

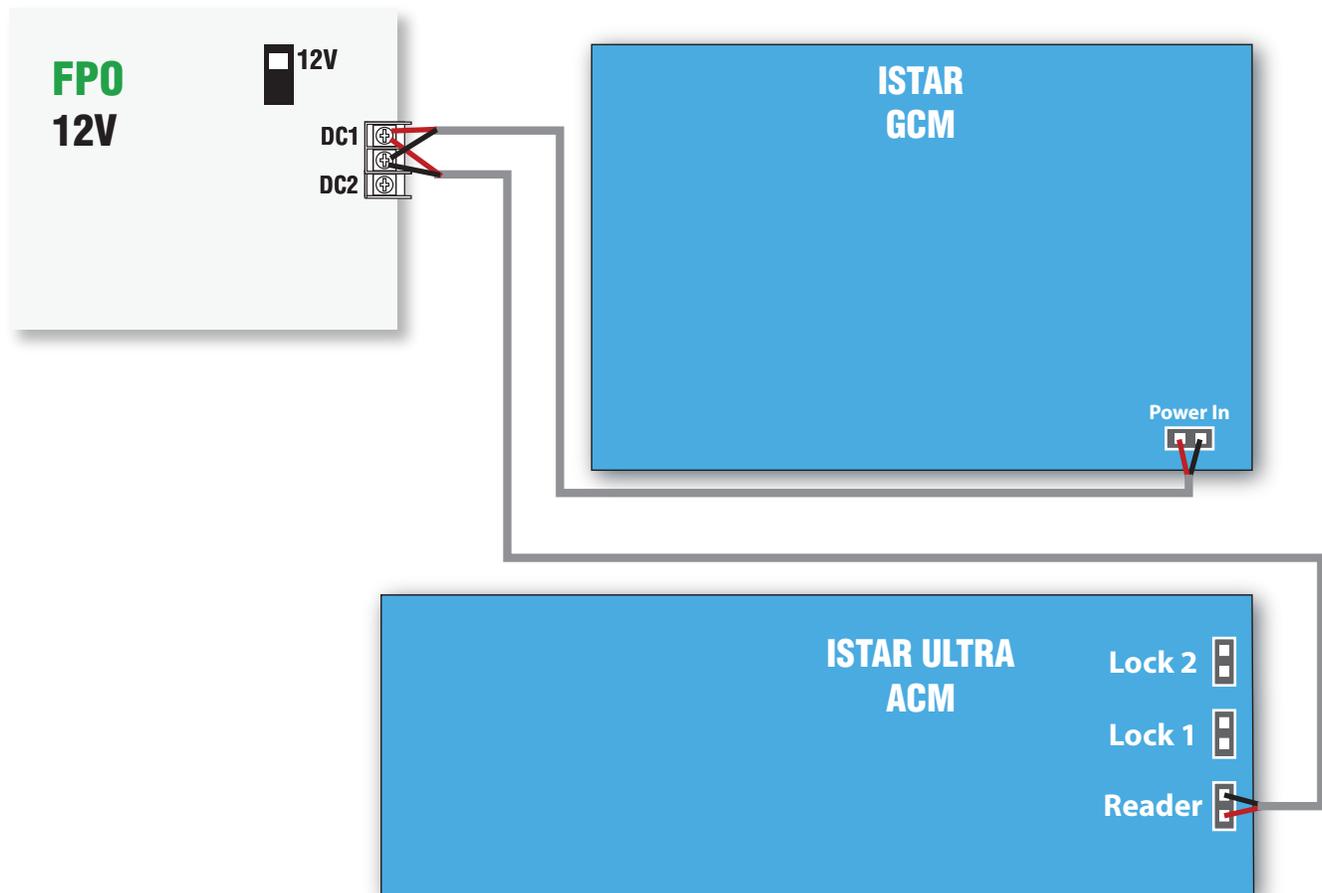
OVERVIEW

The FlexPower line of power supplies is ideal for powering an access control system such as the Software House iStar Ultra. Additionally, the SCLASS line of power systems allows the mounting of the iStar components within the power supply enclosure, simplifying and streamlining the installation. This application note will cover the basic wiring required between the power system and the iStar Ultra and assumes a basic working knowledge of LifeSafety Power equipment and the iStar Ultra panel.

