



Product Operation Manual

VL-PS POWER SUPPLY

Ver 1.0



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1. Introduction

1.1 Overview

The VL-PS power supply module is designed to provide stable powering for all modules in the chassis. Two VL-PS modules can be used in one VLink platform for redundancy with built-in power sharing circuitry. The auto-recovery short circuit protection function of the power supply improves the reliability of the platform. On the front panel, the LEDs indicate module status and DC voltage output status. VL-PS also provides 24 DC test point voltage testing for output.

1.2 Features

- 90 to 264 VAC wide range
- 24 VDC/200W output
- Hot-swap capability
- Built in power sharing circuit
- Auto-recovery short circuit protection
- Integrated fans for localized cooling
- LEDs for module status indication

1.3 Specifications

Powering	
AC Input Voltage	85 to 264VAC wide range
AC Input Connector	IEC male plug
DC Output Voltage	24VDC/200W
Efficiency@230VAC Full load	Typ. 86%
Efficiency@115VAC Full load	Typ. 84%
Short Circuit Protection	Yes
General	
Operation Temperature	0 to 50 degree C
Storage Temperature	-40 to 70 degree C
Relative Humidity	Max. 85%, non-condensing
Dimensions	4.8cm(W)x11cm(H)x39.5cm(D)
Weight	2kg

All specifications are subject to change without notice

2. Operation Panel Description

The components and features of the power supply are shown in Figure 2.1 and described in Table 2.1 and 2.2.



Figure 2.1 VL-PS Power Supply Panels

Table 2.1 Power Supply Components

Component	Function
Module Housing	The enclosure, with guide rails on the top and bottom, contains the power supply, rear panel with connectors, and the front panel.
Rear Panel	Includes the AC power receptacle and back plane connector, which provide signal and power connections to the chassis backplane.
Front Panel	Includes power switch, DC test point and LED indicators.

Table 2.2 Power Supply Controls, Indicators, and Connectors

(Refer to Figure 2.1)

Item	Description	Function
1	STA LED	Green indicates the module is operating normally. Red indicates the module has alarms.
2	DC OUT LED	Green indicates the module is outputting power. Otherwise, there is no power outputting.
3	TP/24VDC	Anode for 24V DC out test point
4	GND	GND for 24V DC out test point
5	Handle	Used for module install and uninstall
6	Heat dissipation hole	Airflow for heat dissipation of the module
7	Power switch	Turns the Power Supply module on or off
8	Thumbscrew	Fix the power supply module onto the chassis
9	Thumbscrew	Fix the power supply module onto the chassis
10	30pin connector	Provides power and signals to the chassis back plane, connector type is male
11	30pin connector	Provides power and signals to the chassis back plane, connector type is male
12	IEC male plug	Provides input of AC power to the power supply.

3. Precautions

Failure to comply with these general safety precautions and with the specific precautions described elsewhere in this manual violates the safety standards of the design, manufacture, and intended use of the device. Vale Systems, Inc. assumes no liability for the customer's failure to comply with these precautions.

CAUTION: Ensure that the voltage visible through the Line Voltage Indicator window on the AC power entry port of the VL-PS Power Supply module corresponds to the line voltage available to the VL-PS module.

CAUTION: Do not operate the power supply outside of its maximum ratings. Doing so may result in unsatisfactory performance, unit failure, shortened unit life span, or a safety hazard.

CAUTION: Do not attempt to modify or service any part of this module not specifically referred to as replaceable in this manual. Doing so voids the warranty. Return the module to Vale Systems, Inc., for service and repair.

CAUTION: Do not restrict airflow in front or back of the chassis. The VL-PS Power Supply module should be operated in an ambient environment between 0 and 50°C (32 and 122°F) for a continuous output of 200 watts.

CAUTION: Store the module away from corrosive materials, at a temperature between -40 and +70°C (-40 and +158°F), and with no more than 85% humidity, non-condensing.

Note: Operating the VL-PS continuously at 50°C (122°F) may shorten the life of the Power Supply module.

4. Install and Uninstall the Power Supply Module

4.1 Installation

This section describes the installation process for the power supply module.

1. Inspect for bent pins on the backplane connector at the rear of the module. Straighten any bent pins before installing the module.
2. Gently insert each module into a slot in the front of the chassis. Be careful to align the metal guide rails on the top and bottom of the module with the nylon guides in the interior of the chassis housing.
3. Then lock the two thumbscrews on the front of the module.
4. Repeat steps 1 through 3 to install a redundancy power supply module in the chassis if needed.
5. Plug the power cord (shipped with the power supply module) into the IEC male receptacle and turn the power switch to the “ON” position. The module will start to work.

4.2 Uninstall the Power Supply Module

Note: A service outage will occur if a Power Supply module is removed from a VL-CH chassis if no other Power Supply module is installed in the chassis.

1. Turn the Power Supply module off.
2. Disconnect the power cord from the Power Supply module receptacle at the rear of the VL-CH chassis.
3. Loosen the two thumbscrews on the front panel of the module.

CAUTION: Do not pull on the thumbscrews to remove the module. Pull on the handle that the thumbscrew goes through to remove the module.

5. Troubleshooting

5.1 Status LED Light Red

- a. Check to see if the fans are running on back panel.
- b. Check the DC test point output voltage (spec. 24VDC \pm 1.8V).

5.2 DC OUT LED No Light

Installing the AC Power Supply module is explained in the VL-CH Chassis Installation and Initial Setup. Periodically verify that the DC OUT LED on the front panel of the Power Supply module(s) is lit. If this LED is not green, please check DC test point on front panel. If the LED is still not lit there may be a fault in the Power Supply module, or a short circuit in one of the modules already installed in the chassis.