

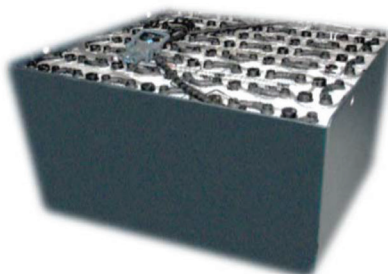


# TRACTION BATTERY CHARGER



ADV SERIES

The **NEW "TP-ADVANCE"** battery chargers implement a **reliable and innovative** charging comes with a **BMOD-T** module comes with an **electrolyte level sensor and temperature sensor** installed onto your traction battery to **monitor the whole charging process** which help to **prolong your battery life and detect abnormal charging operation**. Using of powerline to synchronise and communicate between the charger and battery.



*Power Today For Tomorrow*

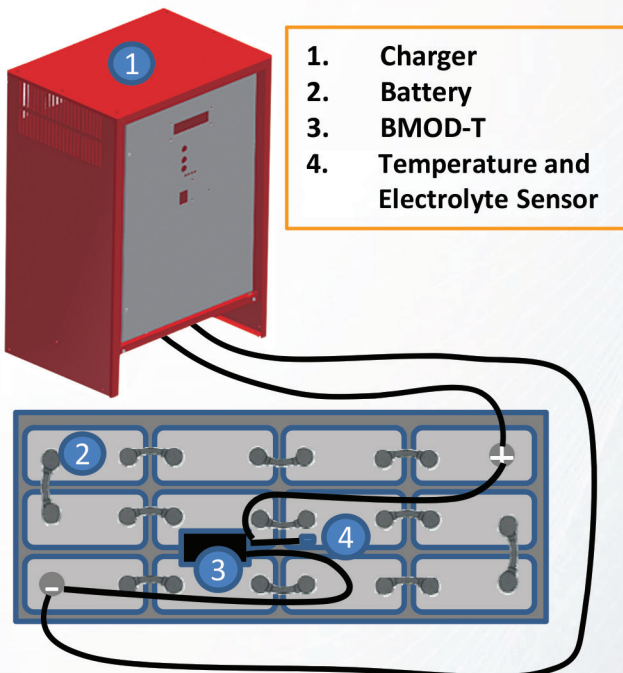


# BATTERY CHARGER

## TP-ADV SERIES

### Main Features

- ❖ **Memorisation** of last 300 charging data, thus allowing technical service to recognise and resolve the system fault
- ❖ **Alphanumerical display** viewing all the charging parameter :
  - Voltage, Charging Current, Time of Charge, Capacity Returned and Warning Message
- ❖ Full Electronic Protection
  - Battery under voltage/overvoltage
  - Output fuse blown
  - Black-out of the main supply
  - **Emergency Timer**
  - **Automatic Equalization and Refresh**
  - **Automatic saving** of the **charging parameters** in case of black-out of the mains and auto restart
- ❖ **Detection of electrolyte level before charging**
- ❖ **Temperature sensing during the whole charging process**
- ❖ Battery Identification function



### BMOD-T

- ❖ BMOD-T is battery identification and monitoring device for Lead-Acid batteries.
- ❖ Two wires to be connected to the battery positive and negative terminals, and a submersible sensor.
- ❖ It provide **battery recognition** (ID, Type, Capacity, Voltage) and complete monitoring (Temperature, Electrolyte level, Equalization).
- ❖ It is essential in **opportunity/rapid charging** applications and is recommended when the workload of the battery is heavy.