GCM & ACM / READER POWER

The iStar Ultra GCM & ACM require a 12VDC source for power - connection to 24VDC will cause immediate damage. Because of this, most iStar Ultra power systems will need to be dual voltage (utilizing two FPO power supplies) to allow for 12V system power and 24V locking devices.

Power for the GCM and ACM boards should be taken directly from the DC1 output terminals of the 12V FPO power supply as shown below.



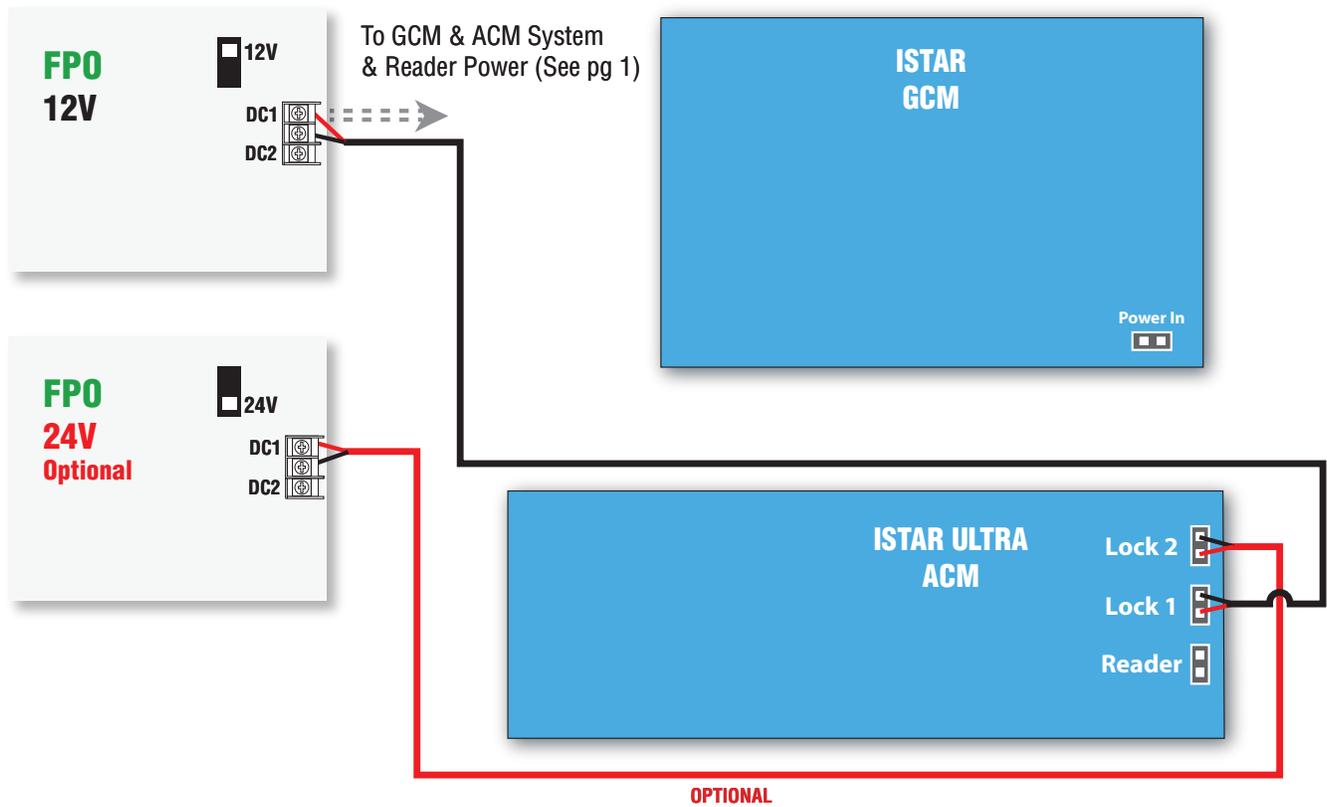
LOCK POWER

The ACM has two independent lock voltage inputs, allowing each lock to be powered by either voltage source. Each ACM output may also be set for a traditional dry contact output, if desired. Because of the flexibility of the ACM, there are several options for how to power the locks in the system.

