7.4.4 Auxiliary Power, CSC (P4-P5) and SPS (P22) Wiring

These CSC and SPS system module terminals provide auxiliary output power (24VDC nominal) for use by addressable output devices, four wire detectors, and other power use.

CSC P5: Two pair of 2.0 amp auxiliary non-resettable outputs. (4.0 amps total)
CSC P4: A 2.0 amp auxiliary resettable output (off during system resets).
SPS P22:Two pair of 2.0 amp auxiliary non-resettable outputs. (4.0 amps total)

Complete auxiliary power wiring. If using a high voltage testing device to verify ground isolation, do not expose devices or modules to the high voltage. Verify wiring per the following :

1. Verify no stray voltages exist on any field wiring prior to device installation.
2. Verify each conductor is free from shorts between all other conductors and chassis.
3. Measure loop impedance with a short across loop at device furthest from circuit start.
   Verify this impedance does not exceed the maximum ohms below for the maximum current used.

Max Current (Amps)	0.1	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.5	2.0	Amp
SRM's with solenoids:	12	6	4	3	2.4	2.0	1.5	1.2	0.8	0.6	max ohms
Standard uses:	24	12	8	6	4.8	4.0	3.0	2.4	1.6	1.2	max ohms

All other circuits: 50 ohms maximum from control panel to furthest device.

7.4.5 Notification Circuit (P8-P9) Wiring

Applies to: a.) ASC P8-P9 wiring.
These two circuits (rated at 2.0 amps) may be wired per these NFPA notification circuit styles.

NFPA	Class / Wiring Method	T-Tapping allowed?	EOL used?
Style Y	Class B / Non-Redundant	No	Yes
Style Z	Class A / Redundant	No	No

Complete circuit wiring. Verify circuit wiring per 7.4.4 (above) with maximum impedance per "Standard Uses" in the chart. Compatible devices are those listed in SOM manual (in the front of this manual).

7.4.6 Relay Circuit (P2) and CRM4 (P4) Wiring

Wire these dry contact outputs per the circuit requirements of their monitoring devices or the devices which they control. All contacts are rated at 2A each @ 30 VDC or 0.5A @ 110 VAC.

7.5 ADDRESSABLE DEVICES: Pull initiating and notification wiring. Refer to Chapter 14 for Wiring Diagram Details.

7.5.1 Notification Circuits

Pull the wiring from the addressable output devices to the notification and releasing devices.
Style Y (Class B) wiring is supported. Refer to the pertinent device manual for:

* allowable circuit resistance
* approved notification devices
* current use per notification device

If using a high voltage testing device to verify ground isolation, do not expose devices or modules to the high voltage. Verify wiring per the following :

1. Verify no stray voltages exist on any field wiring prior to device installation.
2. Verify each conductor is free from shorts between all other conductors and chassis.
3. Measure loop impedance with a short across loop at device furthest from circuit start.

7.5.2 Initiating Circuits

Pull the wiring from the FRCM input addressable devices to the closed contact device.
Style A (Class B) wiring is supported. Verify this wiring per the following:

1. Verify no stray voltages exist on any field wiring prior to device installation.
2. Verify each conductor is free from shorts between all other conductors and chassis.
3. Verify loop impedance with a short across loop at the most remote point is less than 100 ohms.

Abort and Reset input circuits are to be wired only with momentary contact switches so they cannot be left activated without human interaction.

Note: If using any means which applies voltages in excess of device ratings, first remove field devices to prevent damage.

7.6 ADDRESSABLE DEVICES: Program address, install, and wire (except releasing)

7.6.1 Program Device Addresses

An address shall be programmed into each addressable device (both sensors and input/output (I/O) modules) so the system can distinguish it from the other loop devices. Allowed addresses are from 1 to 127 and are programmed using the 55-026 CHEETAH Programmer.

Sensors are comprised of a sensor head and sensor base. Sensors addresses are programmed by attaching the sensor head directly onto the programmer, selecting the address on the programmer switchpad and LCD, then selecting to write the address to the sensor. After programming, mark the address on the sensor's label. While on the programmer, some sensor head diagnostics can be analyzed.

System I/O module addresses can also be set with the programmer. They interface to the programmer's interface cable using two or four wires, depending if the module uses auxiliary 24V power. The cable connects directly into a four position jack through a cutout in the device mounting plate. Modules shall be programmed and marked in the same manner as sensors.

If necessary, the programmer can also set I/O module addresses after they are wired into the signal loops. If programming after loop installation, then loop communications must be halted by disconnecting the loop from the CHEETAH (or SLM) module. It is not necessary to disconnect 24V auxiliary power. If a programmer is not available, an address can be set from the panel. This can be accessed from the CONFIG>SPECIAL>DEV ADDR screen (See Chapter 11).

7.6.2 Install Addressable Devices & complete wiring

Install the addressable devices into their field locations and finish wiring interconnects per wiring diagrams. It is advisable to delay field wiring of releasing circuits and other non-reversible field devices until system prove-in is finished.

7.7 SYSTEM MODULES: Install and wire

Install system modules after the enclosure has been installed and cleaned of all dust and debris. Modules include the appropriate installation mounting hardware. Prior to handling or installing any modules, appropriate anti-static procedures must be followed per Appendix 6.

7.7.1 CSC Controller, P/N 10-2200

Mount on the five mounting standoffs in the upper half of the enclosure and secure using the five 6-32 nuts and lock washers provided.

7.7.2 CRM4 Relays, P/N 10-2204

Optional CRM4's are mounted on the CSC upper left hand corner. Mount standoffs in the four positions provided. Align using mating standoffs, press and secure into place.

