3500/15 AC and DC Power Supplies

Datasheet

Cordant™

141530 Rev. P



Description

The Bently Nevada™ 3500/15 AC and DC Power Supplies are half-height modules and must be installed in designated slots on the left side of the rack. The 3500 rack can contain one or two power supplies with any combinations of AC and DC. Either supply can power a full rack.

When two power supplies are installed in a rack, the one in the lower slot acts as the primary supply, and the other in the upper slot acts as the backup supply. If installed, the second supply is the backup for the primary one.

Removing or inserting either power supply module does not disrupt operation of the rack as long as a second power supply is installed.

The 3500/15 AC and DC Power Supplies accepts a wide range of input voltages and converts them to voltages acceptable for use by other 3500 modules. The following power supplies are available with the 3500 Series Machinery Protection System:

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

The Universal AC Power Supply and PIM (Power Input Module) are not compatible with the Legacy 3500 AC Power Supply, High Voltage AC PIM and Low Voltage AC PIM.

The High Voltage and Low Voltage DC Power Supplies and PIM(Power Input Module) are NOT compatible with the Legacy 3500 High Voltage and Low Voltage DC Power Supplies and PIMs.

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Specifications

Inputs

Voltage Options

Universal Voltage AC	
Description	This option uses the universal AC Power Supply and universal AC Power Input Module (PIM).
Input Voltage	110 to 220 Vac nominal Non-hazardous areas: 85 to 264 Vac rms Hazardous areas: 85 to 250 Vac rms 120 to 373 Vac pk The universal AC Power Supply and Power Input Module are not compatible with the legacy High Voltage AC or Low Voltage AC units.
Input Frequency	47 to 63 Hz
High Voltage DC	
Description	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	
Description	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

Current Information

Out of Range Protection	For all power supply options, an under-voltage does not harm the supply or the PIM. An over-voltage causes the fuse to open on the PIM.
Full Rack Current Draw	
Universal voltage AC	2.8 A rms (maximum)
High voltage DC	2.5 A (maximum)
Low voltage DC	11.0 A (maximum)

Outputs

Front Panel LEDs	
Supply OK LED	Indicates when the power supply is operating properly

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

Rack Space Requirements

Power supply module	Two 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

Miscellaneous

Minimum loading	No minimum rack load is required.

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

Compliance and Certifications

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

EMC

European Community Directive:

EMC Directive 2014/30/EU

Standards:

EN 61000-6-2; Immunity for Industrial Environments
EN 61000-6-4; Emissions for Industrial Environments

Electrical Safety

European Community Directive:

LV Directive 2014/35/EU

Standards:

EN 61010-1

RoHS

European Community Directive:

RoHS Directive 2011/65/EU

Maritime

DNV GL rules for classification – Ships, offshore units, and high speed and light craft

ABS Rules for Condition of Classification, Part 1

- Steel Vessels Rules
- Offshore Units and Structures

Hazardous Area Approvals

For the detailed listing of country and product-specific approvals, refer to the *Approvals Quick Reference Guide (108M1756)*.

For additional technical documentation, please log in to bntechsupport.com and access the Bently Nevada Media Library.

cNRTLus

Class I, Zone 2: AEx/Ex nA nC ic IIC T4 Gc;
Class I, Zone 2: AEx/Ex ec nC ic IIC T4 Gc;
Class I, Division 2, Groups A, B, C, and D;

T4 @ Ta= -20˚C to +65˚C (-4˚F to +149˚F)
When installed per drawing 149243 or 149244.

ATEX/IECEx

Ex II 3 G

Ex nA nC ic IIC T4 Gc
Ex ec nC ic IIC T4 Gc

T4 @ Ta= -20˚C to +65˚C
(-4˚F to +149˚F)
When installed per drawing 149243 or 149244.

Ordering Information

For the detailed listing of country and product-specific approvals, refer to the *Approvals Quick Reference Guide (108M1756)*.

