

# MOD3 | PTO™

Where TECHNOLOGY meets INNOVATION™



**HAWKER® continues its expansion of the modular high-frequency charger line with the PTO™ MOD3 conventional/opportunity charger. The modular design of the PTO™ MOD3 charger provides flexible, scalable, and redundant power to meet the growing demands faced by material handling customers.**

### **MULTIPLE BENEFITS AND FLEXIBILITY**

HAWKER®'s extensive line of modular high-frequency charging solutions includes the PTO™ MOD3 conventional and opportunity charger product. This new high-frequency charger provides economical opportunity charging capabilities and a programmable I-U-I Conventional charging profile to meet a variety of applications.

The new PTO™ MOD3 chargers have settable AH capacity and selectable DC voltage designed to make these chargers customizable and flexible in today's diverse marketplace.

The PTO™ MOD3 charger family offers full flexibility of charging operations while delivering a full range of benefits to enhance your operation.

- Convenient and easy to use
- Settable battery voltage and AH capacity
- Multiple charge profiles to choose from to accommodate a wide range of applications
- Scalable modular design for future needs
- Daily complete charge in Opportunity charge profile to maintain maximum battery life
- Cabinets can be shelf-mounted or wall-mounted.

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*The modules in the HAWKER® PTO™ MOD3 chargers work as a team to deliver consistent power. Even if one module goes down, the other modules will continue charging. And it's easy to quickly switch out individual module units.*

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*Every module in the HAWKER® PTO™ MOD3 chargers is stand-alone, eliminating the risk of catastrophic failures and downtime.*

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### **ECONOMICAL OPPORTUNITY CHARGER**

The Opportunity charge profile allows operators to plug in for a quick charge during break times.

In opportunity mode, the PTO™ MOD3 charger has a start rate of up to 25% of the battery's rated capacity, or the maximum output of the charger (whichever is less), to "boost" the battery through the day. These "boosts" allow the truck to run longer between full charges. The battery is then completely charged daily via the charger's constant current finish charge to bring the battery back to a full state of charge.

#### **Why opportunity charge?**

- Boosting the battery throughout the day allows it to run longer between full charges
- Elimination of battery changing
- Reduction of fleet inventory and equipment
- Improved safety levels due to not changing out batteries
- Improved use of floor space by eliminating dedicated charging areas
- Elimination of excess batteries and change-out equipment

**Note:** Opportunity charging may not be the answer for every customer and each should be evaluated for the best charging practices in their facility.

## PTO™ MOD3 CHARGERS FEATURE

### 1. Adjustable parameters

- Conventional I-U-I, Opportunity, and Cold Storage charge profiles
- Complete charge delay time
- Equalize charge day(s) of the week
- Block-out timer

### 2. Selectable DC voltage range

- 24/36/48V or 72/80V

### 3. AC voltage options

- 208-240 V, 480 V, or 600 V 3-phase
- 480 V single phase

### 4. Flexible AH range

- 100 to 2,000 AH range (depending on the number of modules)

### 5. User-friendly LCD display, which shows real-time charge data of battery being charged, including:

- battery total voltage
- DC current
- battery state of charge
- cell voltage
- amp hours returned to battery
- charge time

### 6. Easy-to-read status lights

- Yellow = charge in process
- Green = charge complete
- Red = fault

### 7. Control panel includes Stop/Start control button and Equalize push button (for a manual EQ)

### 8. Records and stores 365 days worth of charge data in memory

### 9. Built-in, real-time clock automatically adjusts for daylight saving time

### 10. USB port for downloading charge data or uploading firmware

## ADVANTAGES OF MODULAR POWER

Built on HAWKER®'s MOD3 high-frequency power platform, the new PTO™ MOD3 chargers offer all the advantages of the modular charger design.

**⚡ Power You Can Count On** – The new high-frequency modular PTO™ MOD3 charger supplies dependable, proven power – delivering maximum reliability and improved efficiency to keep you moving.

**🔧 Simplified Service** – The PTO™ MOD3 self-diagnostics feature alerts operators to any possible failures. Replacement modules are available for quick delivery, and because of their design, installation is fast and simple.



### 3.5 kW Modules

3-bay or 6-bay cabinets from 3.5kW to 21kW

208-240 V, 480 V, or 600 V 3-phase  
480 V single phase

**Output voltage:** 24/36/48V or 72/80V

**Note:** For DC output current, please refer to product technical specifications.

**✚ Flexible. Adaptable. Fast.** – The modules in HAWKER®'s chargers automatically adjust to effectively charge the battery while maintaining optimal efficiency and best power factor.

The modular design of the PTO™ MOD3 allows for adaptation to a variety of battery capacities, potentially reducing or eliminating the need for more chargers in your fleet.

**🔄 Eliminate Downtime** – When employing two to six individual power modules, PTO™ MOD3 chargers provide you with a non-stop charge. Even if one module stops working, the rest will continue charging the battery – making downtime a thing of the past.

**🏗 Scalability for Future Needs** – Our modular charger design offers the advantage of scalability. The 3-bay and 6-bay PTO™ MOD3 charger cabinets allow modules to be added in response to changing power needs. Your current operations may require only a few modules to effectively charge your batteries, but if your workload changes, additional modules can be added to meet your expanded power requirements.

**🌿 Environmentally Engineered** – The HAWKER® PTO™ MOD3 chargers consume less electricity, simultaneously reducing battery charging costs while positively impacting our carbon footprint.

**For more information on the HAWKER® PTO™ MOD3 chargers, call 1.877.7HAWKER today to speak with a HAWKER® representative in your area.**

## Key Features

### CHARGING

Settable battery voltage and AH capacity

Automatic equalization charge day(s)

Condition charge (programmable DoD)

De-sulphation charge

Opportunity charge profile

Programmable delay start after plugged-in

Block-out timer to avoid peak demand

### FLEXIBILITY

Multi profile capability

Programmable battery temperature

Conventional I-U-I, Opportunity, or Cold Storage charge profiles

### COMMUNICATION

USB port to download charger data and upload firmware

LED indicators on each module for on/off or if a fault is detected

Built-in, real-time clock

Programmable customer asset number

### CONSTRUCTION

Light-weight, modern design

Cabinet can be shelf or wall mounted

Power modules are easily installed or removed

### GREEN TECHNOLOGY

Energy savings with efficiency up to 94% and .96 power factor

## THE BOTTOM LINE FOR PTO™ MOD3 CHARGERS

PTO™ MOD3 is a high-frequency, multi-capacity (settable AH), selectable DC voltage charger that provides an economical choice for charging. The PTO™ MOD3 charger series offers conventional and opportunity charging with a modular design to provide flexible, scalable, and redundant power to meet your growing fleet demands.

**OBSOLESCENCE SAVINGS** – PTO™ MOD3's flexibility and scalability means that your chargers may not need to be replaced when your present trucks or batteries are replaced.

### WHERE TECHNOLOGY MEETS INNOVATION™



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