Battery Chargers - Phase Three Series



Three Stage "Smart" Chargers

Phase Three "Smart" battery charging technology is now available in a wide range of power levels, allowing you to select the right size, features and flexibility you require for virtually any application from small recreational craft to large live-aboards, workboats and other commercial vessels. These chargers interact with batteries to put them through the optimum three stage charge process which provides for fastest recovery and ideal conditioning, maximizing battery performance and extending battery life.

A selector switch adjusts output voltage to adapt for gel-cell/flooded lead-acid/AGM battery types. An optional temperature compensation sensor also adjusts output for ideal voltage based on changes in the batteries' ambient temperature. All models are housed in a rugged stainless steel case with a durable white powder coat finish, and the internal circuitry is polyurethane coated for maximum corrosion resistance.

Features

- "Smart" circuitry provides three stage charging—bulk, absorption, float.
- Wide model range covers battery system ratings from 14-950 amp-hours
 Gel-Cell/Flooded Lead-acid/AGM battery type switch selects optimum charge/float voltages.
- Multiple isolated output banks; ammeter indicates total output current. (except PT-7)
- Optional sensor adjusts output voltage based on battery temperature. (except PT-7)
- Current limiting-prevents damage from overloading.
- Charger status clearly displayed with L.E.D. and/or audible indicators or optional remote panel.
- Use as a power supply; can power loads without a battery in line.
- Built to last—rugged stainless steel case with a durable white powder coat finish with an optional drip shield and marinized internal circuitry.
- Numerous Safety and EMC Compliances
- Two year parts and labor warranty

Models

| 12 Volt | 24 Volt | 32 Volt | | | | | |
|--|-----------|-----------|--|--|--|--|--|
| PT-7 | PT-24-8W | PT-32-25W | | | | | |
| <u>PT-14W</u> | PT-24-13W | | | | | | |
| PT-25W | PT-24-20W | | | | | | |
| PT-40W | PT-24-45U | | | | | | |
| PT-80 | PT-24-60W | | | | | | |
| | PT-24-95U | | | | | | |
| See next page for detailed specifications. | | | | | | | |

Optional Accessories

Remote Indicator Panel, Model: RP (Not available for all models - refer to Specifications on following page)

DC Energy Monitor, reads Volts, Amps, Amp Hours (See page 20 for details)

Temperature Compensation Sensor, Model: TCS-12/24 shown (see next page for applicable sensor depending on charger model)

Phase Three Monitor/Control Unit For ABS Installation

This unit, when used in conjunction with certain PT Chargers* creates a system which is fully compliant with American Bureau of Shipping (ABS) Battery Charging standards for commercial installations

* For use with all models except PT-7, PT-24-60W, PT-24-95U, and PT-32-25.

Incorporates

- Digital readout of float voltage to 1/10th volt
- Output float voltage adjustment pot; permits fine tuning from -4% to +5%
- AC circuit breaker; provides overcur rent protection and manual disconnect
- AC power ON indicator light
- 10' wiring harness for easy connection of PT Series charger

Model: PT-MCU Size (HxWxD): 8.7"x4.6"x5.5" Weight: 3.5 lbs.