### Charging Monitoring Function

- ❖ Connect the battery charger to the battery.
- ❖ If the wrong BMOD-T module detected, charger will not charge to prevent overcurrent and insufficient current.
- ❖ If **insufficient electrolyte level detect**, it **will not charge** to protect the battery
- ❖ If during **charging temperature hit more than 60 degree Celsius** it will **auto cut off charging**
- ❖ **Auto reduction of charging ampere** when it sense battery temperature is raising
- ❖ **Any errors occurred** during charging will be recorded and reflect under the charging cycle number





# BATTERY CHARGER

TP-ADV Three Phase 3x380 – 400 – 420 – 440 – 460VAC 50-60Hz

3x220 – 230 – 240 – 250 – 260VAC 50-60Hz

Voltage (V)	Current (Ampere)	Capacity (AH) Charge in Wa Curve	Input Power (KVA)	Cabinet A: 452 (L) x 320 (W) x 655 (H) (mm) Cabinet B: 503 (L) x 357 (W) x 775 (H) (mm) Cabinet C: 620 (L) x 1050 (W) x 550 (H) (mm)	Weight (KG)
24	80	360 – 500	2,7	A	40
24	100	500 – 600	3,4	A	46
24	120	600 - 720	4,0	A	51
24	140	700 - 840	4,7	A	54
24	160	800 – 1000	5,4	A	58
24	180	930 – 1120	6,1	A	62
24	200	1080- -1250	6,7	B	65
36	80	360 – 500	4,0	A	52
36	100	500 - 600	5,0	A	54
36	120	600 - 720	6,0	A	58
36	140	700 - 840	7,0	B	62
36	160	800 - 1000	8,0	B	65
48	60	300 – 380	3,9	A	52
48	80	360 – 500	5,3	A	53
48	100	500 – 600	6,6	A	54
48	120	600 – 720	7,9	B	65
48	140	700 – 840	9,2	B	72
48	160	800 – 1000	10,5	B	88
48	180	930 – 1120	11,8	B	92
72	50	250 – 300	4,8	A	64
72	60	300 – 380	5,8	A	64
72	80	360 – 500	7,7	B	70
72	100	500 – 600	9,7	B	96
72	120	600 – 720	11,6	B	98
80	60	300 – 380	6,9	A	76
80	80	360 – 500	8,5	B	95
80	100	500 – 600	10,6	B	98
80	120	600 – 720	12,7	B	113
80	140	700 – 840	14,8	C	124
80	160	800 – 1000	17,0	C	129
80	180	930 – 1120	19,1	C	140
80	200	1080 - 1250	21,2	C	150
96	100	500 – 600	14,0	C	118
96	120	600 - 720	16,8	C	123
96	140	700 - 840	19,6	C	140
96	160	800 - 1000	22,4	C	148
96	240	1200 – 1400	33,6	C	198
96	320	1440 - 2000	44,8	C	252



# BATTERY CHARGER

## Safety Features

<b>Wrong Battery Voltage</b>	<b>Standby Mode and signal error</b>
<b>Electronic Overload Protection</b>	Complete protection in case of output short circuit or overload
<b>Power-On Self Test</b>	Each time the unit is powered, an automatic self test of the power electronics and the control boards are executed less than 10 seconds. In case of any fault, the unit will remain in the safe stand-by mode and give fault messages.
<b>Black-Out of the AC Input</b>	The charger features an <b>intelligent management</b> of the AC input occurs. When a blackout of the AC input occurs, all the data related to the charge cycle that was in progress are saved in the internal memory. When the AC input is restored, the charger restarts from the exact point of interruption, and it completes the charge cycle normally.
<b>Automatic Shutdown on Battery Disconnection</b>	If the battery is disconnected while the charge is in progress, the charger turns-off automatically within 3 seconds.
<b>Safety Timer</b>	An independent <b>safety timer turns the charger off</b> in case of malfunction of the main control unit.
Standard Quality Marking EMC Safety Test and Performance	ISO 9001:2008 CE IEC EN 61000-6-2, IEC EN 61000 6-4 IEC EN 50178, IEC EN 62040-1 IEC EN 62040-3

## Comparison Table for TP-ECO/TP-ADV/TP-PRO

Function	TP-ECO	TP-Advance	TP-Professional
Fully Automatic Operation	•	•	•
Equalization Charge	•	•	•
LED Indication	•	•	•
LCD Screen		•	•
Storage of Charging History		•	•
BMOD		•	•
Electrolyte Level Monitoring		•	•
Temperature Monitoring		•	•
Bluetooth/USB Cable download of charging data			•
SDC Fleet Management - Auto sending of report through email - Remote access to charger			•