

Model 206L

High Efficiency Power Supply



Plug-in Replacement for Caltrans Model 206 Power Supply

Meets CALTRANS TEES 2009 Standards

- AC line input voltage – 80 VAC to 135 VAC, 43/65 Hz
- $\pm 0.1\%$ Line Regulation
- 24 VDC output – 10 Amps
- $\pm 1\%$ Load Regulation
- Power Factor > 0.99 @ 10 Amps
- AC input and DC output are fuse protected
- Transient Voltage Protection on AC and DC bus
- Efficiency $> 75\%$
- Low conducted and radiated emissions
- Operating Temperature: -40°C to $+85^{\circ}\text{C}$
- Back Connector mates with Beau S-5406 or equivalent
- Power Supply is light-weight, rugged, and completely enclosed
- Front panel Test Jacks

Model 206L Specifications

General: The 206L is a plug-in replacement for Caltrans PDA #2 and PDA #3 found in 332 and 336 type cabinets using a model 206 cabinet power supply. The model 206L incorporates an advanced switch mode design to achieve a small, light-weight, rugged power supply capable of supporting an output of 24VDC at 10 Amps. As the load increases from 0 to 10 Amps, the efficiency of the 206L also rises from 75% to greater than 85% and the power factor becomes one. The 206L is designed to operate for long periods of time with low and poor quality AC Line Voltages (<70VAC).

Environmental: Complies with or surpasses CALTRAN TEES 2009 Standards

Operating Ambient Temperature: -40° C to +85° C Power Factor: ≥ 0.99 @ 10 Amps

Efficiency: ≥75%

Hold-up Time: 50 milliseconds for 10 Amp load

Back Connector: Inter-mates with Beau S-5406 or equivalent.

Input voltage Indication: When AC Line voltage is present (≥70 VAC) the front panel LED illuminates green. The LED extinguishes when AC voltage is absent or low.

Input Line Frequency: 43 Hz to 65 Hz

Input Line Voltage: 80 VAC to 135 VAC

Line Regulation: ±0.1%

Fuse Protection: The AC line is protected with a 4 Amp slow blow 3AG fuse.

Transient Voltage Protection: AC lines are furthermore protected with 4500 Amp rated metal oxide varistors.

Over current protection: The AC input and DC output are fused with front panel accessible 3AG slow blow fuses. If the D.C. load exceeds 14 Amps for longer than 100 milliseconds the D.C. output is shut down. Once the excessive load is removed the power supply recovers.

Output voltage indication: When the DC output voltage exceeds more than +/- 1 VDC from the nominal output voltage the front panel LED changes from green to red. The LED remains red until output voltage returns to within +/- 1 VDC of the nominal output voltage. If the power supply shuts down due to a fault, the front panel LED turns off.

DC Outputs: 24 VDC ±1% @ 10 Amps max.

Load Regulation: ±1%

Output Ripple: Less than 400 mV Peak to Peak

Fuse Protection: The DC output is protected with a 10 Amp 3AG Fast blow fuse.

Transient Voltage Protection: DC Output protected with 1500W

Suppressor Initial startup: A soft start feature is provided for starting up under heavy loads. Power draw from the AC line is ramped up over a 4 millisecond period.

In-rush current: In-rush current is limited to less than 3 Amps A.C.

Self-checking: Self-monitoring features insure shutdown of the DC output in the event of a critical component failure or excessive load.

Emissions: Radiated and conductive emissions are in compliance with FCC part 15, Class A. An aluminum enclosure and EMI filter minimize radiated and conductive emissions.

Circuit Board: The printed circuit board is 0.062 inch thick FR4 material with 2 Oz. Copper. All holes are plated through. Circuit boards and components are conformal coated with a polyurethane coating.

Enclosure: Designed to maximize natural circulation air cooling while providing protection from objects and fluids dropped into rack when installed.

Size: 5.5 inches wide x 6.0 inches high x 7.5 inches deep (not including back connector pins, front handles, or bottom slide rails)

Weight: 2.71 pounds.

Pin Assignments: Back Connector

Position	Function
7	+24 VDC
8	DC GND
9	Earth Ground
10	Not Connected
11	AC- (AC Neutral)
12	AC+ (AC Hot)