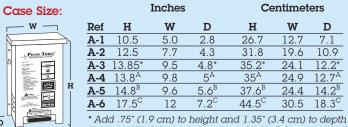
Newport Beach, CA USA



Battery Chargers - Phase Three Series

Specifications

| | 12 Volt Models | | | 24 Volt Models | | | | | 32 Volt 🗆 | | | |
|-----------------------|----------------|-----------|-----------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | PT-7 | PT-14W | PT-25W | PT-40W | PT-80 | PT-24-8W | PT-24-13W | PT-24-20W | PT-24-45U | PT-24-60W | PT-24-95U | PT-32-25W |
| Input VAC | 88-132 or | 85-264 | 90-132 or | 85-135 or | 90-264 | 85-264 | 90-132 or | 85-135 or | 90-264 | 207-253 | 90-264 | 104-126 |
| (50-60 Hz.) | 176-264 | | 180-264 | 170-270 | | | 180-264 | 170-270 | | | | |
| Input Amps | | | | | | | | | | | | |
| @ Full Load | | | | | | | | | | | | |
| @ 115 VAC | 2 | 2.8 | 6.5 | 8.5 | 12 | 2.8 | 6.5 | 8.5 | 12 | NA | 26 | 15 |
| @ 230 VAC | 1 | 1.4 | 4 | 4.3 | 7 | 1.4 | 4 | 4.3 | 7 | 13 | 14 | N/A |
| P.F. Rating | >.65 | .93@230V | .7 | .7 | .95@230V | .93@230V | .7 | .7 | .95@230V | .7 | .95@230V | .7 |
| | | .98@115V | | | .98@115V | .98@115V | | | .98@115V | | .98@115V | |
| Max Output Amps | 7 | 14 | 25 | 40 | 80 | 8 | 13 | 20 | 45 | 60 | 95 | 25 |
| Output Banks | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Battery Capacity | | | | | | | | | | | | |
| (Amp-Hours) | 14-70 | 28-140 | 50-250 | 80-400 | 160-800 | 16-80 | 26-130 | 40-200 | 90-450 | 120-600 | 180-950 | 50-250 |
| Operating Temp. | T-1 | T-2 | T-4 | T-5 | T-7 | T-2 | T-3 | T-5 | T-8 | T-6 | T-8 | T-6 |
| Rating Reference | | | | | | | | | | | | |
| Case Size Ref. | A-1 | A-2 | A-2 | A-3 | A-5 | A-2 | A-2 | A-3 | A-5 | A-6 | A-6 | A-4 |
| Weight; Lbs./Kg. | 3.2/1.5 | 8/4 | 8.2/4 | 12/6 | 15.2/7 | 8/4 | 8.2/4 | 12/6 | 12.2/6 | 24.1/11 | 24.5/11 | 12.2/6 |
| Optional Temp. | | | | | | | | | | | | |
| Sensor Model | N/A | TCS-12/24 | TCS-12/24 | TCS-12/24 | TCS-12/24 | TCS-12/24 | TCS-12/24 | TCS-12/24 | TCS-12/24 | TP | TCS-12/24 | TP |
| Remote Panel Model | N/A | RP | RP | RP | RP | RP | RP | RP | RP | N/A | RP | N/A |
| Equalize Option | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | No |
| Output Indicator Ref. | M-1 | M-3 | M-3 | M-3 | M-3 | M-3 | M-3 | M-3 | M-3 | M-2 | M-3 | M-2 |
| Compliance Ref. | CG, CE | CG, CE | CG | CG, | CE | CG, CE | CG | CG, | EN, CE | EN, CE | EN, CE | EN, CE |
| | | | | CE | | | | CE | | | | |



Add .75" (1.9 cm) to height and 1.35" (3.4 cm) to depth
A Add 1.27" (3.2 cm) to height and 1.1" (2.8 cm) to depth
B Add 1" (2.54 cm) to height and .5" (1.27 cm) to depth
C Add 2" (5.08 cm) to height and 1" (2.54 cm) to depth

Temperature Rating References:

 T-1
 -10°C to +45°C; Derate linearly from 100% @ 0°C to 80% @ -10°C

 T-2
 -10°C to +60°C; Derate linearly from 100% @ 40°C to 60% @ 60°C

 T-3
 -10°C to +60°C; Derate linearly from 100% @ 50°C to 60% @ 60°C

 T-4
 -10°C to +60°C; Derate linearly from 100% @ 40°C to 60% @ 60°C

 T-5
 -40°C to +60°C; Derate linearly from 100% @ 40°C to 75% @ 60°C

 T-6
 -20°C to +50°C; Full output

 T-7
 -20°C to +70°C; Derate linearly from 100% @ 45°C to 50% @ 70°C

T-8 -20°C to +70°C; Derate linearly from 100% @ 45°C to 50% @ 70°C

Nominal Output Voltages at Gel/Flooded Switch Settings

Compliance References*:

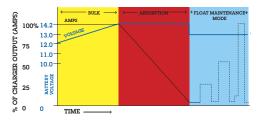
See matrix for applicable models CG USCG CFR 183.410 (Ignition protected) EN EN 60335-1, EN 60335-2-29 **CE** Carries the CE Mark * Numerous other Safety and EMC compliances may also apply. Contact factory if further compliance information is required.

Output Indicator References:

M-1 Charge/Float L.E.D.

M-2 Total output ammeter and charger status L.E.D.'s/Alarms M-3 Total output ammeter and power-on L.E.D.

Typical Charge Curve



(without Temperature Compensation option installed or at 22.2°C (72°F) with Temperature Compensation option installed.)

| | 12 Volt I | Models | 24 Vol | t Models | 32 Volt Model | | |
|-------------|-----------------------|----------|----------|---|---------------|------------------------|--|
| Setting | Charge @ 50 % load | | | Charge Float @ 50 % load @ .5 amp load | | Float @ .5 amp load | |
| Gel-Cell | 14.0 VDC | 13.6 VDC | 28.0 VDC | 27.2 VDC | 37.3 | 36.2 | |
| Flooded/AGM | 14.2 VDC | 13.4 VDC | 28.4 VDC | 26.8 VDC | 37.8 | 35.7 | |

Temperature Compensation: - 5 mV per cell per °C. Sensor supplied with 25' cable (40' cable optional) and plug-in connector

Protection (all models): Input/Output Fuses, Current Limiting, Thermal Protection, Forced Air Cooling, Drip Shield



Newport Beach, CA USA



Manual reset button reinitializes three stage charge cycle.

Supplied with 25' cable and plug-in connector.

Panel dimensions: 3" H x 4.75" W

Remote Panel, Model RP: LED's indicate charger output stage.

3