


PSC-12 Power Supply Charger Module

For the FireFinder XLS Control Panel

ENGINEER AND ARCHITECT SPECIFICATIONS

- Main system power supply
- Total power output 12 Amp @ 24VDC
- Built-in charger for up to 100AH batteries
- Universal AC Power input 120VAC – 240VAC @ 50/60Hz
- Off-line Switch Mode Power Converter
- Filtered & Regulated 24VDC
- Mounts on CAB-MP in (1) module space
- Common Alarm & Common Trouble Relays (Form “C” rated @ 2A)
- Two Programmable relays (Form “C” rated @ 2A)
- Provides 12A non-power limited 24 VDC output (internal use)
- 4 Amp power limited 24VDC output (external use)
- Supervised Intelligent Module – plain decimal addressing
- Communicates with PMI/CPC via common 60 pin power/data bus
- Downloadable module firmware
- Provides 24VDC and 6.2VDC power to all modules connected to 60 pin bus
- Ground Fault detection circuitry
- Optional enclosure tamper switch connection point (HTSW-1)
- PTB Power Termination Board for AC field connections
- Optional 24VDC system power expansion with PSX-12 Power Supply eXtender.
- PSC-12 and PSX-12 share common batteries
- Up to (3) PSX-12’s connected to PSC-12
-  UL/ULC listed, CSFM, NYMEA, City of Chicago, FM pending



Description

The PSC-12 is a high current power supply that provides the FireFinder-XLS primary regulated 24VDC power to operate. It is rated at 12Amps (Alarm)/5mps (Standby) and has a built in battery charger capable of charging up to 100AH batteries. The PSC-12 is an addressable intelligent microprocessor controlled

module that communicates its status to the system operator interface (PMI). The PMI is able to query the status of the power supply to obtain information regarding system charging current, terminal loading information, ground fault conditions and more.

The PSC-12 is a universal power supply accepting AC power input levels from 120VAC to 240VAC @ 50HZ or 60HZ. No special configuration is required – the PSC-12 is designed to operate across these AC input ranges. This allows the PSC-12 to be used for all FireFinder-XLS power supply applications domestic and foreign.

The PSC-12 has an off-line switch mode power converter and power factor correction circuit to improve conductive RF emissions at low frequency. Due to its efficient off-line switch mode design, the PSC-12 draws an AC input power maximum of 4A@120VAC.

The PSC-12 communicates via H-Net protocol with other system cards and modules via the systems common 60 pin power/data bus. Via the 60 pin bus the PSC-12 provide the system with 6.2VDC (2Amps) and 24VDC (2Amps) to provide basic power to cards and modules- this 24VDC and 6.2VDC power is also referred to as “back plane current.” Combined with the “back plane current,” the PSC-12 provides 12Amps of power @ 24VDC. Two separate power output terminals are available: one power limited with 4A max @24VDC capacity and one non-power limited with 12A max @24VDC capacity (total not to exceed 12A). The PSC-12 also provides two connection points for the 60 pin power/data bus.

The PSC-12’s 24 VDC outputs provide auto resettable current protection circuits for overload and short circuit conditions.

The battery sizes installed are entered in the software configuration tool. The PSC-12 can charge 15AH, 31AH, 75AH or 100AH batteries. The charger monitors and maintains the battery. The charger has three charge modes depending on the state of the batteries: Bulk (full) charge state, Trickle charge state and Float (maintenance) state. The charger monitors the batteries and automatically determines which of the charging modes to activate.

The PSC-12 can charge lead-acid batteries only. An optional thermister (HTHERM) is available for use with the PSC-12 to connect to the battery set to monitor battery temperature – to regulate the battery charge rate in the event that the batteries begin to overheat.

The PSC-12 mounts on one of the four available module spaces on the CAB-MP module mounting plate (which then mounts inside of the CAB1,CAB2 or CAB3 system enclosures).

The PSC-12 has (4) form “C” relays rated at 2Amps each. One 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 additional relays are available to be programmed for activation based on system control logic.

When a door tamper switch is required in any of the CAB enclosures, the HTSW-1 tamper switch can be optionally connected to the PSC-12 to provide this functionality.

The PSC-12 has diagnostics LED’s 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. The PSC-12 module is addressed using plain decimal push button address switches which clearly state the address of the module.

The PSC-12 also contains screw terminals for remote CAN bus module applications, remote paging micro-phones and telephones.

