



## MTS-AN3 POWER SUPPLY / BATTERY CHARGER

### Product description

The MTS series is a range of rack mounting power supply modules. This data sheet covers units with 220Vdc and 110Vdc 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.

Each rectifier module receives its operating parameters via the internal RS485 communication bus. The password protected central monitoring unit controls and monitors each of the units, although the units will still operate with their default values if the monitoring unit 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 (85V-290V) 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
- 110Vdc 20A and 220Vdc 12A 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 Signalling.
- High Efficiency with low EMI
- CE Certification for Safety and EMC
- LED indication for module status reporting.



### Input

Type	220V/12A	110V/20A
<b>Model No.</b>	<b>MTS220V/12A-FC1</b>	<b>MTS110V/20A-FC1</b>
Input voltage	85-290VAC (Nominal 180-290VAC)	
Input current at 230Vac	$\leq 13.6A$	
Input frequency range	45 Hz-65 Hz	
Power Factor	$\geq 0.99$ at P nom $\geq 75\%$	

### Mechanical

Type	220V/12A	110V/20A
<b>Model No.</b>	<b>MTS220V/12A-FC1</b>	<b>MTS110V/20A-FC1</b>
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)	220VDC	110VDC
Adjustable output voltage range	190-300VDC	95-150VDC
Voltage Stabilization Accuracy	$\pm 0.5\%$	
Current Stabilization Accuracy	$\pm 1\%$	
Nominal output current (Inom)	12ADC@ 240VDC	20A DC@ 120VDC
Nominal output power at 143 V DC	3000 W	3000 W
Efficiency	$\geq 94\%$	
Charge line characteristic	IU Characteristic according to DIN41772/DIN41773	
Default value of the charging voltage	240V	120V
Output Overvoltage Vo> (factory set)	302V	151V
Voltage ripple	$\leq 200$ mV	
Dynamic accuracy of the charging voltage	<3% of Nominal 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 $\pm 3\%$	

### Technical Data

Communications interface	RS 485
Ambient temperature	Operation: -20° to +50° C , Storage:-40° to +60° C
Humidity	$\leq 90\%$ RH
Cooling	Fan Cooled
Climatic conditions	IEC-68-2-2, IEC-68-2-3, IEC-68-2-6
Max. installation altitude	$\leq 2000$ m
Audible noise	< 50 db
Connections	AC Input DC Output and Signalling 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.