Cerberus® PRO Modular

Power Supply Charger | Power Supply Extender | Power Termination Board

Models PSC-12 | PSX-12 | PTB

Architect & Engineer Specifications

☐ **Model PSC-12 is the main-system power supply**

☐ **Model PSX-12 is the optional, system-power-expansion module**
- ▪ **Up to three (3) Model PSX-12s connected to one (1) Model PSC-12**

☐ **PSC-12 and PSX-12 each include a Power Termination Board (Model PTB) for AC field connections**

☐ **Model PSC-12 has a built-in charger for up to 100AH batteries**

☐ **Main and optional power supply each has a universal AC power input: 120VAC – 240VAC @ 50 / 60Hz**

☐ **Filtered and regulated, total output power for each power-supply type is output 12 Amps @24VDC**
- ▪ **24VDC and 6.2VDC power contact between panel and to all power modules via a 60-pin connector**
- ▪ **Provides 12A | non-power-limited | 24VDC output (internal use)**
- ▪ **4-Amp, power-limited 24VDC output (external use)**
- ▪ **Common `Alarm' and `Trouble' relays (Form `C' rated @ 2A)**
- ▪ **Two (2) programmable relays (`Form C' rated @ 2A)**

☐ **Any of the three (3) modules mount on back box or optional Model CAB-MP in one (1) module space**

☐ **Ground-fault-detection circuitry for all three (3) power-equipment types**

☐ **UL864 & CAN / ULC-S576 Listed**

Product Overview

Main-Power Supply Charger –> Model PSC-12

The Model PSC-12 Power-Supply Charger is a high-current power supply that provides a Cerberus PRO Modular panel with primary, regulated 24VDC power to operate at 12 Amps (`Alarm' mode) / 5 Amps (`Standby').

With its built-in battery charger – capable of charging up to 100AH batteries, Model PSC-12 is an addressable-intelligent, microprocessor-controlled power module that communicates its status to the Cerberus PRO Modular Operator Interface (OI), Model FCM2041-U3. Moreover, the panel's OI is able to query the status of the power supply to obtain data regarding system-charging current | terminal-loading information | ground fault-conditions and more.
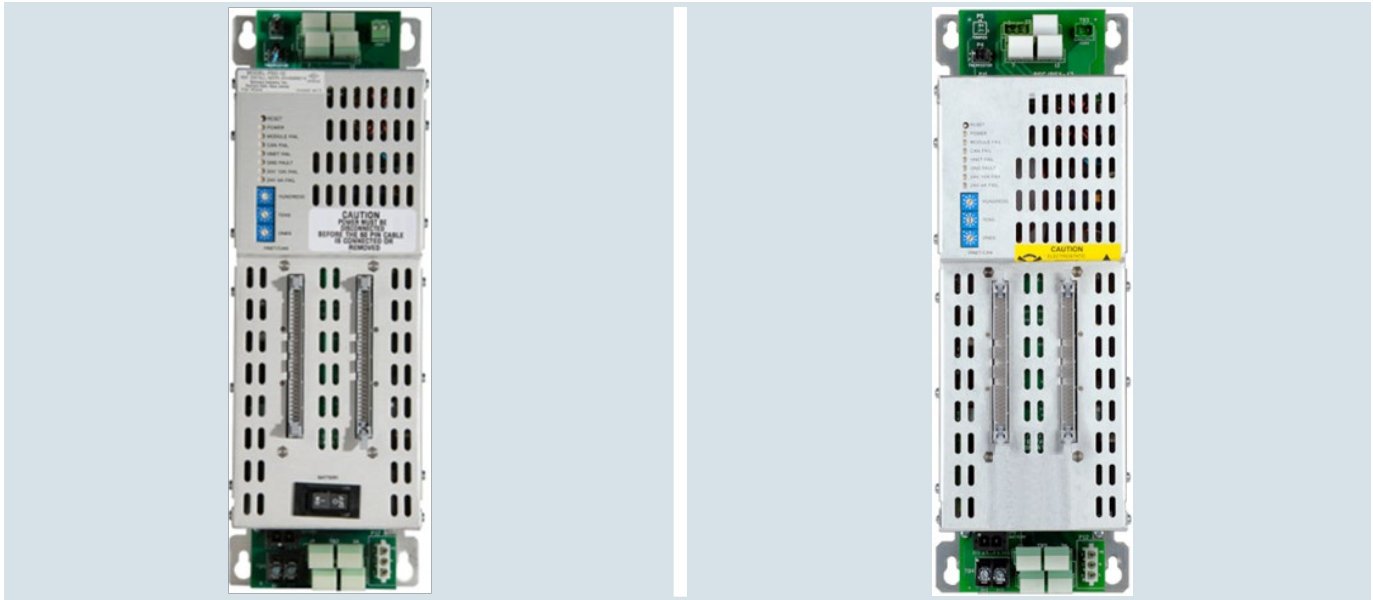
Model PSC-12 is a universal power supply; accepting AC power-input levels from 120VAC – 240VAC @ 50 / 60Hz. No special configuration is required: Model PSC-12 is designed to operate across these AC input ranges. A 60-pin connector is used for communication between a Model PSC-12 charger and other system cards and modules. The communication transmission (of which has variables of 6.2VDC and 24VDC), is referred as `back-plane current'.

