3.2 Storage: ETSI 300 019-2-1 cl T1.2 Transportation: ETSI 300 019-2-2 cl T2.3
RoHS, WEEE	2002/95/EC, 2002/96/EC
Quality	ISO 9001, ISO 14000
Approvals	CE, CB certified

Options	
Temperature sensor	Enables temperature compensated charging+

Ordering information:

Description:	Product Order number
OPUS WRS 24-1100 F	95H660
OPUS WRS 48-1600 F	95H670
OPUS WRS 60-1600 F	95H680
OPUS WRS 110-1600 F	95H690
OPUS WRS 125-1600 F	95H700
OPUS WRS 220-1600 F	95H710