

MT24-AN3-W POWER SUPPLY / BATTERY CHARGER

Product description

The MT24V AN3-W series are wall mounting convection cooled power supplies / battery chargers with 24Vdc output. They have rear connectivity, a bright 3 digit display on the front and are suitable as a standalone DC power source or to charge batteries. A mating connector for input / output is supplied.

The 5mm plated steel wall mounting bracket has been developed to enable the unit to be mounted with either its side or rear face on the wall, and whilst still having access to the power supply module without taking the bracket off the wall. These rectifiers are designed for high voltage Power Plants, Substations, Oil & Gas installations and many other industrial applications.

Because the units are highly modular it is possible to configure systems with multiple units for higher power or n+1 redundant applications.

If the units are mounted within an enclosure, there is also an optional panel mounting controller available which gives access to parameters and the display of alarms. In this case the rectifier module receives its operating parameters via the internal RS485 bus instead of via the dip switch settings on the front.

The rectifiers operate from a 3-wire, 3-Phase mains input connection without neutral.



MT3-WM

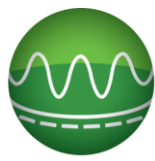
Applications

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

- Power supply for all medium to high power DC loads
- Rectifiers in DC systems with battery backup
- Telecommunication
- Industrial control systems
- Charging and buffering of stationary batteries in electrical power plants

Key features

- 5mm thick plated steel wall bracket
- Three-phase Input, 415Vac without neutral
- 24Vdc Output 50A
- Protection for Input and output over voltage, under voltage, over temperature, phase reversal, phase failure, and short circuit
- "Hot plug-in" design with backplane connection
- High power density
- RS 485 Interface for Remote Control, Monitoring and Signalling.
- Digital display for output voltage, current and buttons for adjustment of values
- CE Certification for Safety and EMC
- LED indication for module status reporting.



Input

Type	24V/50A
Model No.	MT24V/50A-AN3
Input voltage	350 – 460VAC
Input current	4.8 A
Input frequency range	45 Hz-65 Hz
Power Factor	≥ 0.93

Output

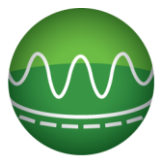
Nominal output voltage (Vnom)	24V DC
Adjustable output voltage range	21-37 DC
Voltage Stabilization Accuracy	± 0.5%
Current Stabilization Accuracy	± 1 %
Nominal output current (Inom)	50A DC @ 24V
Nominal output power at 30 V DC	1500 W
Efficiency	≥ 95 %
Charge characteristic line	IU Characteristic according to DIN41772/DIN41773
Default value of the charging voltage	21-37 V DC
O/p Overvoltage Vo> (factory set)	32V DC
Voltage ripple	≤ ± 0.5%
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%
Internal decoupling at the output	Yes ,In positive output line

Mechanical

Type	24V/50A
Model No.	MT24V/50A-AN3
Weight approx.	16kgs
Dimensions (H/W/D)	309x141x452
Type of enclosure / Protection class	IP 20
Colour (front panel)	Grey

Technical data

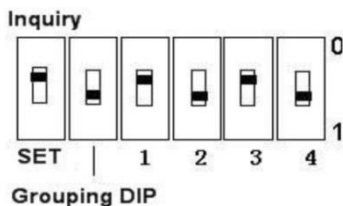
Communications interface	RS 485
Ambient temperature	Operation: -20° to+50° C , Storage:-40° to +60° C
Humidity	≤ 95 % RH
Cooling	Air Natural
Climatic conditions	IEC-68-2-2, IEC-68-2-3, IEC-68-2-6
Max. installation altitude	≤2000 m
Audible noise	< 50 db
Connections	AC Input DC Output and Signalization 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.



Parameters Adjustable Via DIP Switch

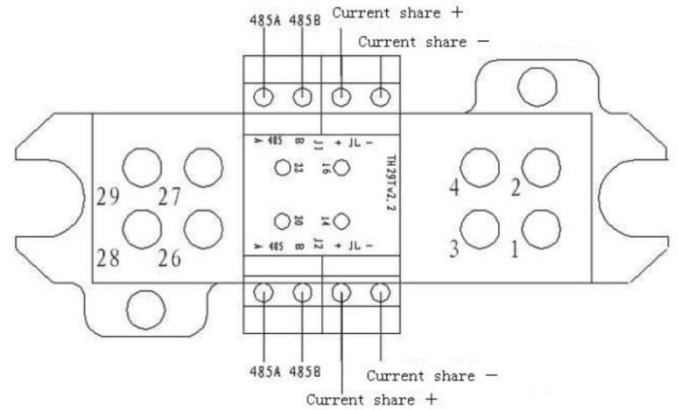
Dip Switches	Function	Setting Range	Default
0000	Working mode	0-Independent 1-Manual 2-Automatic	2
0001	Communication Protocol	0-Modbus 1- ZTM	1
0010	Over voltage alarm	Under voltage threshold-150V	29V
0011	Under voltage alarm	Under voltage threshold-95V	21V
0100	Charging state	0-Float charge 1-Boost charge	0
0101	Float charge voltage	21V-29V	27.6V
0110	Boost charge voltage	21V-29V	28.8V
0111	Charging current limit set	10%-105% rated current	105%
1000	Current threshold float to boost charge	105%	80%
1001	Current threshold boost to float charge	0.5	20%
1010	Tail current charging time	0-10 Hours	3
1011	Boost charge time	0-99 Hours	10
1100	Boost charge cycle	0-999 Days	180
1101	Fault output node set	0-Normally Open 1-Normally Closed	0

DIP Switch Operation



Settings can be configured by using the DIP Switches and the ▼,▲ buttons. To begin, the first DIP switch must be placed in position 1, and the required function entered on the remaining DIP switches. Press the 'V/A' button once and the display will flash. The value can now be adjusted using the ▼,▲ buttons. Press the V/A button once more to store the value.

Connector



50A module

Pin	Definition	Function
1,3	DC+	DC output+
2,4	DC-	DC output-
26	G	Earth
27	A	Input 380V
28	B	Input 380V
29	C	Input 380V