Locks Powered by the ACM Directly

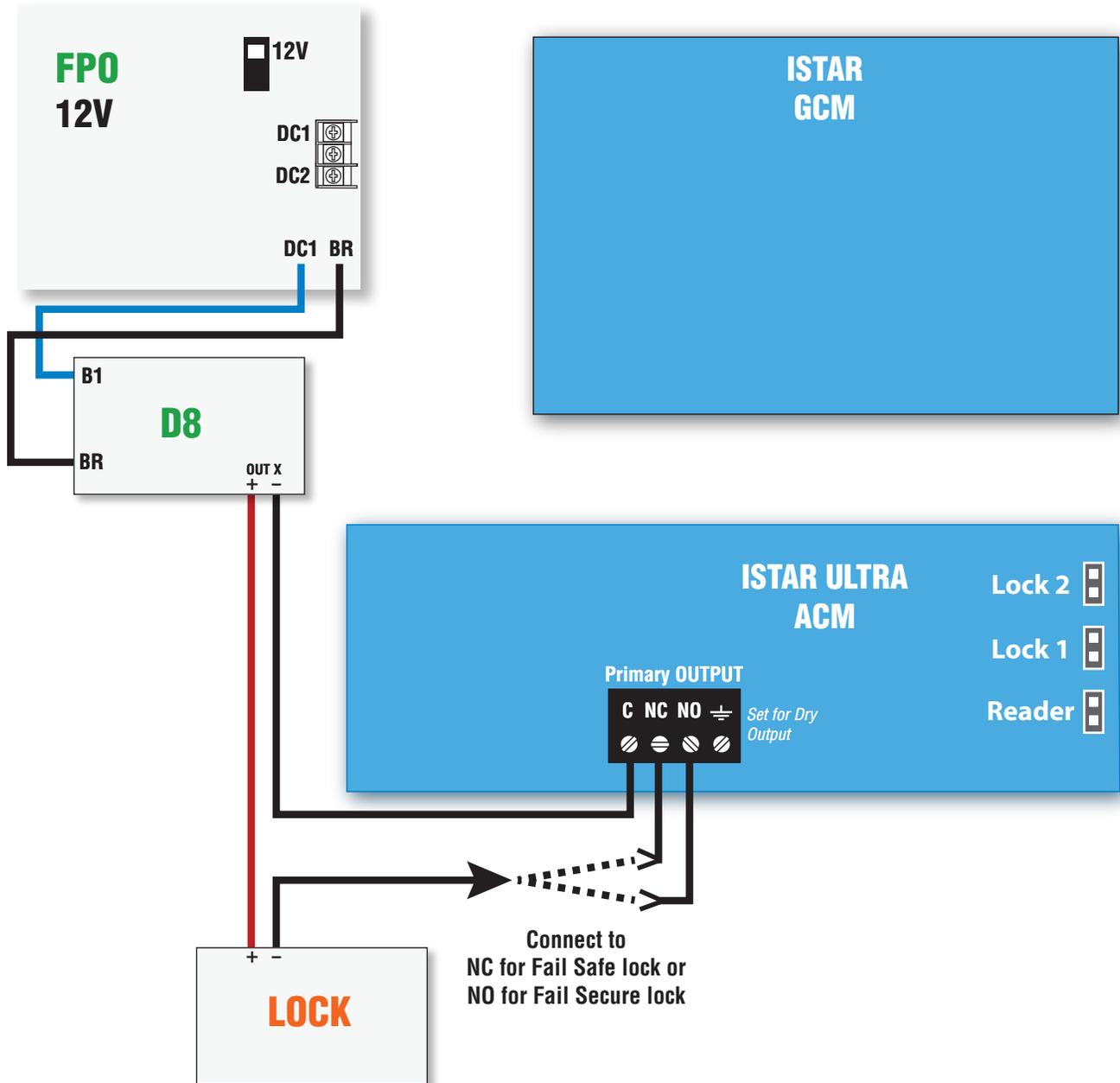
In this application, the ACM supplies power to the locks directly, using the ACM's internal relay to switch the lock power. This is the most common application, as the ACM in the iStar Ultra provides the features needed for most situations.

