



ONS 15190 Power Supply Installation Guide

Optionally supplied with the ONS 15190 is a –48V DC power supply unit that can operate within the range of 100 to 250V AC. Output power is provided through a D-type high power connector on the front of the unit. Over-current and over-voltage protection is provided to prevent damage that might be caused by external loads (See the section “Performance Specifications”).

Power supply and system specifications are presented in the following sections:

- Safety
- Power Supply Packing List
- Installing the Power Supply
- Power Supply Description
- Troubleshooting
- Performance Specifications

Safety

Replace fuses only with fuses of like value and size.



Warning

There is a high voltage hazard from within the power supply. The power supply cover should only be removed by an authorized technician.

Power Supply Packing List

The power supply comes packaged with the following items:

- Power supply unit (RS-EXTRNL-AC-PWRC).
- Installation kit (includes nuts, bolts, and washers for rack-mount installation).
- 1 DC male-female cable to connect the power supply to the PEM card in the ONS 15190.
- 1 AC power cord.



After unpacking, verify that all of these items are present. If any items are missing, report this immediately to a support representative.

Installing the Power Supply



Warning

Install the power supply unit with at least 2 inches (5 cm) of clearance on both sides to enable free air flow through the ventilation holes of the unit.



Warning

Connect the power cable to the unit *only* after the unit is secured,

The power supply must be rack-mounted as follows:

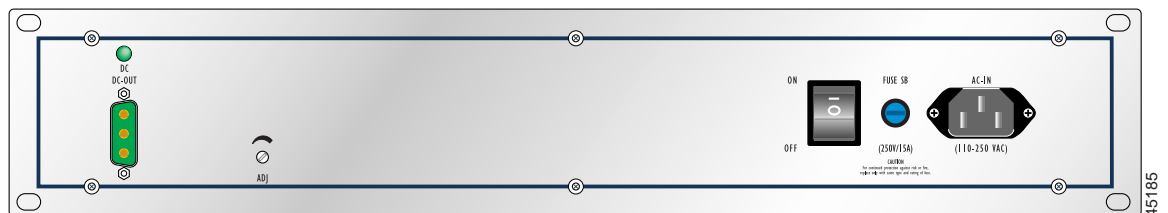
- Step 1 Open the rack-mount installation kit containing the nuts, bolts, and washers.
- Step 2 Determine the location on the rack where the power supply unit is to be installed, taking into account that the height of the unit is 2U.
- Step 3 At the location of each of the four corner holes where the unit is to be installed, insert a nut from the back of the rack toward the front (so that the bolt can be screwed into the nut from the front of the rack).
- Step 4 Lift the power supply unit up to the location of the nuts and screw in the four bolts with the washers placed between the bolt and the power supply panel.

Power Supply Description

The power supply is presented in the following sections:

- DC Output Connector
- On/Off Switch
- Front Panel Indications
- Main Fuse

Figure 1 Power Supply Front Panel



457185

DC Output Connector

The power supply front panel includes a three-pin D-type connector. The connector pin-out follows:

- A1—+48V DC grounded.
- A2—48V DC.
- A3—Chassis ground.

On/Off Switch

The main On/Off switch is used for turning on and off the power supply unit. When the power switch is turned to On, the unit will power up after a delay of approximately 1 second. Turn the unit off by pressing down on the switch. The time delay for turning off the output voltage is dependent on the output load and can be in the range of a few milliseconds to a few seconds.

Front Panel Indications

The front panel of the power supply includes two indicators:

- DC LED—Located above the DC-output connector, is lit green when there is output voltage. This LED turns off when there is no output voltage due to missing AC voltage or activation of any protection circuitry.
- On/Off switch—Lit green when there is AC voltage to the unit, and the switch is in the On position. When the unit is not connected to AC voltage or is turned off, this lamp turns off.



Note

You do not need to touch the ADJ button on the front panel.

Main Fuse

The AC fuse is rated at 15A/250V slow-blow size 3AG. The recommended replacement fuse is BASSMAN MDA-15.

Performance Specifications

Power supply specifications are presented in Table 1.

Table 1 Power Supply Specifications

Description	Value
Performance	
Input line voltage	85 to 265V AC
Line frequency	47 to 65 Hz
Output voltage	–48V DC at 17.7A
Output voltage regulation	1V over-voltage range, load and temperature

Table 1 Power Supply Specifications

Description	Value
Ripple and noise	500mV p-p at 17.7 load*
Overload Protection	
Over current	Set point in the range of 17.7 to 20 AMP. The power supply transfers from constant voltage into constant current mode during overload. The short circuit current limit is below 20 AMP.
Over voltage	Set point in the range of -56 to -62V DC. A latch circuitry will be activated at over-voltage. Turn the unit on by disconnecting AC power and reconnecting it again.
Indication	
AC	Green lamp is located within the ON/OFF switch to indicate when the unit is powered.
DC	Green LED used to indicate when DC output is present.
General	
Size (h x w x d)	3.4 x 19 x 11 inches (87 x 483 x 280 mm)
Cooling	Power supply cooling is performed with an internal fan that blows air from side to side with a side mounted ventilation hole.
Weight	5.28 lb (2.4 kg)
Operating temperature	23 to 122°F (-5 to +50°C)
Storage temperature	-40 to 194°F (-40 to +90°C)
Humidity (noncondensing)	5 to 95% at 144°F (60°C)

* Ripple and noise measured at 20 MHz BW.

Troubleshooting

Power supply problems and solutions follow in Table 2.

Table 2 Troubleshooting Tips for Power Supply

Problem	Cause and Remedy
Power supply does not turn on. No AC indication.	Fuse on front panel might be burnt out. Replace the fuse with an appropriate fuse. (See section “Main Fuse”.)
No voltage appears at output, and the LED is not lit.	Make sure the power supply is not shorted or exposed to over voltage. Turn off the AC voltage and reapply the AC voltage.

Cisco, Cisco IOS, Cisco Press, Cisco Systems, and the Cisco Systems logo are registered trademarks of Cisco Systems, Inc. or its affiliates in the U.S. and certain other countries.

All other brands, names, or trademarks mentioned in this document or Web site are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0010R)