

## INSTALLATION INSTRUCTIONS

### TBL 060-124BC Uninterruptible Power Supply

#### Rated Values

Order Code	AC-Input Voltage Range		Output Power max.	Output	* Output Voltage Adjustment Range	Recommended Input Circuit breaker
	Nominal	Operational				
TBL 060-124BC	100–120 / 220–240Vac 50–60Hz / 1.4–0.7A	85–132 / 187–263Vac 47 – 63Hz	60 Watt	27.6Vdc / 2.2A	26.0 – 29.5Vdc	6A (Characteristic C)

\*Output Voltage Adjustment:

Factory Settings	Factory set to 27.6Vdc with 4K7 resistor in Temp. Sensor terminal (J3). Adjustable by pot (Vadj) with a screwdriver. NOTE: If J3 is open the output voltage will fall to 26Vdc and a FAIL notification is generated
Constant Battery Temperature mode	Adjust the output voltage to suit battery temperature. Refer to battery manufacturers instructions for optimum charging voltage vs. temperature levels.
Battery Temperature Compensation Mode	Remove 4K7 resistor from J3 and replace with battery temperature sensor. Place temperature sensor as close as possible to the battery.

#### Accessories

Order Code	Description	Length
TBL-BC-TS1	Battery Temperature Sensor with Connection Line	2m

#### Typical Reference Values

Input current:	@ Vin = 115Vac	@ Vin = 230Vac	Power Consumption	@ Vin = 115Vac	@ Vin = 230Vac
➤ TBL 060-124BC	1.4A typ.	0.7A typ.	➤ TBL 060-124BC	71 Watt typ.	70 Watt typ.

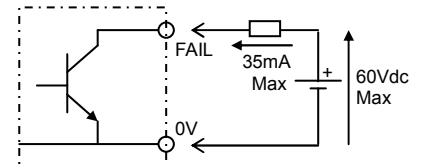
#### Terminal Connections:

Terminals	Function:	Wiring Instruction	Size		Torque	Strip
			[mm <sup>2</sup> ]	[AWG]	[Nm]	[mm]
Input: L, N	AC Input	1 lead into each terminal	0.5 – 2.5	20 – 13	0.5 – 0.7	7.0
Output: 24V	'+' Output terminal	1 lead into terminal	0.5 – 2.5	20 – 13	0.5 – 0.7	7.0
Output: +BATT	'+' Battery terminal	1 lead into terminal	0.5 – 2.5	20 – 13	0.5 – 0.7	7.0
Output: 0V	'-' Output terminal, '-' Battery terminal, '-' Fail Open-Collector circuit terminal	** 2 leads: Insert '-' Output and '-' Battery leads into this terminal. The '-' lead of the FAIL Open-Collector circuit may be connected anywhere on the 0V net	0.5 – 2.5	20 – 13	0.5 – 0.7	7.0
Output: FAIL	'+' Fail terminal	1 lead into terminal	0.2 – 3.3	24 – 12	0.5 – 0.7	7.0
Temp. Sensor: S1, S2	Temp sensor terminals	Insert leads of Temperature Sensor cable into S1 and S2	0.2 – 3.3	24 – 12	0.5 – 0.7	7.0

\*\*Use only stranded copper wire for the shared 0V terminal. Either Solid or stranded copper wire may be used for other terminals.

#### FAIL Open-collector circuit:

The FAIL open-collector circuit allows external monitoring of the unit. Under normal operating conditions, the unit can sink an externally limited max current of 35mA from FAIL to 0V. If a failure occurs, this current will cease to sink. The open-collector voltage must be externally limited to 60Vdc max.



#### General Specifications

Operating temperature range: Natural Air Convection Cooling	-10°C – +60°C max. at nominal load, above +60°C derate → 2.5%/°C up to +70°C 14°F – +140°F max. at nominal load, above +140°F derate → 1.4%/°F up to +158°F
Storage temperature range:	-25°C – +85°C max. -13°F – +185°F max.
Case material:	Grey Plastic
Internal Fuse Ratings: (replace only with same type and rating)	Battery Reverse Connection fuse: 2.5A/250V 5x20mm Time-Lag High-Breaking capacity ceramic cartridge

## 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's office or from the product datasheet, which can be downloaded, from the Internet at <http://tracopower.com/products/tbl-bc.pdf>. You will find additional information in our Instruction Manual, which can also be downloaded from the Internet at: [http://www.tracopower.com/products/tbl-bc\\_manual.pdf](http://www.tracopower.com/products/tbl-bc_manual.pdf).
- The mains supply voltage connection, must be in accordance to IEC 62103, EN 50178 and IEC 60364, VDE 100.
- 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:
  - ❖ Connection to mains supply in compliance with national regulations (VDE0100 and EN50178).
  - ❖ 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.
  - ❖ Degree of protection II to IEC536. (Protection Class II).
  - ❖ All output wires must be rated for the power supply output current and must be connected with the correct polarity.
  - ❖ Sufficient cooling must be ensured.
- **Never work on the power supply 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 power supply until at least 5 minutes after it has been disconnected from the mains on all poles.**
  - ❖ Only trained personnel may open the power supply.
  - ❖ Do not introduce any objects into the power supply. The output voltage adjustment potentiometer may only be actuated using an insulated screwdriver.
  - ❖ Keep away from fire and water

## Installation Instructions:

- This power supply is designed for professional indoor systems. The unit shall be mounted in an enclosure without openings in the end application. In operation the power supply 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 50mm (2in.) above and below the power supply. Observe power derating.
- The internal fuse is not accessible, as it may not be replaced by the user. If this internal fuse has blown, the power supply has an internal defect and, for safety reasons, must be shipped to the local distributor. In case this internal fuse has to be replaced in the field, replace only with same type and rating of fuse for continued protection against risk of fire.
- **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 at the end of its service life.