

SELECTION OF CHARGING CURVE

Use a flat screwdriver on the switch located on the bottom of the charger to select the charging curve.

Each position of the arrow on a number corresponds to specific values of voltage and current for the charge. These different values are indicated on an annexe board supplied with this user guide.



The position of the switch determines output voltage and current but depends on the capacity and the battery technology which should be charged.

Checking of the charging curve selection :

1. Disconnect charger from the mains.
2. Connect the two output wires to the battery to create a short circuit (no danger).
3. Connect the charger to the mains.
4. The number of flashes of the green LED gives the position of the switch.

The default setting corresponds to the grey line given on the annexe board.



- Never let water enter inside the charger.
- Death danger if the charger is opened ($U > 400\text{ V}$)
- Be very careful with the quality of connections
- Don't smoke and don't transport any inflammable products near by the batterie.

2 YEAR WARRANTY.

The battery charger is warranted for a period of 2 years, including parts and labour, unless it has been incorrectly installed.

TECSUP TOP UP WITH ENERGY
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POWER-TEC

ITEMS AVAILABLES WITH
3 OR 5 STATES
CHARGING CURVES



**SWITCH-MODE BATTERY CHARGER
MICROPROCESSOR SYSTEM**

12V/50A - 24V/30A - 36V/20A - 48V/15A

USER GUIDE

Note Technique 2703N130

TECSUP REFERENCE	INPUT VOLTAGE (V)	U (V)	I (A)	CONNECTIONS	Number of output(s)
T 1250 1U9 12 000	90 to 255	12	50	input wires / output wires	1
T 1250 1U9 22 000	90 to 255	12	50	input wires / output wires	1
T 2430 1U9 12 000	90 to 255	24	30	input wires / output terminal block	1
T 2430 1U9 22 000	90 to 255	24	30	input IEC / output terminal block	1
T 3620 1U9 12 000	90 to 255	36	20	input wires / output terminal block	1
T 3620 1U9 22 000	90 to 255	36	20	input IEC / output terminal block	1
T 4815 1U9 12 000	90 to 255	48	15	input wires / output terminal block	1
T 4815 1U9 22 000	90 to 255	48	15	input IEC / output terminal block	1

INSTALLATION

CAUTION: For safety reasons, before doing any work inside the charger it is essential not only to disconnect it from the mains but also to disconnect the batteries. It is essential to disconnect the charger when you are connecting the batteries. **OTHER WISE DANGER OF ELECTRIC SHOCK.**

The charger must be fitted by an electrician or by a professional installer.

FITTINGS INSTALLATIONS :

The charger must be mounted vertically, while maintaining a free area of 15 cm (6") all around. This allows an optimal cooling with air circulation.

The ventilation system of the charger is designed to provide a full power charge in a ventilated area whose temperature never exceeds 40° C.

The charger will automatically regulate the output power to compensate for abnormal overheating.

In case of critical overheating (>70°C), the charger will shut down temporarily.

CAUTION : Never cover the charger.

CONNECTING THE BATTERIES :

1. If your charger is equipped with a on/off switch, put it on the « 0 » position.

2. Put the charger in the chosen area, locate holes for screws and drill for 4 mm. screws.

3. Connect cables between the battery and the charger.

WARNING : Check carefully the tightness of the battery connections to the charger (risk of overheating if not properly tightened). **TECSUP will not take charge of damaged caused by a bad tightness of connections.**

4. Connect on main. If you have one, put the switch on "I" position.

The electric installation must be protected by a residual current device.

DISPLAY

The charger measures constantly the working temperature and decides on the speed of the fan and maximum current of charge authorised.

The LED indicates the mode of working of the charger.

Different modes of working exist :

Charging curve with several voltage thresholds (depends on the model) :

- **ORANGE LED** : Putting into operation, **BOOST** and **ABSORPTION** states.
- **GREEN LED** : **FLOATING**, the battery is fully charged.
- **RED LED** : Abnormal working.

- **PERMANENT RED** : Battery voltage is not normally low ($U < 8 V$) or not normally high ($U > 16 V$) for a 12 V battery. For a 24 V battery, these values are 16 V and 32 V.

- **FLASHING RED** : The charger is on floating mode although the battery is not totally charged. Either the battery is defective, or the charging curve is not very well adapted to the technology or the capacity of the battery used.

Charging curve with a fixed voltage threshold (depends on the model) :

- **GREEN LED**: "Power supply" mode, that means that output voltage since the putting into operation.

TECHNICAL SPECIFICATIONS

- 3 or 5 states memorised charging curves developed in close co-operation with main battery manufacturers.
 - fitted with a PFC, $\cos \varphi = 1$
 - Working temperature full range : $-5^{\circ}C$ to $+45^{\circ}$
 - CE conformity / In compliance with European requirements. User safety NF EN 60335-1 and EN 60335-2-29.
 - Electromagnetic compatibility: (E.M.C.) : EN 50081-1, EN 50082-1, EN 55011 classe B, EN 60555-2 and EN 60555-3
 - **CAUTION :** The **POWER-TEC** is full range for input voltage $> 200 V$; for input voltage $< 200 V$ the output power available is proportional to the input voltage.
- PI 20
 - 1 battery output
 - Output power max. : 800 W
 - Efficiency $> 86\%$

SECURITY :

- ELECTRONIC PROTECTION AGAINST :**
output short circuit + safety timeout to anticipate an eventual escape of gas.
- AUTOMATIC ELECTRONIC PROTECTION AGAINST :**
Polarity inversion, no fuse to change
- THERMIC PROTECTION** regulating the output current.

General appearance of the charging curve