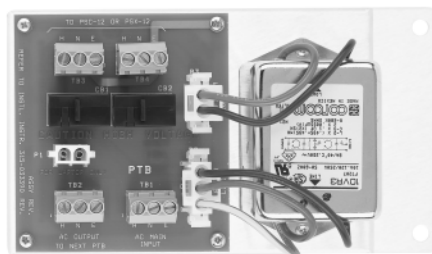
PTB Power Termination Board

Description

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


The PTB contains screw terminals for AC input power to be connected. The PTB contains an AC line filter and AC line power breaker rated at 5A. From another connector on the PTB, AC power is connected directly to the PSC-12 via a keyed cable harness. Each PTB supports building AC power connection circuits for two power supplies. Either one PSC-12 and optionally one PSX-12 Power Supply eXtender or two PSX-12’s. When more than one PSX-12 Power Supply eXtender is used a second PTB is required and must be ordered separately.

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



PTB

PSX-12 Power Supply Extender

- Auxiliary 24VDC Power Supply
- Total power output 12 Amp @ 24VDC
- Universal AC Power input 120VAC – 240VAC @ 50/60Hz
- Off-line Switch Mode Power Converter
- Filtered & Regulated 24VDC
- Provides 12A non-power limited 24 VDC output (internal use)
- 4 Amp power limited 24VDC output (external use)
- Mounts on CAB-MP (1) module space
- Supervised Intelligent Module – plain decimal addressing
- Communicates with PMI/CPC via common 60 pin power/data bus
- Downloadable module firmware
- Ground Fault detection circuit
- PTB Power Termination Board for AC field connections
- PSC-12 and PSX-12 share common back-up batteries
- Up to (3) PSX-12's connected to PSC-12
-  UL/ ULC listed, CSFM, NYMEA, City of Chicago, FM Approved

Description

The PSX-12 is a high current auxiliary power supply that expands the FireFinder-XLS systems main PSC-12 power supply and battery charger with an additional 24VDC power. It is rated at 12Amps.

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

The PSX-12 is a universal power supply accepting AC power input levels from 120VAC to 240VAC @ 50HZ or 60HZ. No special configuration is required – the PSX-12 is designed to operate across these AC input ranges. This allows the PSX-12 to be used with the PSC-12 for all FireFinder-XLS auxiliary power supply applications domestic and foreign.

The PSX-12 has an off-line switch mode power converter and power factor correction circuit to improve conductive RF emissions at low frequency. Due to its efficient off-line switch mode design, the PSX-12 draws an AC input power maximum of 4A@120VAC.

The PSX-12 communicates via H-Net protocol with other system cards and modules via the systems common 60 pin power/data bus. The PSX-12 provides a full 12Amps of power @ 24VDC. Two separate



power output terminals are available: one power limited with 4A max @24VDC capacity and one non-power limited with 12A max @24VDC capacity (total not to exceed 12A). The PSX-12 also provides two connection points for the 60 pin power/data bus.

The PSX-12's 24 VDC outputs provide auto resettable current protection circuits for overload and short circuit.

The PSX-12 mounts on one of the four available module spaces on the CAB-MP module mounting plate (which then mounts inside of the CAB1,CAB2 or CAB3 system enclosures).

The PSX-12 has diagnostics LED's 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. The PSC-12 module is addressed using plain decimal push button address switches which clearly state the address of the module.

Electrical Ratings	PSC-12	PSX-12
Input Voltage	120 VAC/220 VAC/240VAC +10%, -15%	120VAC/220VAC/240VAC +10%, -15%
Input Current	4.0A Max. @ 120VAC 2.5A Max. @ 220VAC 2.0A Max. @ 240VAC	4.0A Max. @ 120VAC 2.5A Max. @ 220VAC 2.0A Max. @ 240VAC
24VDC Back Plane Current	2A Max.	NA
Screw Terminal 24VDC Current	Power Limited: 4A Max Non-Power Limited: 12A Max.	Power Limited: 4A Max. Non-Power Limited: 12A Max.
6.2VDC Back Plane Current	2A Max.	NA
24VDC Standby Current	150mA + 20mA per active relay	170mA

Model	Description	Part Number
PSC-12	Power Supply & Battery Charger 12A @ 24VDC	500-033340
PSX-12	Power Supply Extender 12A @ 24VDC	500-034120
PTB	Power Termination Board (only required for applications with more than (2) PSX-12's)	500-033390
HTSW-1	Door Tamper Switch	500-033350
AC-ADPT	Technician Laptop Power Connector	500-633992
BP-61	24VDC, 15AH Battery	175-387194
BTX-1	Set of 12V, 31AH Batteries	175-083897
BTX-2	Set of 12V, 75AH Batteries	175-083898
BTX-3	Set of 12V, 100AH Batteries	599-034220
CAB-BATT	Battery Enclosure for 75AH or 100AH Batteries	500-633917

NOTICE: The use of other than Fire Safety detectors and bases with Fire Safety equipment will be considered a misapplication of Fire Safety equipment and as such void all warranties either expressed or implied with regard to loss, damage, liabilities and/or service problems.