

INSTALLATION INSTRUCTIONS

TSP BCMU360 Battery Controller

Mode	Output Current			
	I _{out} Nominal @ 24V	I _{out} Nominal @ 48V	I _{out} Boost @ 24V	I _{out} Boost @ 48V
Normal	15A	7.5A	-	-
Buffer	10A*	5A*	15A**	7.5A***

* Observe output current de-rating: 2%/°C (Between +50°C and +60°C for 24V operation or between +40°C and +60°C for 48V operation)

** Ambient temperature up to +40°C for max. 10 minutes.

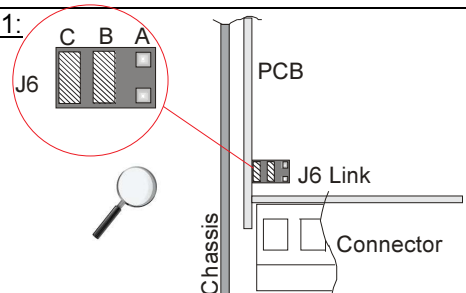
*** Ambient temperature up to +40°C for max. 3 minutes.

Parameter	Condition	Settings	
		24V	48V
Output Voltage [V]	Normal Mode	V _{in} (0.4...0.8)	V _{in} (0.4...0.7)
Output Voltage [V]	Buffer Mode	22.2...22.6	44.6...45.2
Electrical Connections & Wire Size	Input & Output	2-10 mm ² [AWG14-AWG7] (Max. resistance 20mΩ)	1-10 mm ² [AWG17-AWG7] (Max. resistance 40mΩ)
	Battery Input	4-10 mm ² [AWG11-AWG7] (Max. resistance 10mΩ)	
	Tightening Torque	1.76Nm	
Battery Charging Current [A]	Normal Mode	0.8...1.2	
Nominal Battery Voltage [V]	25°C Ambient	13.6 (Factory Set)	
Battery Adjustment Range [V]	Normal Mode	13.0...14.4	
Battery Resistance Test [mΩ]	Normal Mode	100 (max)	
Battery Test Current [A]	Normal Mode	2.5A for 60ms (typ)	
Battery Test Interval [s]	Normal Mode	15s (Jumper A fitted: Fig.1)	8..10mins (Jumper A not fitted: Fig.1)
Battery Warning Voltage [V]	Buffer Mode	10.4...11.4	
Battery Disconnection Voltage [V]	Buffer Mode	9.1...9.7	
Thermal Protection	Buffer Mode	100°C (at back of chassis)	
Automatic Battery Temperature Compensation Range	Normal Mode	-15°C...50°C (external sensor temp. Fig.2)	
Battery Remote ON/OFF	Buffer Mode	Switch 5V/5mA (min) to GND (Fig.2) Level: 0...1.5V	
Signal Relay Contact Rating	Input DC Monitoring	30VDC 1.0A (Fig.2)	
		60VDC 0.5A (Fig.2)	

User Settings:

- A: Battery Test Period 10 min (not fitted, default); 15 sec (fitted)
- B: Output Voltage Settings 48V (not fitted); 24V (fitted, default)
- C: Not in use (spare jumper fitted)

Figure 1:



Signal Connector:

Temp.Sensor: Connect optional external sensor for automatic end of charge battery compensation. (Traco Power P/N: TSP-TS)

Battery Remote ON/OFF: Enables remote disconnection of the battery in buffer mode.

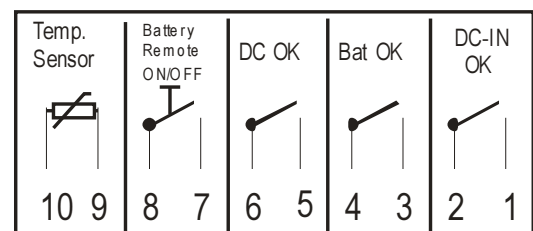
DC OK: Closed contact indicate that the output voltage is higher than 85-90% of the nominal output voltage.

BAT OK: Closed contact indicates that the battery is charged and has low resistance. During battery operation, it indicates that the battery is approaching disconnection point.

DC-IN-OK: Closed contact indicates that at least one of the inputs is present and has voltage within +20 / -3% tolerance.

Remark: Apply torque 0.19Nm for all contacts.

Figure 2:



Safety Instructions:

- Before installation read these instructions carefully and completely. This installation instruction cannot account for every possible condition of installation, operation or maintenance. Further information can be obtained from your local distributor office or from the product datasheet, which can be downloaded from our website:
www.tracopower.com/products/tsp-bcmu.pdf
- Before any installation, maintenance or modification work ensure that the main switch is switched off and prevented from being switched on again. Non-observance, touching of any live components or improper handling of this power supply can result in death, severe personal injury or substantial property damage. Proper and safe operation is dependent on proper storage, handling, installation and operation.
- Compliance with the relevant national regulations (in the USA, Europe and other countries) must be ensured. Before operation is started the following conditions must be ensured:
 - ❖ By use of stranded wires, all strands must be fastened in the terminal blocks. (Potential danger of contact with the case)
 - ❖ Power supply and mains cables must be sufficiently fused.
 - ❖ All output wires must be rated for the equipment output current and must be connected with the correct polarity.
 - ❖ Sufficient cooling must be ensured.
- **Never work on the equipment if power is supplied!** Risk of electric arcs and electrical shock, which can cause death, severe personal injury or substantial property damage.
- **Warning:** Hazardous voltages and components storing a very substantial amount of energy are present in this power supply during normal operating conditions. However, these are inaccessible. Improper handling may result in an electric shock or serious burns!
- Do not open the equipment.
 - ❖ Do not introduce any objects into the equipment.
 - ❖ Adjustment potentiometer(s) may only be actuated using an insulated screwdriver.
 - ❖ Keep away from fire and water

Installation Instructions:

- This equipment is designed for professional indoor systems. In operation the equipment must not be accessible. It may be installed and put into service by qualified personnel only.
- The correct mounting position for optimal cooling performance must be observed. **Do not cover any ventilation holes.** Leave a free space of minimum 80mm (3.15in.) above and below the power supply and on each side of the power supply a minimum space of 25mm [0.98in] which allows air convection. Observe power derating.
- **Recycling:** The unit contains elements that are suitable for recycling, and components that need special disposal. You are therefore requested to make sure that the power supply will be recycled environment friendly at the end of its service life.