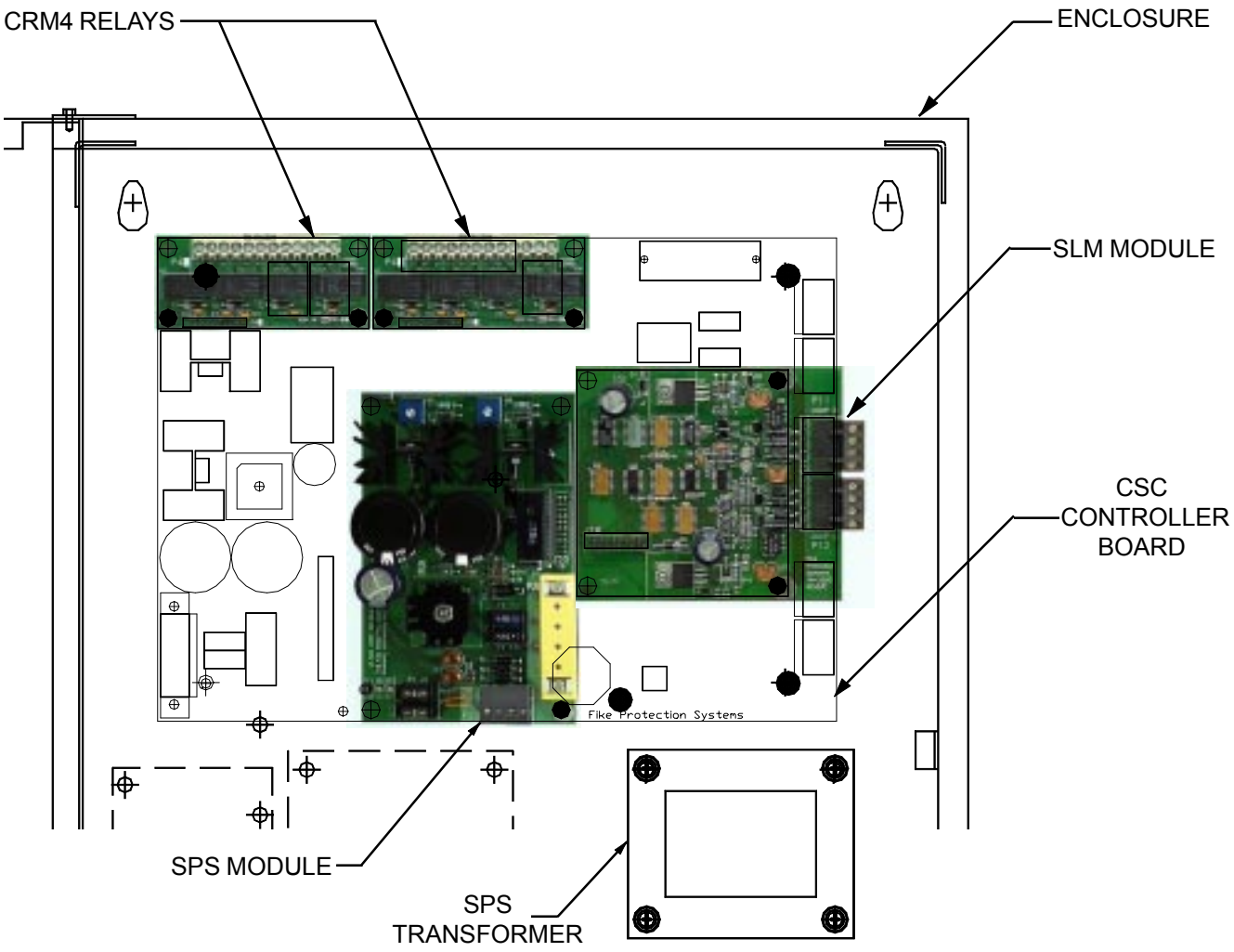
7.7.3 SLM Loop Module, P/N 10-2203

The optional loop module is mounted on the right center of the CSC module. Mount standoffs in the four positions provided. Align with mating standoffs, press and secure into place.

7.7.4 SPS Power Supply Module, P/N 10-2201-p

The SPS includes both a transformer and a plug-in module. The plug-in module is mounted on the lower center of the CSC module. Mount standoffs in the four positions provided. Align with mating standoffs, press and secure into place.

The SPS transformer is mounted in the right center of the enclosure. Using hardware included with assembly to install. Secure four standoffs in center of enclosure just to the right of the primary transformer. Mount the transformer on the standoffs (with the wires on the lower side) and secure with the four 6-32 screws.
Connect the terminals lugs to the AC power strip per the wiring diagram.



7.7.5 Finish system wiring and AC power

Finish system wiring to the system modules per system wiring diagrams. Prior to power-up , interconnect the transformer secondary winding to CSC P1-1 & P1-2 per the wiring diagram. If optional SPS module is used, ensure it is wired in a similar mode. Ensure AC power is wired per the wiring diagram.

7.8 CONFIGURE SYSTEM

Configure the system per the system design documents. Physical configuration can be by either of these two methods:

1.) CSC controller LCD and menu travel options (with level 3 password)
Chapter 12 provides details of using this method.

2.) CHEETAH Tracker program, subsequently downloaded to CHEETAH system.
Manual 06-144 provide details of using this method.

7.9 CHECK-OUT SYSTEM

Power the system up and again verify no troubles exist. Connect the batteries per the Wiring diagram. After pressing reset switch, verify trouble LED does not illuminate. Perform system check-out per Chapter 13.

Note: Use disabling of SRM modules judiciously during system check-out.
If using a solenoid (rather than the ARM-III), remove the EOL from the SRM ARM circuit.
Solenoids can be simulated with a 30 ohm high (>20) Wattage resistor across SOL terminals.

7.10 CONNECT RELEASING HARDWARE (hardware system check-out)

After complete system check-out, power-down, then connect the releasing hardware.

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