



AUTOMATIC BATTERY CHARGERS & DC SWITCH TRIPPERS

Automatic battery chargers provide a reliable and effective solution to most industrial battery charging requirements. Utilising the latest high efficiency switch-mode technology BPC's Battery Chargers & DC Switch Trippers are suitable for continuous charging of all common battery types, for example sealed lead acid VRLA/AGM, Gel, flooded lead acid, Ni-Cad etc.

BPC's Battery Chargers & DC Switch Trippers are provided with intelligent multi-stage charging profiles as standard to ensure accurate and efficient battery charging and are designed for permanent connection to the batteries, maintaining them in a fully charged condition without overcharging.

These systems are fully protected against overload, reverse battery connection, over voltage and over temperature as standard.

INPUT SPECIFICATION

Voltage Range	88-132V or 176-264Vac (switch select)
Frequency	47 – 63Hz
Input Current	3.3A @ 115V, 2A @ 230V
Inrush Current	60A @ 115V, 30A @ 230V (cold start)
Leakage Current	<3.5mA @ 240 Vac

OUTPUT SPECIFICATION

Voltage / Current	12V / 10A nominal, 24V / 5A nominal, 48V / 2.5A nominal (Voltages calibrated to specific battery type)
Output Ripple	<20mV
Line Regulation	±0.5%
Load Regulation	±1%
Efficiency	85% typical
Overload Protection	Constant current limit
Over Voltage Protection	125% - 140% shut down. Recycle power to reset
Over Temp. Protection	80-90°C (on heatsink). Shutdown. Self Resetting
Reversed Battery Protection	Internal diode with external 'automatic type' blade fuse
Setup, Rise, Hold Up	500ms, 70ms, 30ms (at full load)

Features:

- High reliability
- Suits all battery types
- Switch mode technology - IGBT, MOSFET, etc.
- Fully automatic operation
- 12, 24 or 48V nominal outputs
- Protection against
 - Short circuit
 - Overload
 - Over voltage
 - Over temperature
 - Reverse battery
- Worldwide AC input range
- Low output ripple
- Fully enclosed construction
- Naturally cooled – fan-less design
- Charge fail, AC fault and common fault alarms
- Float, Boost and Equalising Charge Mode
- Manual boost charging system

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ISOLATION

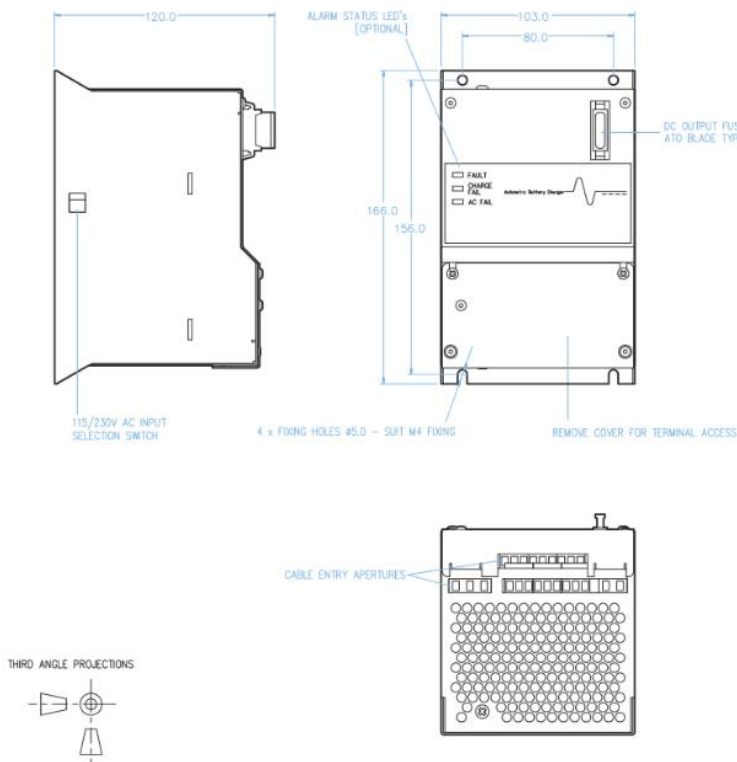
Withstand Voltage	Input – Output 1.5kVAC Input – Earth 1.5kVAC Output – Earth 500VDC
Isolation Resistance	500VDC / 100M Ohms (Output – Earth)

