



SLC[®] Series 5 Carrier System

CS787B540 Power Unit (Rectifier) - PWPQ88C

This data sheet describes the CS787B540 power unit (COMCODE 105571590) and is intended for the end-user of the unit. The CS787B540 power unit is a part of the 60-ampere off-line switching (OLS) power plant used to power the SLC[®] Series 5 Carrier System. The power unit is an off-line switching rectifier that converts commercial 220-volt AC power into a regulated 54.5-volt DC output at 0 to 25 amperes. It is a printed wire board assembly that interfaces, via connectorized cables, with the ED-7C704-30 shelf and ED-83114-30 control and distribution panel.

This data sheet is reissued to change reference from -54 V to -54.5 V, and to clarify that the OUTPUT ADJUST control is for factory adjustment only.

Figure 1 is a functional block diagram of the CS787B540 power unit, and Figure 2 shows the power unit indicators and controls.

This power unit contains an AC line conditioner and boost circuit that rectifies the incoming line voltage, provides power factor correction to 90% or better, provides protection against incoming transients and provides an internal well-regulated DC voltage that powers an internal DC-DC converter. The converter converts this internal DC into a regulated DC output voltage adjustable from a -52 to -56 volts DC. Overall power unit efficiency is 82%.

Other features include the following functions:

- Current sharing — three rectifiers in parallel will share output current within 5 amperes.
- Fan cooling — contains internal ball-bearing fan for temperature control to 85° C ambient environment.

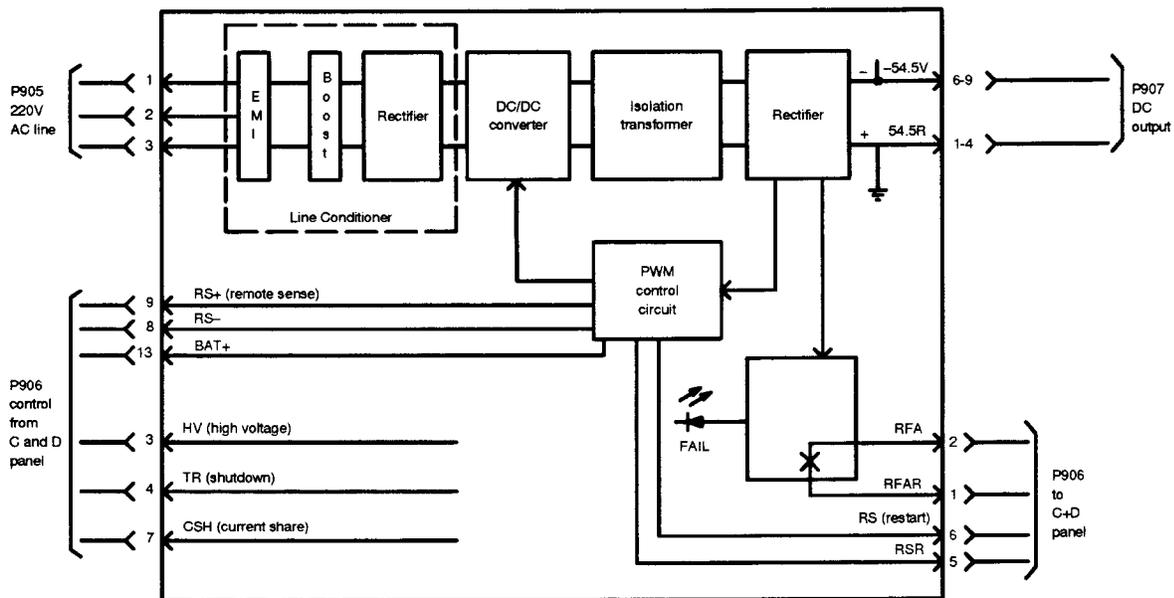
- Inrush current — will not trip standard 20-ampere circuit breaker.
- Output current limiting — current limited to control power dissipation and prevent short circuit damage.
- Overvoltage protection — rectifier will shut down if its output exceeds 59 volts.
- Remote sense — allows precise control of output voltage at a remote point.
- Remote shutdown — external control signal provides on/off rectifier control.
- Remote start — external control signal will restart rectifier.

