

MTS-FC1 24Vdc / 48Vdc POWER SUPPLY / BATTERY CHARGER

Product description

The MTS series is a range of rack mounting power supply modules. This data sheet covers units with 24Vdc and 48Vdc outputs. They are compact in size with rear connectivity and are suitable as a standalone DC power source or to charge batteries. These rectifiers are designed for high voltage Power Plants, Substations, Oil & Gas installations and many other applications.

Because the units are highly modular it is possible to configure systems with multiple units per rack for higher power or n+1 redundant applications. The robust construction with rugged metal handles make them ideal for industrial hot swap applications.

The rectifiers can also be used in conjunction with the USV6 panel mount controller which provides all of the battery management parameters and alarms. The unit controls and monitors each of the rectifiers via the RS485 bus, although the units will still operate with their default values if the controller is not present. Therefore the continuity of all connected loads and the charging of the batteries are guaranteed without any interruption. The temperature controlled fan also changes speed with the output power of the module which helps to minimize noise and extend fan life.

The rectifiers operate from a single phase AC mains connection with the multi level rectifier power circuit divided into active PFC and DC to DC converter stages to enable a wide operating range and extremely high efficiency.

Applications

These power supplies are designed for a wide range of applications including:

- DC Power for all medium to high power loads
- Battery Charging
- DC Power systems with battery backup
- Oil & Gas Installations
- Telecommunication systems.
- Industrial control systems.
- Electrical Power and Substations

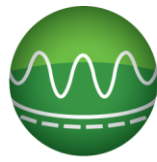


Key features

- 230Vac Input (50% load at 110Vac)
- 24Vdc 70A and 48Vdc 50A Output
- Protection for Input and output over voltage, under voltage, over temperature, and short circuit
- "Hot plug-in" design with backplane connection
- High power density
- RS 485 Interface for Remote Control, Monitoring and Signaling.
- High Efficiency with low EMI
- CE Certification for Safety and EMC
- LED indication for module status reporting.

USV6 Controller





Input

Type	48V/50A	24V/70A
Model No.	MTS48V/50A-FC1	MTS24V/70A-FC1
Input voltage	85-290VAC (Nominal 180-290VAC) 100% Output power at 230VAC 50% Output power at 110VAC*	
Input current	11.5 A	10 A
Input frequency range	45 Hz-65 Hz	
Power Factor	≥ 0.99 at P nom ≥ 75%	

Mechanical

Type	48V/50A	24V/70A
Model No.	MTS48V/50A-FC1	MTS24V/70A-FC1
Weight approx.	2.6 kgs	
Dimensions (W/H/D)	103 x 88 x 261	
Type of enclosure / Protection class	IP 20	
Colour (front panel)	Black	

Output

Nominal output voltage (Vnom)	48V	24V DC
Adjustable output voltage range	42-66VDC	21-36VDC
Voltage Stabilization Accuracy	± 0.5%	
Current Stabilization Accuracy	± 1 %	
Nominal output current (Inom)	50A*DC@ 50V	70A*DC @ 30V
Nominal output power at 143 V DC	2500 W*	2100 W*
Efficiency	≥ 92 %	
Charge characteristic line	IU Characteristic according to DIN41772/DIN41773	
Default value of the charging voltage	50V	26V
O/p Overvoltage Vo> (factory set)	68V	37V
Voltage ripple	≤ 200 mV	
Dynamic accuracy of the charging voltage	<3% of Venom at load change from 10% -90%-10% ;Transient time <50 ms	
Short circuit protection	15% - 30% of Inom when in short circuit	
Parallel operation	Yes .Current Sharing ± 3%	

Technical Data

Communications interface	RS 485
Ambient temperature	Operation: -20° to+50° C , Storage:-40° to +60° C
Humidity	≤ 90 % RH
Cooling	Fan Cooled
Climatic conditions	IEC-68-2-2, IEC-68-2-3, IEC-68-2-6
Max. installation altitude	≤2000 m
Audible noise	< 50 db
Connections	AC Input DC Output and Signaling at rear
CE conformity	Yes
Compliance to EMC standards	EN61000-4-2, EN-61000-4-6, EN-61000-4-3, EN-61000-4-12
Air Pressure	70-106 Pa
Insulation Resistance	Input Chassis & Output > 10M Ohms at 500VDC
Dielectric strength	2000V between Input, Output & Chassis for 1Min.