

P600 EZ-SWAP Chargers

COMPACT - RELIABLE - VERSATILE - INTELLIGENT



Compact - Achieved with high frequency 5KW modules:
Optimize space and feed loads while keeping batteries healthy.

Reliability - Is built in with modularity
Charger will keep feeding loads even in the event of control board failure:
No more emergencies due to charger failure.

Versatility - Gained by having up to 3x5 KW modules in a wall-mount enclosure that can fit in a standard relay rack:
In a 125 Vdc substation application, 5 to 105 A can be installed in the same enclosure.

Intelligence - Implemented by a touchscreen display giving access to all parameters and settings.
The P600 EZ-Swap provides the most comprehensive list of standard alarms & features in the industry:
The P600 is quick and easy to install, use and maintain.

OVERVIEW

With one easy to install cabinet, you can order a charger that will fit most substation applications. All installation and servicing operations have been simplified using intelligent modular design. Minimum technical knowledge and experience is needed to install, operate, maintain and service the P600 EZ-SWAP. High frequency Technology reduces the overall size and weight up to 80% compared to traditional chargers.

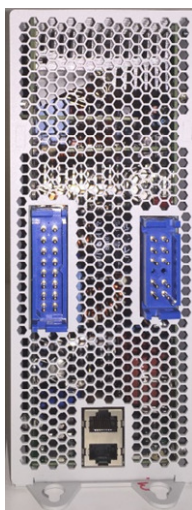
LESS IS MORE

- Simplifies design and installation in a wide range of applications. One size wall mount cabinet smartly packaged to include up to 3 modules delivering up to 105 A at 125 Vdc., it will fit in standard 19" & 23" relay racks
- Major emergencies caused by charger failures are reduced. Each module has its own microcontroller capable of operating even if the main controller is out.
- Minimum technical knowledge required for charger diagnostic and repair, main controller or power modules can easily be replaced in less than 10 minutes.
- No more wasted time with the easy to operate interactive touchscreen display, The menu is user friendly and easy to navigate.
- No risk of falling behind, the Primax P600 EZ-SWAP will Evolve in time: Control boards can be easily re-flashed with new algorithms and functions, 8 digital inputs for future expansion. If more power or N+1 redundancy is required, the charger can be adapted by adding an extra module

REDUCED DOWNTIME - REDUCED TRAINING - REDUCED INVENTORY - REDUCED BUDGET



FRONT



BACK

P600 basic power unit

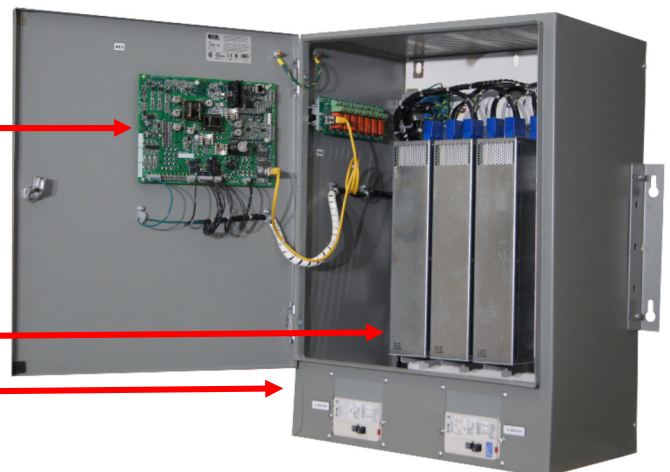
Control and alarm board

Secure Front access through swing door

No need for rear or side access

Power modules

AC and DC breakers



QUICK, EASY TO INSTALL, OPERATE & MAINTAIN

Basic design features

Electrical:

- Input Voltage: 120*-208-240, 1 & 3 phase, 50-60Hz
- Output Voltages: 24-48-125-250-380-480 Vdc
- Output power: Up to 5 kW/module, up to 3 units per enclosure
- THD < 5%, Power factor: 0.99, Efficiency: 92%
- Static load regulation: ±0.5% at +10/-12% input voltage, ±5% frequency and 0-100% load
- Dynamic load regulation: =<1% from 10-90% on resistive load
- Recovery time: 2 cycles
- System MTBF: 175,000 hours.
- MTTR: Less than 10 minutes
- Output ripple: Less than 100mV
- Protection: Soft start,
- Current limit adjustable from 5% to 100% of nominal rating,
- Ac and dc output breaker standard.
- Surge suppression on input and output
- Reverse polarity protection

Safety certification

- UL1012-CSA C22.2-107.1 listed
- CSA C22.2 107.1 certified
- ISO9001 Quality control

Mechanical:

