



- Optimal Three State Charging
- State of Charge/Amp/AC LEDs
- Low Standby Battery Drain
- Customizable Charge Algorithm
- Dual - Isolated Banks
- State of Charge Current Sharing
- Vibration Resistant
- Reverse Polarity Protected
- Over Temperature Protected
- Over Current/Voltage Protected
- Waterproof-Hermetically Sealed
- UL/CSA 1236 Certified
- Full Two Year Warranty

### Description

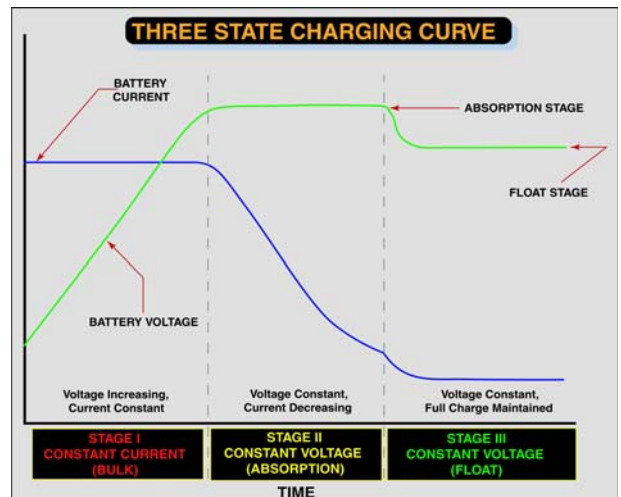
The TPRO220-1 is a rugged, waterproof and sophisticated three state lead-acid battery charger with two isolated banks. With a wide operating temperature range (-20C to 50C) and UL/CSA 1236 certification, this product is especially suited for high end industrial and marine applications. The TPRO220-1 is factory programmable to accommodate several charging algorithms

and an LED display to indicate status. Total output current is 20 amps and distributed between Banks1 & 2 depending on state of charge as 0/20, 20/0, 10/10 or any other ratio summing to 20 amps. Output current and battery voltage are controlled precisely to insure a complete recharge. The charger may be left connected indefinitely to the battery, maintaining full charge at all times.

### Charging Specifications per Bank

PARAMETER	DESCRIPTION/CONDITIONS	MIN	NOM	MAX	UNITS
$V_{FSTERM}$	Fast charge termination voltage, 25C	14.4	14.6	14.8	VDC
$V_{FL}$	Float voltage, $I_{OUT} < 1.0 A$ , 25 C	13.4	13.6	13.7	VDC
$I_{FS}$	Fast charge current, (sum of Banks 1 & 2)	20	21	22	Amps
$I_{ABTERM}$	Absorption mode charge termination current, Transition from Fast to Absorption	4.0	5.0	6.0	Amps
$I_{FLTERM}$	Float charge termination current	2.5	3.0	3.5	Amps
$I_{SBY}$	Standby Current, AC Off			0.5	ma

**Charging Algorithm:** Supplies constant current to battery until  $V_{FSTERM}$ . Transition to Absorption Mode follows and regulates battery voltage at  $V_{FSTERM}$  until current decreases to  $I_{ABTERM}$ . Float Mode follows and regulates battery voltage at  $V_{FL}$ .



# TPRO220-1 Datasheet

## Input Specifications

PARAMETER	DESCRIPTION/CONDITIONS	MIN	NOM	MAX	UNITS
AC Voltage	47 - 63Hz	90	110	132	VAC
Input Current	90VAC, 15VDC Each Output		3.0		Amps

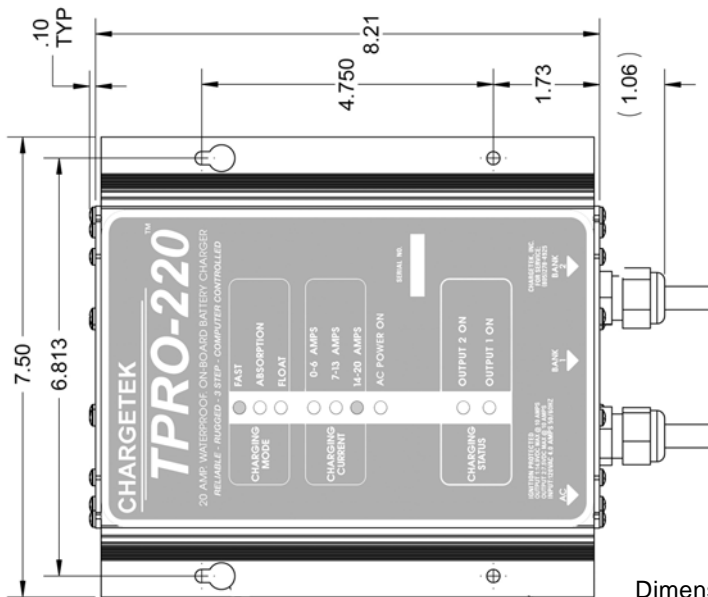
## Environmental Specifications

PARAMETER	CONDITIONS
Storage Temperature	-40C - 80C
Operating Temperature	-20C - 50C
Relative Humidity	0 - 95C Relative Humidity (non-condensing)
Input to Output/Chassis Voltage Isolation	2KV (leakage current less than 1mA)
Output to Chassis Voltage Isolation	50V ( can be increased/ consult factory)

## LED Indicators

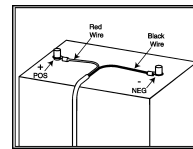
PARAMETER	RED	YELLOW	GREEN
State of Charge	Bulk	Absorption	Float
Charging Current in Amps	14 - 20	7 - 14	0 - 7
Input AC Power			On
Battery Connected on Bank 1			On
Battery Connected on Bank 2			On

## Outline and Mounting

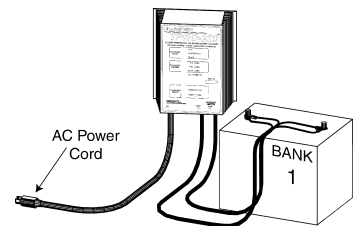


Dimensions in inches

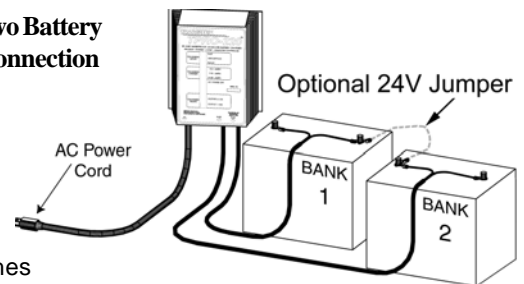
Do not leave any lead set disconnected when charging less than two batteries.



Single Battery Connection



Two Battery Connection



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