Each Model PSC-12 provides 12 Amps of system output power @ 24VDC. Two (2) separate power-output terminals are available: one (1) power limited with 4A max @ 24VDC capacity, as well as one (1) non-power limited with 12A max @24VDC capacity (the total not to exceed 12A). Model PSC-12 also provides two (2) connection points for the 60-pin power / data bus. Additionally, the 24VDC outputs found a Model PSC-12 provide auto-resettable current protection circuits for overload and short-circuit panel conditions.

In event of a Cerberus PRO Modular system power failure, backup batteries are used. Though when main-system power is active, Model PSC-12 is able to charge back-up batteries that carry the following current: up to 15AH | 31AH | 75AH and up to 100AH batteries. The battery sizes that are used in a given Cerberus PRO Modular panel are entered into the custom-configuration software tool, *Zeus-C*, and the power charger (Model PSC-12) has three (3) modes – dependent upon condition: Bulk (full) Charge State | Trickle Charge State and Float (maintenance) State. Model PSC-12 subsequently is able to monitor the condition of the batteries automatically, determining which of the charging modes to activate.

<u>NOTE</u>: Model PSC-12 can only charge lead-acid batteries.

Model PSC-12
Cerberus PRO Modular
Power Supply Charger

Model PSX-12
Cerberus PRO Modular
Power Supply Extender

Product Overview – (continued)

Main-Power Supply Charger –> Model PSC-12

Model PSC-12 mounts on one (1) of four (4) available module spaces directly on the back box or optional Model CAB-MP module mounting plate, which then mounts inside of Models CAB1 **|** CAB2 or CAB3 system enclosures.

Additionally, Model PSC-12 has four (4) Form `C' relays rated at 2 Amps each.  A relay is dedicated to automatically operate on `**Any System Alarm**' – this is the Common Alarm Relay. Another is dedicated to automatically operate on `**Any System Trouble**' - this is the Common `Trouble' Relay. Two (2) additional relays are available for programming and activation, based upon system-control logic. When a door-tamper switch is required in any CAB-series enclosures, the Model HTSW-1 tamper switch can be optionally connected to a Model PSC-12 to provide this functionality.

Model PSC-12 has diagnostics LEDs to indicate `Power On', `Module Failure' (internal module failure), `H-NET Failure' (network-communication failure), `Ground Fault' (internal to enclosure or on any 24VDC output circuits), `24VDC **|** 12A Fail', and `24VDC **|** 4A Fail.' Model PSC-12 module is addressed using plain, decimal-address switches, which clearly state the address of the module. As an option, an extender cable (Model PSC-ISO-CBL) allows use for two (2) Cerberus PRO Modular power supplies (Model PSC-12) in one (1) Model CAB-series enclosure.

Power Termination Board –> Model PTB

The Power Termination Board comes packaged with a module known as Model PTB. Model PTB is the Power Termination Board, and is required for operation with the Power Supply Charger (Model PSC-12). Model PTB must be mounted in the lower-right corner of the CAB enclosures. Mounting studs are provided in all enclosures to mount to Model PTB.

Model PTB contains screw terminals for the usage of AC-input power. Model PTB contains an AC-line filter and AC-line power breaker rated at 5A. From another connector on Model PTB, AC power is connected directly to Model PSC-12, via a keyed-cable harness. Each Model PTB supports building AC-power-connection circuits for two (2) power supplies – either one (1) for Model PSC-12 and one (1), optionally, for the Power Supply extender (Model PSX-12.) When more than one (1) Model PSX-12 Power Supply extender is used, a second Model PTB is required, and must be ordered separately.

Model **PSC-12**

Model **PTB**

Model PTB has an optional connector that can be used during system installation, commissioning, and service to provide the technician with a place to plug in their laptop computer, if required. Model AC-ADPT is an optional accessory cable that allows connection on one side to Model PTB, via a keyed connector, and on the other end directly into to the laptop's transformer. Most PC external power transformers have removable AC power cords which can be replaced by Model AC-ADPT to temporarily provide an AC power source for PCs used during system installation, service and maintenance calls, when needed.

Power Supply Extender –> Model PSX-12

The Power Supply Extender is a high-current, auxiliary-power supply that expands the main Model PSC-12 power supply and battery charger for the Cerberus PRO Modular system with an additional 24VDC power. Model PSX-12 is rated at 12 A.

