

# 3500/15 Power Supply

Bently Nevada\* Asset Condition Monitoring

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## Description

The 3500 Power Supplies are half-height modules and must be installed in the specially designed slots on the left side of the rack. The 3500 rack can contain one or two power supplies (any combination of ac and/or dc) and either supply can power a full rack. If installed, the second supply acts as a backup for the primary supply. When two power supplies are installed in a rack, the supply in the lower slot acts as the primary supply and the supply in the upper slot acts as the backup supply. Removing or inserting either power supply module will not disrupt operation of the rack as long as a second power supply is installed.

The 3500 Power Supplies accept a wide range of input voltages and converts them to voltages acceptable for use by other 3500 modules. Three Power Supply versions are available with the 3500 Series Machinery Protection System as follows:

- AC Power
- High Voltage DC Power Supply
- Low Voltage DC Power Supply



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Specifications and Ordering Information  
Part Number 141530-01  
Rev. C (07/09)

## Specifications

### Inputs

#### Voltage Options:

##### High Voltage ac

This option uses the ac Power Supply and the High Voltage ac Power Input Module (PIM).

##### Input Voltage

220 Vac nominal

175 to 264 Vac rms

247 to 373 Vac pk

**Note:** Installations using ac Power Input Modules (PIM) prior to Rev. R and/or AC Power Supply Modules prior to Rev. M require an input voltage of 175 to 250 Vac rms.

##### Input Frequency

47 to 63 Hz

##### Low Voltage ac

This option uses the ac Power Supply and the Low Voltage ac Power Input Module (PIM).

##### Input Voltage

110 Vac nominal

85 to 132 Vac rms

120 to 188 Vac pk

**Note:** Installations using ac Power Input Modules (PIM) prior to Rev. R and/or AC Power Supply Modules prior to Rev. M require an input voltage of 85 to 125 Vac rms

##### Input Frequency

47 to 63 Hz

##### High Voltage dc

This option uses the High Voltage dc Power Supply and the High Voltage dc Power Input Module (PIM).

##### Input Voltage

88 to 140 Vdc

##### Low Voltage dc

This option uses the Low Voltage dc Power Supply and the Low Voltage dc Power Supply Input Module (PIM).

##### Input voltage:

20 to 30 Vdc

##### Out of Range Protection:

For all power supply versions, an under-voltage will not harm either the supply or the PIM. However, an over-voltage will cause the fuse to open on the PIM.

##### Full Rack Current Draw:

##### High Voltage AC

2.3 A rms (maximum).

##### Low Voltage AC

4.5 A rms (maximum).

##### High Voltage DC

2.5 A (maximum).

##### Low Voltage DC

10.0 A (maximum).

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### Outputs

#### Front Panel LEDs

##### Supply OK LED:

Indicates when the power supply is operating properly.

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### Environmental Limits

#### Operating Temperature:

-30 °C to +65°C (-22 °F to +150 °F).

**Storage Temperature:**

-40 °C to +85 °C (-40 °F to +185 °F).

**Humidity:**

95%, non-condensing.

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**CE Mark Directives**

**EMC Directives:**

**EN50081-2:**

*Radiated Emissions*

EN 55011, Class A

*Conducted Emissions*

EN 55011, Class A

**EN50082-2:**

*Electrostatic Discharge*

EN 61000-4-2, Criteria B

*Radiated Susceptibility*

ENV 50140, Criteria A

*Conducted Susceptibility*

ENV 50141, Criteria A

*Electrical Fast Transient*

EN 61000-4-4, Criteria B

*Surge Capability*

EN 61000-4-5, Criteria B

*Magnetic Field*

EN 61000-4-8, Criteria A

*Power Supply Dip*

EN 61000-4-11, Criteria B

*Radio Telephone*

ENV 50204, Criteria B

**Low Voltage Directives:**

**EN 61010-1**

Safety Requirements

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**Hazardous Area Approvals**

**CSA/NRTL/C:**

**Approval Option (01)**

Class I, Div 2  
Groups A, B, C, D  
T4 @ Ta = -20 °C to +65 °C  
(-4 °F to +150 °F)

*Certification Number*

CSA 150268-1002151 (LR 26744)

**Approval Option (02)**

A/Ex nC[L] IIC  
Class I, Zone 2  
Class I, Div 2, Groups A,B,C,D  
T4 @ Ta = -20 °C to +65 °C  
(-4 °F to +150 °F)


*Certification Number*

CSA 1389797 (LR 26744-211)

**ATEX**

**Approval Option (02)**

**For Selected Ordering Options with ATEX/CSA agency approvals:**

 II 3/(3) G

EEx nCAL[L] IIC

T4 @ Ta = -20°C to +65°C  
(-4°F to +150°F)

*Certification Number*

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**Physical**

**Power Supply Module**

**Dimensions (Height x Width x Depth):**

120.7 mm x 50.8 mm x 251.5 mm (4.75 in x 2.0 in x 9.9 in).

