

# OPUS Inverter System

## Dual



## OPUS Inverter family

OPUS Inverter family delivers uninterrupted AC power to demanding industrial, automation, telecom and datacom applications like servers, personal computers, relay protection devices, transmission and security systems.

OPUS Inverter family includes modern systems build on efficient switch mode inverter modules working in parallel, stand alone units and bypasses. The system provides N+1 redundancy, scalable architecture and flexibility.

OPUS Inverters fit in to standard 19" frame. There are configurations with front and rear connections. Inverters are integrated with the comprehensive VIDDI controller of the DC Power Systems and can be monitored remotely.

### Features

- Small size, light weight, standard 19" rack
- On-line/off-line configurations, user changeable during operation
- Fast switching, user programmable reaction time for optimized system performance
- Large user programmable synchronization range
- Continuous microprocessor based internal monitoring and diagnostics
- Remote monitoring through RS-232 with standard PC
- Redundant n + 1 system, hot swap plug-in-modules
- Both On-line and Off-line applications
- Solutions with AC- and DC-distribution

**SPECIFICATION INVERTERS**

<b>Electrical</b>		<b>48 VDC/230 VAC 1500 VA</b>
Input voltage	40-72 VDC User programmable (PC/RS-232) start-up and shut down voltage limits and delays	
Input current	35 A max (continuous)50 A max (5 s)	
Inrush current	< 20 A	
Output voltage	Nominal 230 VAC sine wave, user programmable 200-240 VAC, floating output	
Output frequency	Nominal 50 Hz, user programmable 40-70 Hz, floating output	
Nominal output power	1500 VA / 1200 W	
Output current	Nominal 6.5 A, short circuit 13 A max	
Efficiency	90%	
Static regulation, 0-100% load	±3%	
Load power factor range	Full power rating from 0 inductive to 0 capacitive	
Total harmonic distortion, resistive load	< 2%	
Transient recovery	< 0.3 ms	
Psometric noise, input	< 2mV	
Crest factor	> 3	
Isolation	Input-Chassis 1500 VAC (2000 VDC)Input-Output 3000 VAC (4000 VDC)Output-Chassis 1500 VAC (2000 VDC)	
Overload	140% (1700 W) / 5 seconds Max time can be limited shorter, 110% / 60 s is always available. Number of restart attempts and delays are user programmable	
Protection	Output current limiting. Overload and short circuit proof. Input and output fuses.	

<b>Alarms, indications and controls</b>	
LED-Indications	Input ON Output ON Output loading, 4 levels: >5%, >30%, >50%, >80% Overload / Fault Relay alarms
Relay alarms	2 relay contacts: Fault in system summary alarm (module failure, DC input low etc) Primary supply failure (system with bypass) or Output ON indication (system without bypass)
Remote monitoring through RS-232 (Remote monitoring software)	Status information: For example input and output voltage, power, temperature, faults etc Parameter adjustment: For example input voltage limits, output voltage, over load, faults etc.
<b>Mechanical</b>	
Dimensions	Dimensions
Connectors in modules rear panel	plug-in connectors DIN41612 F48, DIN41612 H15
Connectors in sub-racks rear panel	MSR8170 sub-rack: (see separate datasheets for other racks) - DC input and GND M5 screw for cable clamp, 2 per powerframe - AC output M4 screw for cable clamp, 1 per powerframe 88818008 bus bars M6 screws for cable clamp Connectors are shielded from hazardous contact
Enclosure	Steel casing IP20
<b>Standards</b>	
Safety	EN 60950-1
EMC	Inverters: EN 55022B, EN61000-6-3, EN61000-6-2, ETS 300 132-2, BTNR 2511 Static Switch: As inverters except immunity: EN61000-4-3 radiated immunity according to EN61000-6-1, other immunity standards EN61000-6-2
<b>Environmental</b>	
Operating temperature	0...45 C full power, 45...60 C reduced power, derating -2%/C typically
Cooling	Forced cooling front to rear, 2 fans inside the module. Fans are redundant, one fan is enough for cooling in normal conditions
Humidity	5...95%, non condensing
Altitude	Full power up to 2000m, derating -2% / 100m, max altitude 3000m