



Subject:	Opto Card Upgrade
Release Date:	May 3, 2017
Systems Affected:	DSS-200 Series 2 CE, DSS-200 Synergy and Synergy Integra
Reference Components:	28-8875-036 PC ASSY, OPTO OUTPUT, CE96 28-8875-037 PC ASSY, OPTO INPUT, CE96 28-8875-038 PC ASSY, SMIF RELAY, CE96
Summary:	Information regarding replacement Optical Isolation PCBs and the upgrades associated with each PCB.

Background

The Optical Isolation (Opto) PCBs are used to provide an electrical buffer between the computer and the input and output devices of an OnTrak Series 2 CE, Synergy, or Integra. The original version of Opto PCBs used soldered ICs and only provided an interface for attaching an external LED board for troubleshooting. The external LED board provided a single LED for each Opto channel which on some boards indicated an input was present and other board indicated an output was present. Troubleshooting was not only confusing but once the failed channel was isolated it was very difficult to de-solder the IC and ultimately the entire PCB was replaced each time a channel failed. Due to the cost of the PCB often a failed PCB would be swapped to another location with unused channels and forgotten until the next troubleshooting event.

Entrepix had previously discovered that the current rating for the Opto IC was under rated for some of the relay coils in the electrical cabinet. The IC that is installed on the new PCBs is the same IC that Entrepix has been using to repair the original PCBs for many years.

System Integration

To integrate the new PCBs simply order and replace the old PCB. The upgraded PCBs are a direct replacement to the original in terms of form, fit, and function. The differences are the PCBs have troubleshooting LEDs integrated directly to the PCB and each opto IC is socket mounted for easy replacement. The part numbers for each PCB and the replacement Opto IC are listed. Note that the difference in part numbers is the 99 vs. 88.

28-9975-036 UPG, PCB ASSY, OPTO OUTPUT

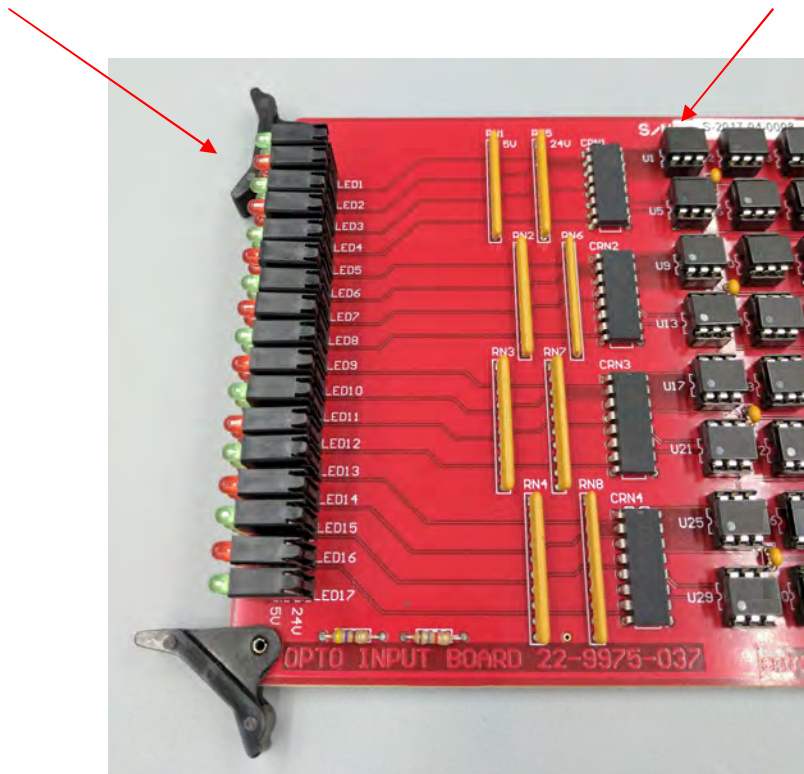
28-9975-037 UPG, PCB ASSY, OPTO INPUT

28-9975-038 UPG, PCB ASSY, SMIF RELAY

50-0075-901 IC, OPTO, 2.5A UPGRADE

Troubleshooting
LEDs

Socketed Opto
Isolator IC



LED\Opto Cross Reference

Each Opto IC has 2 associated LEDs. One LED is the input signal to the Opto and one is the output. The LEDs should always light in pairs. If the input LED is active the output LED should also activate. If the output does not activate this indicates the possibility the Opto IC has failed and should be replaced.