GENERAL

Monitoring Display	Coloured TFT Touch Screen Display
Controls	Battery Test Facility

ENVIRONMENTAL SPECIFICATION

Working Temperature	-10°C to +45°C
Working Humidity	20% - 90% RH (non-condensing)
Storage Temperature	-20°C to +80°C
Storage Humidity	10% - 95% RH
Unpacked Weight	1.3kgs (approx.)



AUTOMATIC BATTERY CHARGER

AC INPUT:
115/230Vac 50/60Hz NOMINAL INPUT VOLTAGE IS SELECTED BY SWITCH IN THE SIDE OF THE ENCLOSURE.

DC OUTPUT:
12V 10A, 24V 5A OR 48V 2.5A. OUTPUT VOLTAGES CAN BE ADJUSTED VIA INTERNAL POTENTIOMETERS. THE CURRENT LIMIT LEVEL IS WORKS CALIBRATED AND SHOULD NOT BE ALTERED. AUTOMATIC RECALIBRATION OF THE OPTIONAL ALARM SYSTEM IS REQUIRED IF ADJUSTMENTS ARE MADE.

CONNECTION:
ALL CABLING FEEDS THROUGH THE COVER APERTURES AND TERMINATES TO PCB MOUNTED TERMINAL BLOCKS. TERMINAL IDENTIFICATION FOLLOWS:

TERMINAL IDENT. FUNCTION

E PRIMARY EARTH
N NEUTRAL
L LIVE
B- BATTERY -V_b
B+ BATTERY +V_b

THE FOLLOWING TERMINALS (1-18) ARE OPTIONAL AND DEPENDENT ON THE SPECIFIED ALARMS AND FUNCTIONS.

- 1 -VE AUXILIARY CONNECTION (LED RETURN)
- 2 COMMON FAULT ALARM NORMALLY CLOSED CONTACT
- 3 COMMON FAULT ALARM COMMON
- 4 COMMON FAULT ALARM NORMALLY OPEN CONTACT
- 5 SYSTEM HEALTHY LED DRIVE
- 6 SYSTEM FAILED LED DRIVE
- 7 CHARGE FAIL ALARM NORMALLY CLOSED CONTACT
- 8 CHARGE FAIL ALARM COMMON
- 9 CHARGE FAIL ALARM NORMALLY OPEN CONTACT
- 10 CHARGE FAIL ALARM HEALTHY LED DRIVE
- 11 CHARGE FAIL ALARM FAILED LED DRIVE
- 12 AC FAIL ALARM NORMALLY CLOSED CONTACT
- 13 AC FAIL ALARM COMMON
- 14 AC FAIL ALARM NORMALLY OPEN CONTACT
- 15 AC FAIL ALARM HEALTHY LED DRIVE
- 16 AC FAIL ALARM FAILED LED DRIVE
- 17 MANUAL BOOST (LINK TO 18 TO BOOST)
- 18 MANUAL BOOST (LINK TO 17 TO BOOST)

EACH LED DRIVE OUTPUT HAS A MAXIMUM RATING OF 10mA. ALL LED DRIVE OUTPUTS CONNECT TO THE ANODE (+V_b) OF THE LED. ALL CATHODES CONNECT TO AUX -VE OR B-.

ALARM SYSTEM:

LED's ARE LIT GREEN FOR HEALTHY, RED FOR FAULT. INDIVIDUAL ALARMS OPERATE AS SOON AS A FAULT CONDITION OCCURS. ALL ALARMS SELF RESET. THE COMMON FAULT ALARM OPERATES WHEN ANY OF THE FAULT ALARM CONDITIONS HAVE BEEN PRESENT FOR APPROXIMATELY 60 SECONDS. AT THE END OF THIS TIME PERIOD THE FAULT LED CHANGES FROM GREEN TO RED AND THE REMOTE ALARM CONTACTS DE-ENERGISE TO SIGNAL A FAULT.

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