COMROD BC1500BM TC

Power Supply and Battery Charger

Application:

BC1500BM TC is a compact DC power supply and battery charger with nominal output of 28V 50 Amps. It is designed for the supply of power to sensitive electronics, with or without backup battery. BC1500BM TC is designed to accept large input voltage variations.

The BC1500BM TC input current is power factor corrected, and is configured for optimum adaptation to weak power sources such as portable generators. The efficiency is very high due to the soft switching converter technology.
In order to prolong battery life and to achieve maximum charging efficiency, the charging voltage is automatically adjusted with changes in battery temperature. An external temperature sensor (NTC resistor) mounted on the battery gives the battery temperature signal.
Several units can be interconnected in a redundant system, and the unit can be mounted in any direction.
The unit is protected from over voltage, short circuit and over current.

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 09-0416-80-05
Acoustic noise	Max. 35 dBa at 50Hz
Frequency	47 - 63Hz

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BC1500BM TC
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 11 5VAC
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
Load sharing	Better than 10% deviation with 4 units in parallel
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 reconised

Encapsulation
IP54

Cooling
Forced air by speed controlled fan

Environmental conditions

High temperature
Operation
MIL-STD-810E: Method 501.3, Procedure II, hot induced 70ºC
Storage
MIL-STD-810E: Method 501.3, Procedure I, hot induced, 71ºC

Low temperature
Operation
MIL-STD-810E: Method 502.3, Procedure II, - 40ºC
Storage
MIL-STD-810E: Method 502.3, Procedure I, -51ºC

Temperature shock
MIL-STD-810E: Method 503.3, -51º - +48ºC, (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)

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