The ACM accepts two separate lock power inputs, allowing the selection of 12V or 24V for each lock output if required. Since FAI is handled by the ACM, no connection to the FPO power supply's FAI is needed.



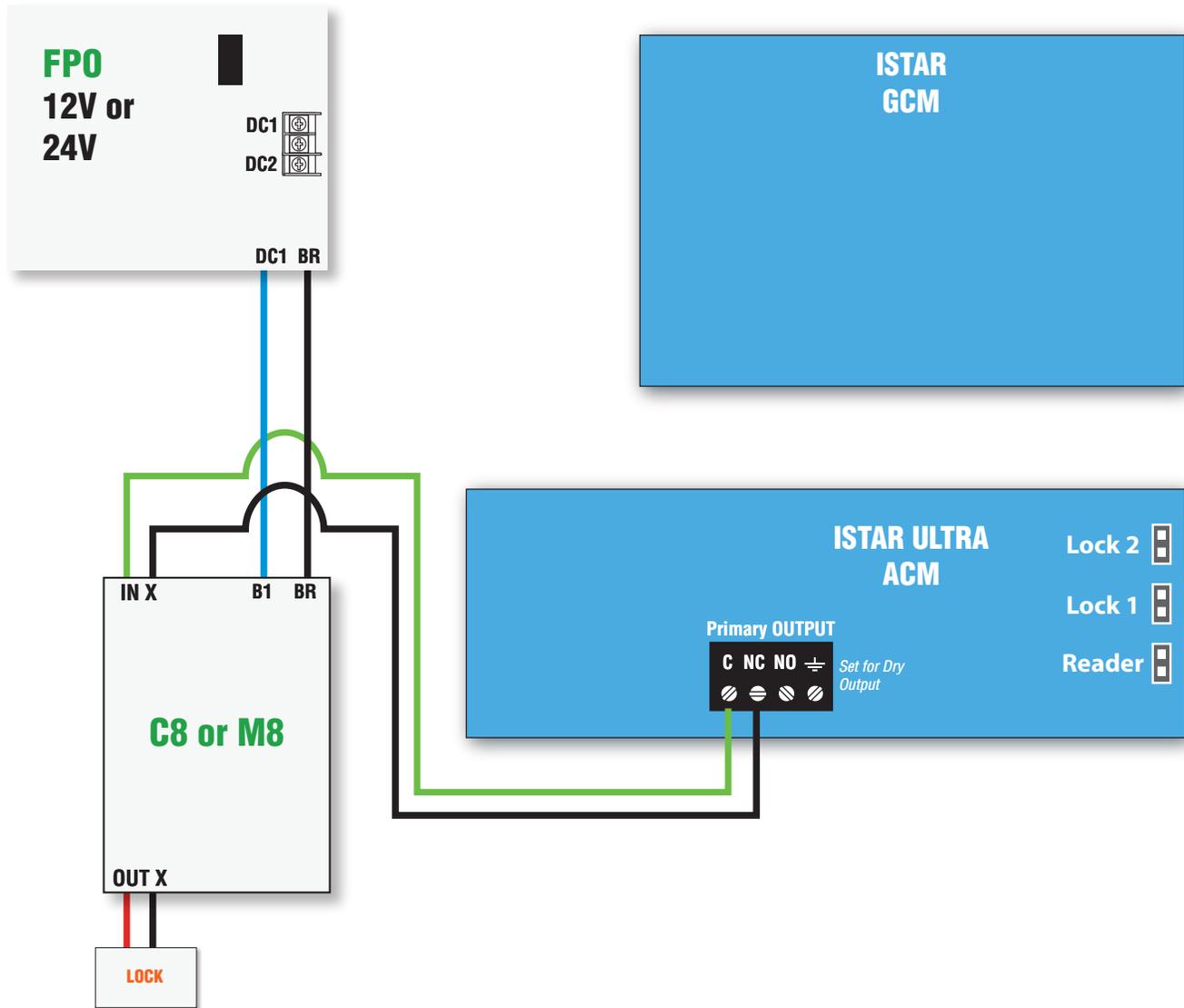
Locks Powered by a D8 Module

When set for a wet output, the ACM lock outputs are limited to 0.75A via a PTC. If a greater current is desired, or if positive short circuit indication via a fuse is desired, one or more D8 boards may be added to the FPO power supply. By setting the ACM's lock outputs as a dry relay, the outputs may then be wired as a traditional access system.



