

Application:

BC1500BM TC 3S is a compact DC power supply and battery charger. The charger has three stages, bulk, absorption and float. The charging voltage is temperature compensated according to the temperature of the batteries by a cable with NTC resistor. BC1500BM TC 3S is designed for the supply of power to sensitive electronics, with or without backup battery, and to accept large input voltage variations.



The BC1500BM TC 3S input current is power factor corrected, and is configured for optimum adaptation to weak power sources such as portable generators. The charger has signal for charger time out, (bulk stage for more than 10 hours will make the charger shut down), temperature sensor fault, battery over temperature, bulk or absorption stage, float stage and charger ON.

If the temperature sensor is short, open circuited, or in contact with positive or negative battery voltage, the charger will shut down. The charger can also be shut down by an external signal >18 VDC.

Functions

| | |
|-------------------------------|---|
| Over temperature | The unit is protected from over temperature, derating. |
| Output circuit breaker | If an output current higher than aprox. 70 Amps occurs, a circuit breaker is released and rectifier is shut off. |
| Input circuit breaker | The input circuit breaker is rated for 25 Amps. |
| Input voltage | When the input voltage decreases to a given level, the rectifier is shut off. When the voltage returns, the rectifier is turned on again. |
| Connectors | AC: MS3102E16-10P DC: MS3102E22-2S Signals: Binder 09-0428-80-08 |
| Acoustic noise | Max. 35 dBa at 50Hz |
| Frequency | 47 - 63Hz |

BC1500BM TC 3S

Power supply

SPECIFICATION

Electrical data at 50Hz input voltage

| | |
|---------------------------------|---|
| Input voltage | 99 – 264 VAC |
| Input current at nominal load | 7.3 Amps at 230 VAC 14.3 Amps at 115 VAC |
| Power Factor (PF) | > 0.95, (typical 0.99) |
| Efficiency at full load | >86% at 230 VAC |
| Nominal output voltage | 28 VDC (adj. 22–30 VDC) |
| Nominal output current | 50 Amps |
| Output voltage ripple and noise | < 100mV p-p, 20 MHz bandwidth |
| Output voltage regulation | ±0,5% zero/max load |
| Max input current | 19.5 Amps at 99 VAC |
| Rated input current | 16.0 Amps at 115 VAC 7.5 Amps at 230 VAC |
| Total Harmonic Distortion (THD) | <8% at full load |
| Short circuit current | ≤58.0 Amps |

EMC

TREE: QSTAG 620
(Transient Radiation Effect on Electronics)

Electromagnetic Interference
MIL-STD-461D: CE101, CE102, RE102, RS103, CS101, CS114 and CS116

Electromagnetic Pulse (EMP)
The power supply is able to operate without fault after exposure to EMP levels defined in paragraph A5 of QSTAG 244, edition no 3, amendment no. 1.

Electrostatic discharge
The power supply meets the requirements of MIL-STD-1686 for ESD

Safety
In accordance with IEC 950, UL recognised

Encapsulation
IP54

Cooling
Forced air by speed controlled fan

Environmental conditions

High temperature

Operation

MIL-STD-810E: Method 501.3, Procedure II, hot induced 70°C

Storage

MIL-STD-810E: Method 501.3, Procedure I, hot induced, 71°C

Low temperature

Operation

MIL-STD-810E: Method 502.3, Procedure II, - 40°C

Storage

MIL-STD-810E: Method 502.3, Procedure I, -51°C

Temperature shock

MIL-STD-810E: Method 503.3, -51° - +48°C, (Non-operational)

Humidity

MIL-STD-810E, Method 507.3

Vibration

MIL-STD-810E. Method 514.4, cat. 1 (Basic Transportation), cat. 3 (Loose Cargo), cat. 8 (Ground Mobile)

Shock

MIL-STD-810E. Method 516.4, Procedure I, functional shock

Crash hazard

MIL-STD-810E, Method 516.4, Procedure V

Bench handling

MIL-STD-810E, Method 516.4, Procedure VI

Fungus

Analysis of the degree of inertness to fungus growth of the components in accordance with MIL-HDBK-454

Altitude

MIL-STD-810E: Method 500.3, Procedure I (Storage), II (Operation), and III (Rapid decompression), Test altitude is 4750 metres at 57.2Kpa for all tests

Mechanical data

| | |
|----------------------|---|
| Dimensions W x D x H | 273 x 355 x 193mm (10.7" x 14" x 7.6") |
| Weight | 14.9kg (43.9lbs) |