**Weight:**

1.39 kg (3.06 lb.).

**Power Input Modules**

**Dimensions (Height x Width x Depth):**

120.7 mm x 25.4 mm x 114.3 mm (4.75 in x 1.0 in x 4.5 in).

**Weight:**

0.34 kg (0.75 lb.).

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**Rack Space Requirements**

**Power Supply Module:**

Two special half-height slots are located on the left side of the rack. Each slot accommodates one power supply. Both slots can hold a power supply at the same time, allowing for redundant power supplies.

**Power Input Module:**

Special half-height module located directly behind the associated power supply.

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**Miscellaneous**

**Minimum Loading:**

No minimum rack load is required.

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**Ordering Information**

3500/15-AXX-BXX-CXX

**A: Power Supply Type (Top Slot)**

- 01** Low Voltage ac (85 to 132 Vac rms)
- 02** High Voltage ac (175 to 264 Vac rms)
- 03** High Voltage dc (88 to 140 Vdc)
- 04** Low Voltage dc (20 to 30 Vdc)

**B: Power Supply Type (Bottom Slot)**

- 00** No supply (use when only one supply is required)
- 01** Low Voltage ac (85 to 132 Vac rms)
- 02** High Voltage ac (175 to 264 Vac rms)
- 03** High Voltage dc (88 to 140 Vdc)
- 04** Low Voltage dc (20 to 30 Vdc)

**C: Agency Approval Option**

- 00** None
- 01** CSA/NRTL/C
- 02** ATEX/CSA (Class 1, Zone 2)

**Note:** Agency Approval Option C 02 is only available if Power Supply Type (Top Slot) Option is A 01 or A 02 and if Power Supply Type (Bottom Slot) Option is B 00, B 01, or B 02.

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**Spares**

**127610-01**

ac Power Supply Module

**125840-01**

High Voltage ac Power Input Module (PIM)

**125840-02**

Low Voltage ac Power Input Module (PIM)

**129486-01**

High Voltage dc Power Supply Module

**129478-01**

High Voltage dc Power Input Module (PIM)

**133292-01**

Low Voltage dc Power Supply Module

133300-01

Low Voltage dc Power Input  
Module (PIM)

Replacement Fuse (Low Voltage  
dc PIM)

129767-01

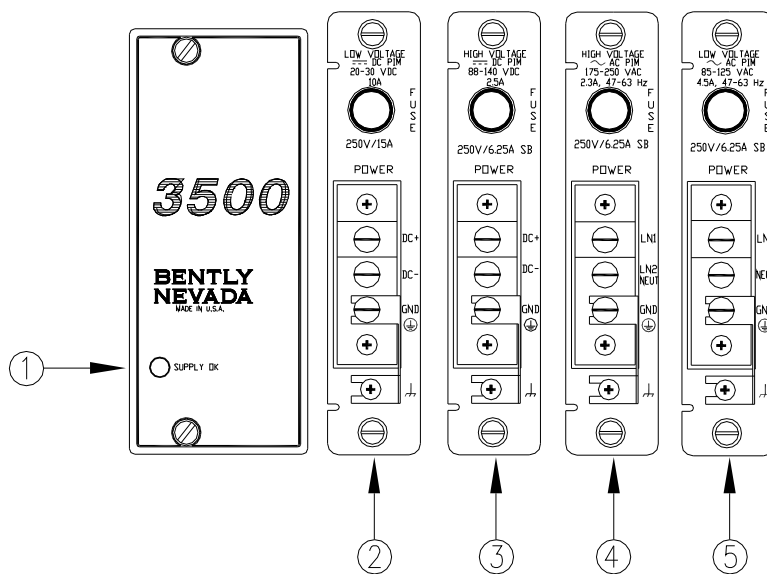
01720025

Replacement Fuse (for both ac  
PIMs and High Voltage dc PIMs)

Power Supply Operations and  
Maintenance Manual

01720045

## Figures and Tables



- 1) Supply OK LED
- 2) Low Voltage DC Power Input Module
- 3) High Voltage DC Power Input Module
- 4) High Voltage AC Power Input Module
- 5) Low Voltage AC Power Input Module

**Front and rear view of Power Supply and Input Modules**

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Rev. C (07/09)