The following indicators, jacks, and controls are provided on the faceplate:

FAIL (Red LED): This LED lights to reflect a low output voltage, a fan failure, a high output voltage shutdown, or loss of input AC.

OUTPUT ADJUST: This control is for *factory* use only.

±OUTPUT VOLTAGE: These jacks are used to measure the rectifier output voltage.



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Figure 1. Power Unit Block Diagram

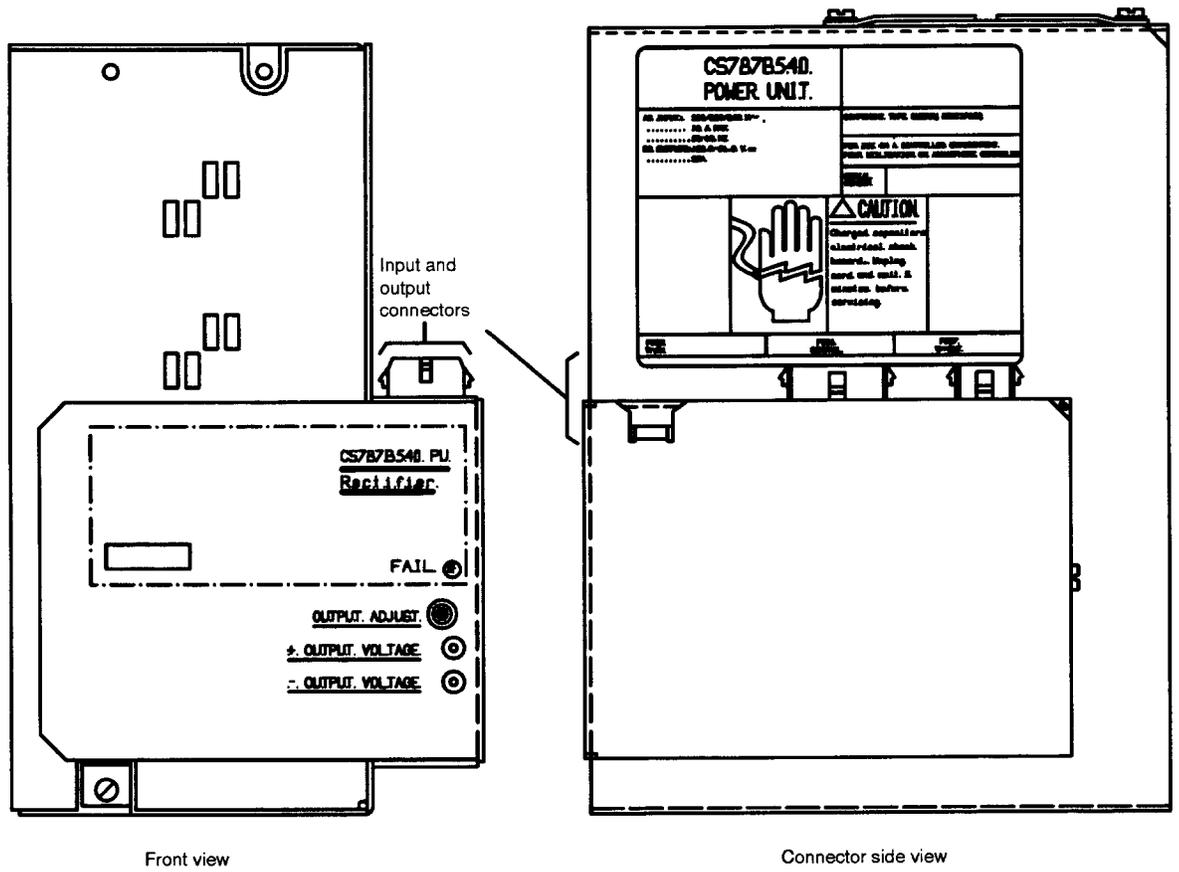


Figure 2. Power Unit Indicators and Controls

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In-hours or emergency out-of-hours technical assistance for the *SLC* Series 5 Carrier System can be obtained by calling the Regional Technical Assistance Center at **1-800-225-RTAC**.

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