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3500/15 Power Supply Module

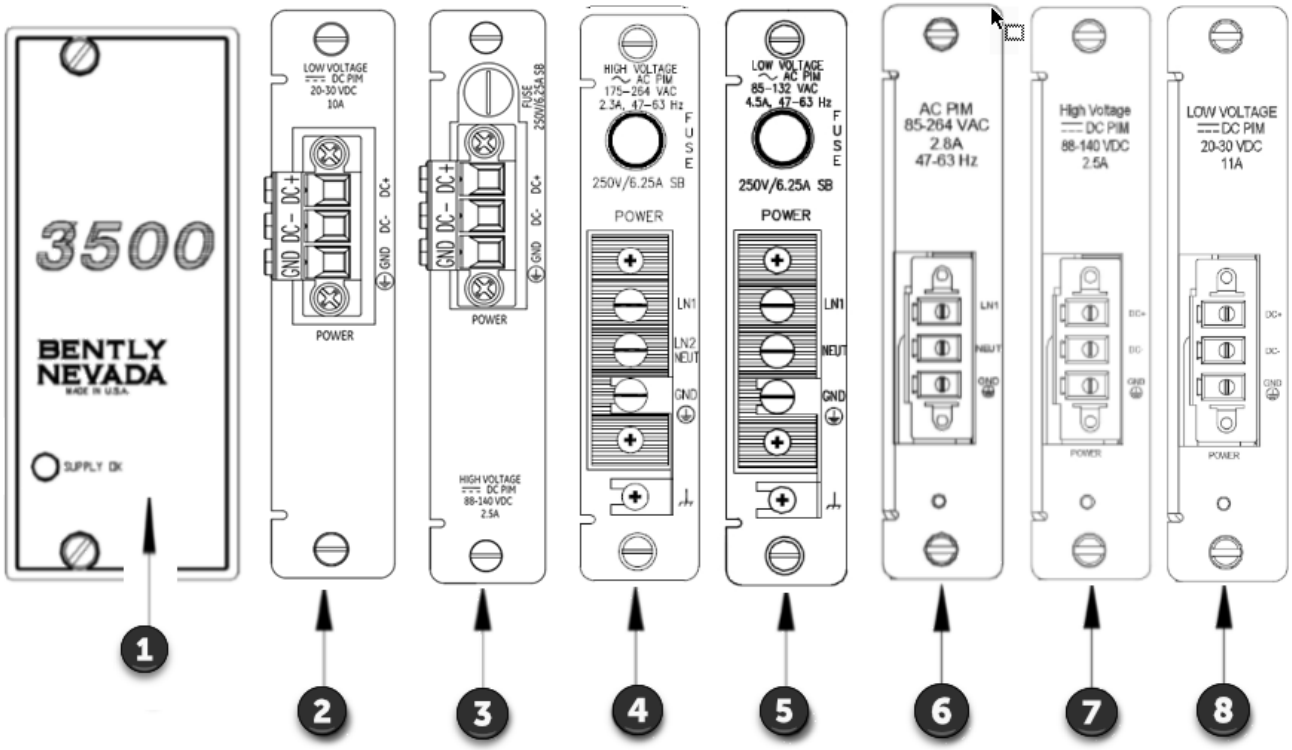
3500/15 -AA-BB-CC

A: Power Supply Type (Top Slot)	
03	Legacy High Voltage DC (88 to 140 Vdc)
04	Legacy Low Voltage DC (20 to 30 Vdc)
05	Universal AC Voltage (85 to 264 Vac rms)
06	High Voltage DC Supply
07	Low Voltage DC Supply
B: Power Supply Type (Bottom Slot)	
00	No Supply (Used when no supply is required)
03	Legacy High Voltage DC (88 to 140 Vdc)
04	Legacy Low Voltage DC (20 to 30 Vdc)
05	Universal AC Voltage (85 to 264 Vac rms)
06	High Voltage DC Supply
07	Low Voltage DC Supply
C: Agency Approval	
00	None
01	CSA / NRTL / C (Class 1, Division 2)
02	ATEX / IECEx / CSA (Class 1, Zone 2)

Spares

Part Number	Description
106M1079-01	Universal AC Power Supply Module
106M1081-01	Universal AC Power Input Module
129486-01	Legacy High Voltage DC Power Supply Module
129478-01	Legacy High Voltage DC Power Input Module
133292-01	Legacy Low Voltage DC Power Supply Module
133300-01	Legacy Low Voltage DC Power Input Module
114M5329-01	High Voltage DC Power Supply
115M7750-01	High Voltage DC PIM
114M5330-01	Low Voltage DC Power Supply
114M5335-01	Low Voltage DC PIM
01720025	Replacement Fuse (for both AC Power Input Module and Legacy High Voltage DC Power Input Module)
01720045	Replacement Fuse (Low Voltage DC Power Input Module and Legacy Low Voltage DC Power Input Module)
120M3877	Replacement Fuse Fast blow rated at 5A/500 Vac Size 6.3 x 32 mm (Universal AC Power Input Module)
131150-01	Power Supply Blank Front Panel (qty 1, includes screws)
128085-01	Power Supply Rear Input Connector Cover (qty 1) Order part 04310251 for screws.
04310251	Screw for Power Supply Input Cover (qty 2)
129767	3500/15 Power Supply User Guide
118M0915-01	Replacement connector for Universal AC Power Input Module
118M0915-02	Replacement connector for DC Power Input Module
129M0198	Replacement fuse (High Voltage DC Power PIM (Power input Module)

Graphs and Figures



1. 3500/15 AC and DC Power Supplies OK LED
2. Legacy Low Voltage DC Power Input Module
3. Legacy High Voltage DC Power Input Module
4. Legacy High Voltage AC Power Input Module
5. Legacy Low Voltage AC Power Input Module
6. Universal AC Voltage Power Input Module
7. High Voltage DC Power Input Module
8. Low Voltage DC Power Input Module

Figure 1: 3500/15 Power Supply and PIMS

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