SSC Alarm Cabling

This chapter describes how to cable the alarm contacts on the System Status Card (SSC).

⚠

Caution   The CO alarm interface of the SSC is suitable for connection to intra-building or unexposed wiring or cabling only. This interface MUST NOT be metallically connected to interfaces that connect to the outside plant (OSP) or its wiring. This interface is designed for use as an intra-building interface only (Type 2 or Type 4 ports as described in GR-1089-CORE, Issue 5) and requires isolation from the exposed OSP cabling. The addition of Primary Protectors is not sufficient protection in order to connect these interfaces metallically to OSP wiring.

It includes the following sections:

CO Alarm Interface

The Central Office (CO) Alarm interface on the SSC is a DB15 female connector that supports three low voltage, normally-closed/normally-open dry-contact relays. These Form C relays interface with an CO alarm monitor panel to trigger external audio and/or visual indicators.

Three alarm levels are supported by the relays:

- **Minor Alarm –** This alarm is triggered when a high temperature is detected on a card, causing the fan tray to switch the fans to high speed.

- **Major Alarm –** This alarm is triggered when there is a:

  - Hardware failure that causes the card to be placed in an off-line state

  - PFU failure or removal from the chassis

  - Failure of one or more fans on any of the upper or lower fan tray units

• Fan tray failure or any fan tray unit is removed from the chassis

• **Critical Alarm** – This alarm is triggered when a degradation in service is detected. For example, if the system is supporting a large number of subscribers and DPCs are removed, the amount of available CPU and memory resources available for use are reduced.

Alarm Cutoff (ACO)

The front panel of the SSC includes an audible system alarm and an Alarm Cutoff (ACO) switch. Press and release this switch to reset the system alarm speaker.

Figure 1: SSC CO Alarm Interface
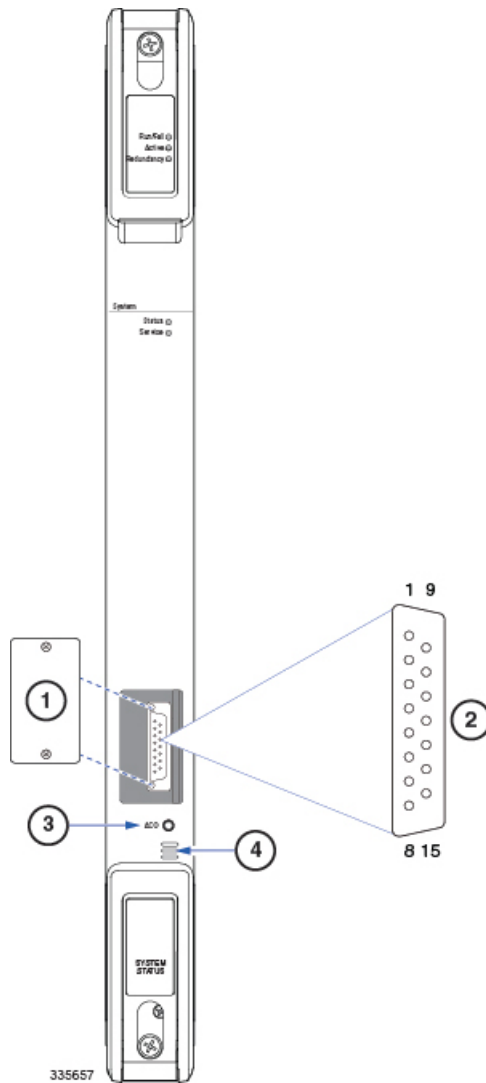
1	Connector cover plate	2	CO alarm interface (DB15)

3	Alarm Cutoff (ACO) switch	4	Audible alarm

Alarm Connector Pinout

The CO alarm connector pinout is provided in the table below.

Use a Phillips #1 screwdriver to remove the two screws that secure the cover plate over the alarm connector.

Table 1: DB15S CO Alarm Connector Pinout

Pin	Alarm Level	Signal
1	Minor	Normally Open
2		Normally Closed
3	—	Not connected
4	Major	Normally Open
5		Normally Closed
6	—	Not connected
7	Critical	Normally Open
8		Normally Closed
9	Minor	Minor, Common
10	—	Not connected
11	—	Not connected
12	Major	Major, Common
13	—	Not connected
14	—	Not connected
15	Critical	Critical, Common

Electrical Characteristics

Each of the three dry-contact, Form C relay switches is rated to support a maximum switching current of 1A@30VDC.

⚠️

Caution   Never connect a high voltage/high current device such as an audible alarm/siren or incandescent lamp directly to the EO alarm connector.

CO Alarm Wiring Example

The figure below depicts how the three dry-contact (no voltage supplied) relay contacts can each control up to two alarming devices. In this example the SSC CO alarm interface is connected to a CO Alarm Panel, where green LEDs are wired to indicate normal operation, and red LEDs are wired to indicate alarm conditions.

With all relays de-energized, the green LEDs are illuminated. If an alarm relay is energized, its NO (normally open) contact closes; the green LED is extinguished and the red LED is illuminated.

Figure 2: CO Alarm Interface Schematic