

Allen-Bradley 1746 1747 Series Service Manual

1768-L45S

1. Description

The Allen-Bradley 1768-L45S is a CompactGuardLogix controller. This controller is a 1oo2 safety architecture, rated up to and including Safety Integrity Level 3 (SIL 3), Performance Level e (PL e) functionality. It has 3 MB standard memory and 1MB Safety memory. This controller supports up to Thirty (30) modules in Three (3) banks and supports Two (2) 1768 communication modules. It has an Technical specifications for 1768-L45S

2. Specifications

Specification	Value
Backplane	Current 2.1 Amps at 24 Volts
Enclosure	Open
Isolation	Voltage 30 Volts Continuous
Shipping	Weight 0.45 kg(15.9 oz)
Module	Type Processor Module
Product	Line Compact GuardLogix
Part	Number/Catalog No. 1768-L45S
Brand	Allen-Bradley
Manufacturer	Rockwell Automation
Power	Consumption 50.4 Watts
Power	Dissipation 9.5 Watts
Safety	Memory 1 MB
No.	of local I/O modules 4 1768 I/O
No.	of Expnasion I/O up to 30 1769 Compact I/O
No.	of expansion banks up to 3 expansion I/O banks
Dimensions	131.6 x 90 x 121.8 mm (5.18 x 3.55 x 4.80 in.)
Memory	3 MB
Shipping	Dimensions 8X8X5 in. Description
The	1768-L45S is an Allen-Bradley Compact GuardLogix controller that features the same CompactLogix capability with an integrated safety feature. This controller is compatible for use in applications that require up to Safety Integrity Level (SIL) 3 requirements and Performance Level (PLe) applications and implements 1oo2 Safety Architecture

3. Product Information

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The 1768-L45S has 3 MB memory allocated for standard functionalities such as automating a process or machine and another 1 MB allocated for safety tasks. It uses a 1784-CF128 CompactFlash card memory module and provided with an embedded RS232 communication interface.

The 1768-L45S supports I/O expansion. It may can handle up to Thirty (30) I/O modules, distributed up to Three (3) I/O banks. Specifically, it may use Four (4) 1768 Local I/O modules and Thirty (30) 1769 Compact I/O modules.

When developing user programs for the 1768-L45S, standard tasks can be programmed using standard languages mentioned in the IEC-61131-3 standard while for safety tasks or programs may only be developed using relay ladder language and by utilizing safety application instructions.

The 1768-L45S supports installation of various types of communication modules such as Ethernet I/P Standard and safety, ControlNet Standard and safety and DeviceNet modules.

The 1768-L45S support panel or DIN rail mounting. Appropriate mounting clearances must be followed such as 105 mm or 4.13 inches for top and bottom are of the controller and 90 mm or 3.54 inches clearance for the right and left side of the controller. These clearances should be able to promote adequate air flow for maintaining the required operating temperature of 0-60 Degree Celsius. Climate control devices such as heater and fan may also be installed.

The 1768-L45S has a 2.1A back-plane current draw at 24 V DC. The controller has a 9.5 W power dissipation and a 50.4 W power consumption. It comes with an isolation voltage of 30 V DC continuous power with a functional insulation type. The 1768-L45S has been tested to withstand 500V DC for 6 s with the RS-232 isolated communication ports at 38.4 Kbps max. It weighs approximately 0.45 kg with dimensions of 132 x 90 x 122 mm and it can be DIN rail or Panel mounted. The 1768-L45S controller has an operating temperature 0 - 60 deg. Celsius, a -40 - 85 deg. Celsius non-operating temperature, and a 5 - 95% relative humidity. It also has an operating vibration of 5g at 10 - 500 Hz, an operating shock of 30 g, and a 50 g non-operating shock.