Locks Powered By An M8 or C8

If network monitoring or control of the lock voltage and current is desired, an M8 may be used to power the locks. If monitoring and control are not required, a C4 or C8 may also be used, though the features of the C4/C8 become redundant when used with an iStar Ultra. Wiring for the C4/C8 or M8 are identical, as shown below.



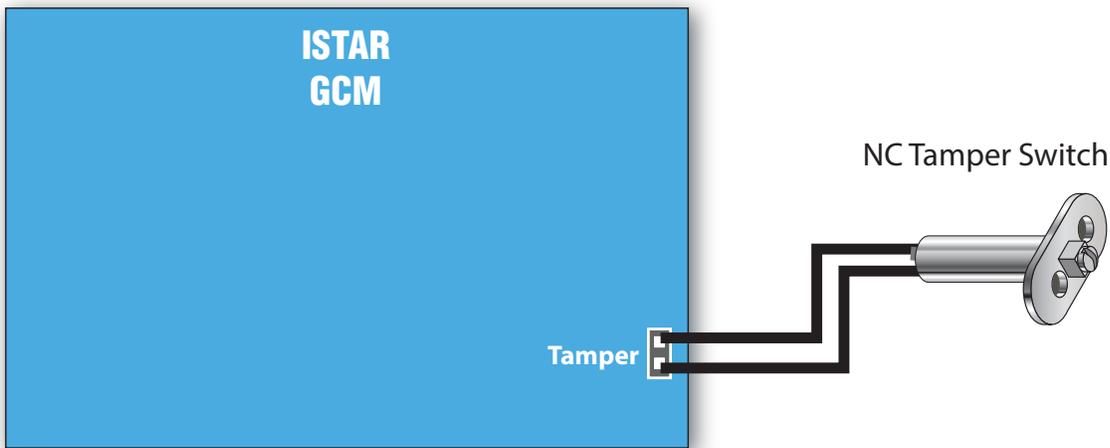
MISCELLANEOUS

There are some miscellaneous items which may be wired between the FPO power system and the iStar Ultra.

