

Allen-Bradley 1746-P1 Manual

Brand	Allen-Bradley
Product Series	1746 1747
Product Type	Power Supply

Description

The Allen-Bradley 1746-P1 is a SLC 500 Power Supply. This Power Supply has a nominal Input Voltage of 120/220 Volts AC. It has an internal Current capacity of 2A at 5VDC and 0.46 A at 24VDC. It provides a 24VDC voltage output with built-in fuse protection.

Technical specifications for 1746-P1

Manufacturer Rockwell Automation

Brand Allen-Bradley

Part Number/Catalog No. 1746-P1

Series SLC 500

Module Type Power Supply

Input Voltage 120 to 220 Volts AC

Input Power 42 Watts

Inrush Current 20 Amps

Internal Current Capacity 2 A at 5V dc 0.46 A at 24V dc

Output Voltage Range 18 to 30 Volts DC

Backplane Current (5 Volts) 2 Amps

Backplane Current (24 Volts) 0.46 Amps

Frequency 47 to 63 Hertz

Location 1746 Chassis

Weight 2 pounds (0.9 kilograms)

UPC 10662073521416

Dimensions 5.5 x 2.3 x 5.7 inches

UNSPSC 32151706

Operating Temperature 0 to 60 Celsius

Fuse Protection 1746-F1 or equivalent Description

The Allen-Bradley 1746-P1 is an SLC 500 power supply. It has a line voltage of 85 to 132 Volts or 170 to 265 Volts AC at 47 to 63 Hertz and with a typical line power requirement of 135 VA. Its internal current capacity is 2 A at 5 Volts DC and 0.46 A at 24 Volts DC and its inrush current is a maximum of 20 A. This power supply also has a 24 Volt DC user-power current capacity of 200 mA and a 24 Volt DC user-power voltage range of 18 to 30 Volts DC. The maximum user-supplied overcurrent protection is 15 A and the isolation between the input terminals and the backplane is 1800 Volts AC RMS for 1 second. Measuring 5.5 x 2.3 x 5.7 inches and weighing 2 pounds or 0.9 kilograms, this power supply can be installed in a 1746 chassis. It also has an operating temperature of 0 to 60 degrees Celsius and the current capacity is derated by 5% when the temperature exceeds 55 degrees Celsius.

The input jumper must be set before applying power to the 1746-P1 power supply during installation. This is because the exposed pins have hazardous voltage when power is applied and this may result in injury. This power supply comes with fuse protection but this is limited only to guarding against fire hazards due to short-circuit conditions. For user-power overcurrent conditions, the 1746-P1 Series A that is made in Japan will undergo a power supply shutdown and CPU fault and the recovery procedure is to reload the user program. For the 1746-P1 Series A that is made in Malaysia, the CPU continues but a 24 Volts DC user shutdown occurs and the recovery procedure is to correct the overcurrent condition. When undervoltage happens, the 1746-P1 power supply will continue to operate the SLC 500 controllers for a short time and it will stop supplying power to the controllers when the input voltage drops below the recommended operating range for a time that is longer than the CPU hold-up time. For the 1746-P1 power supply, the CPU

hold-up time is 20 ms for the full load and 3000 ms for no load. Operations will resume once the power supply gets the normal input voltage.

The 1746-P1 is an SLC 500 Power supply. This Programmable Logic Component (PLC) is a necessary module to operate an SLC 500 rack. It provides backplane power which is used by most modules attached to the chassis to energize each electric circuitry to become operable.

This power supply module has a line voltage requirement of 85 - 132 / 170 - 265 VAC with a frequency of 47-63 Hz. Aside from providing backplane power supply, this module is capable of providing 18-30 VDC voltage with Current of 200 mA. This power supply has an internal fuse installed which may be replaced with part number of 1746-F1. It also has a user-supplied overcurrent protection rated 15 Amperes.

Through power supplies, SLC 500 controllers are capable of operating even if the input power supply drops below the operating voltage level. This feature is known as the CPU hold-up time. The program and I/O data are continued being scanned for a limited period. If the power return to normal voltage level, the processor may continue to operate normally. For 1746-P1, the CPU hold time is 20 ms at full load and 3000 ms at no load.

This power supply is installed at the leftmost of an SLC 500 chassis. Whether main, expansion or Remote I/O rack, the installation position is same. Only One (1) power supply is needed per chassis.

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