Model PSX-12 is an addressable intelligent microprocessor-controlled module that communicates its status to the system-operator interface (OI) to report fault conditions. Model FCM2041-U3 is able to query the status of the power supply to obtain information regarding terminal-loading information, ground-fault conditions and more.

Model PSX-12 is a universal power supply; accepting AC power-input levels from 120VAC – 240VAC, and has an off-line, switch-mode power converter and power-factor-correction circuit to improve conductive RF emissions at low frequency. No special configuration is required.

Additionally, Model PSX-12 works with the panel's communication protocol in order to work with other system cards and modules, via the system's common 60-pin power/data bus. Model PSX-12 provides a full 12 Amps of power @ 24VDC. There are two (2) separate power-output terminals: one of which is power-limited with 4A max @24VDC capacity. The other terminal is non-power-limited with 12A max @24VDC capacity (total is not to exceed 12A).

Similar to Model PSC-12, each Cerberus PRO Modular Power Supply Extender mounts to one (1) of four (4) available module spaces on the back box or optional Model CAB-MP module mounting plate, which subsequently mounts inside a Models CAB1, CAB2 or CAB3 system enclosure.

Model PSX-12 has diagnostics LEDs to indicate `Power On'; `Module Failure' (internal module failure); `H-NET Failure' (network communication failure); `Ground Fault' (internal to enclosure or on any 24VDC output circuits), 24VDC 12A fail and 24VDC 4A fail. Model PSX-12 is addressed using plain, decimal-address switches, which clearly state the address of the module.

Temperature and Humidity Range

Cerberus PRO Modular power supplies are UL Listed | ULC Listed. Environmental operating conditions for each powering module is 32°F (0°C) to 120°F (49°C) with a relative humidity of no greater than 95%, non-condensing.

Electrical Ratings

	MODEL PSC-12	MODEL PSX-12	
INPUT VOLTAGE:	120VAC @ 50 / 60 Hz. 220VAC @ 50 / 60 Hz. 240VAC @ 50 / 60 Hz.	120VAC @ 50 / 60 Hz. 220VAC @ 50 / 60 Hz. 240VAC @ 50 / 60 Hz.	
INPUT CURRENT:	3.5A, max. @ 120VAC 2.5A, max. @ 220VAC 2.0A, max. @ 240VAC	3.5A, max. @ 120VAC 2.5A, max. @ 220VAC 2.0A, max. @ 240VAC	
24VDC BACK PLANE CURRENT:	2.0A, max.	Not Applicable	
SCREW TERMINAL, 24V CURRENT:	Power Limited: 4.0A, max. Non-Power Limited: 12A, max.	Power Limited: 4.0A, max. Non-Power Limited: 12A, max.	
6.2VDC BACK PLANE CURRENT:	2.0A, max.	Not Applicable	
24V STANDBY CURRENT:	150mA + 20mA per active relay	150mA	
OUTPUT CURRENT [Each HNET / XNET and CAN Network Pair]	8V — Peak-to-peak max. 75mA, max. during msg. transmission	8V — Peak-to-peak max. 75mA, max. during msg. transmission	

MODEL PTB

AC MAINS RATING	EACH MODEL PSC-12 | PSX-12
120VAC @ 50 / 60 Hz.	3.5A, max.
220VAC @ 50 / 60 Hz.	2.5A, max.
240VAC @ 50 / 60 Hz.	2.0A, max.

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
AC-ADPT	500-633992	Technician Laptop-Power Connector
BP-61	175-387194	15 AH @ 24VDC Battery
BTX-1	175-083897	Set of 31AH @ 12V Batteries
BTX-2	175-083898	Set of 55AH @ 12V Batteries
BTX-3	599-034220	Set of 100AH @ 12V Batteries
CAB-BATT	500-633917	Battery Enclosure for 75AH or 100AH Batteries
HTSW-1	500-033350	Door Tamper Switch
PSC-12	500-033340	Power Supply and Battery Charger (12A @24VDC)
PSC-ISO-CBL	S54430-K4-A1	Optional Extender Cable (used for holding two [2] Model PSC-12 power supplies in one [1] Model CAB-series enclosure
PSX-12	500-034120	Power Supply Extender (12A @24VDC)
PTB	500-033390	Power Termination Board [only required for applications with more than two (2) Model PSX-12 extenders]

NOTICE – The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice.
The product(s) described here has/have a specific instruction sheet(s) that cover various technical, limitation and liability information.
Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product, and are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

Cerberus® PRO

Siemens Industry, Inc.
Smart Infrastructure – Building Products
2 Gatehall Drive • Parsippany, NJ 07054
Tel: (973) 593-2600

April -2023
(Rev 1)

SIEMENS