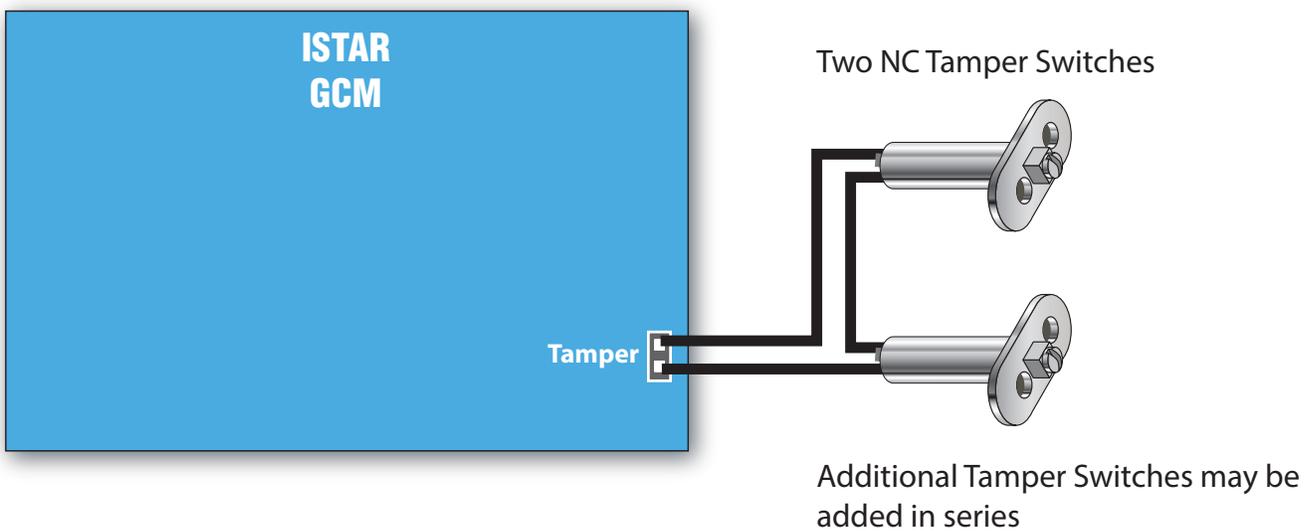
Tamper Switch Wiring

The normally closed (NC) tamper switch on the FPO power supply's enclosure may be monitored by the iStar Ultra's GCM board, as shown below. If there are multiple NC tamper switches to be monitored, they should be wired in series as shown.

Single Tamper Switch

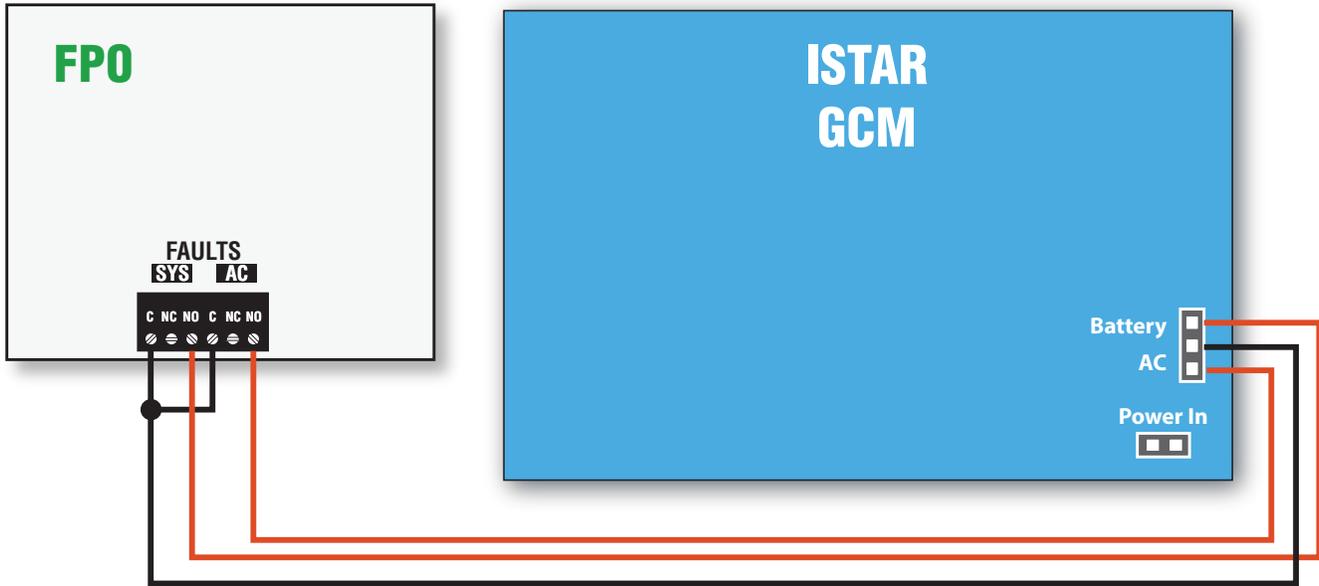


Multiple Tamper Switches



FPO Fault Relay Wiring

The AC and System Fault relays on the FPO power supplies may be monitored by the iStar Ultra's GCM board. In a system with two FPO power supplies, only one set of relays needs to be monitored, since the FlexIO cable ties the system faults between the two FPO power supplies together.



Note: FPO Fault relays are labeled in the unpowered (fault) condition

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