- Enclosure: NEMA 1-IP20 Protection c/w hinged front access door
- Wall mount or 19" rack mount. Grey ANSI 61 grey powder paint.
- Numbered PVC copper wire (standard)
- Weight:
 - Individual Module: 7.5Kg - 17lbs
 - Standard enclosure with one module: 43Kg - 95lbs
- Dimensions:
 - Individual module: (HxWxD): 17x8.37x3.28 (in) / 432x83x213 (mm)
 - Standard enclosure (HxWxD): 30x17.5x15.19 (in) / 762x445x386 (mm)
 - Optional Seismic enclosure (HxWxD): 30x21x15.19 (in) / 762x533x381(mm)

Environmental

- Audible noise: < 65dBa at 1m (3.3ft)
- Ventilation: variable forced cooling for longer fan life
- Base unit heat dissipation: 1700Btu/hr at full load
- Operating temperature: -20°C to +50°C
- Operating humidity: up to 95% non condensing
- Altitude de-rating:
 - 0% for the 1st 1000m (3300ft)
 - 7% per 1000m(3300ft) over 1000m(3300ft)
- Temperature de-rating: 2%/°C from 50°C to 60°C

ALL ALARMS ARE DISPLAYED IN PLAIN LANGUAGE

Default factory enabled alarms: Rectifier failure / ac Fail / Low volt dc (2 levels) / High volt dc / Positive ground fault / Negative Ground fault

Customer enabled alarms:** High Voltage cyclical Shutdown / High ripple alarm / Rectifier High Voltage / Rectifier Low Voltage / Internal high temperature / Internal Low Temperature / Low Output Current / High Output Current / Equalize On Alarm / Frequency out of range cw Programmable shutdown

Each alarm: Can be enabled or disabled, individual level adjustments, individual time delays, the display can be latched or unlatched, relays can be latched and unlatched, the failsafe mode can be on off, each alarm can be programmed to any relay on the alarm board.

PARTIAL OPTION LIST:

Communication Modules

- Modbus RTU via RS232/485 or TCP/IP, DNP3 or Web page via Local or dynamic IP address, c/w Watchdog circuitry
- IEC 61850

Alarms

- Hardware high volt shutdown,
- Battery discharging alarm
- Battery high & low temperature alarm and shutdown

Metering & Monitoring

- Input voltage, current and frequency metering,
- Non intrusive battery current metering,
- Integrated digital AH meter,
- System Clock w/ date and time stamp on event log,
- Temperature compensation c/w single battery temperature probe
- 2nd temperature probe for the room allowing delta temp. alarm
- Battery continuity test,
- Remote equalize and shutdown

Input and Output

High capacity interrupting breakers, Connection free forced load sharing, Remote battery voltage sensing, DC output circuit breaker, Battery current limit

Mechanical and Hardware

Seismic cabinet (Wallmount or will fit a 23" relay rack)
Special paint, NEMA & IP protection, Fungus and tropical proofing, Halogen free and special wiring, Bottom or side cable entry

1ph Model No.	3ph Model No.	Output current at 208 and 240 ac	Input current at				
			1ph input (V)		3ph input (V)		
			120*	208	240	208	240
24Vdc							
P600-1-24-65	P600-3-24-65	65	17.5	10.1	8.7	5.8	5.0
P600-1-24-130	P600-3-24-130	130	34.9	20.1	17.5	11.6	10.1
P600-1-24-200	P600-3-24-200	200	53.7	31.0	26.9	17.9	15.5
48Vdc							
P600-1-48-65	P600-3-48-65	65	34.9	20.1	17.5	11.6	10.1
P600-1-48-130	P600-3-48-130	130	69.8	40.3	34.9	23.3	20.2
P600-1-48-200	P600-3-48-200	200	107.4	62.0	53.7	35.8	31.0
125Vdc							
P600-1-125-35	P600-3-125-35	35	30.0	26.9	23.3	15.5	13.5
P600-1-125-70	P600-3-125-70	70	60.0	53.8	46.7	31.1	26.9
P600-1-125-105	P600-3-125-105	105	90.0	80.8	70.0	46.6	40.4
250Vdc							
P600-1-250-17	P600-3-250-17	17	30.0	26.2	22.7	15.1	13.1
P600-1-250-35	P600-3-250-35	35	60.0	53.8	46.7	31.1	26.9
P600-1-250-51	P600-3-250-51	51	90.0	78.5	68.0	45.3	39.3
480Vdc							
P600-1-480-10	P600-3-480-10	10	30.0	26.7	23.1	15.4	13.4
P600-1-480-20	P600-3-480-20	20	60.0	53.4	46.3	30.8	26.7
P600-1-480-30	P600-3-480-30	30	90.0	80.1	69.4	46.3	40.1

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*: At 120 Vac input, output power is derated by 50%

** : Enabled at the factory if specified in the P.O. Can also be site enabled

Specs may change without prior notice