

Allen-Bradley 1756 Series Service Manual

1756-L81E

1. Description

Mfr. Part Number:

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Isolation	Voltage 50 Volts Continuous
Power	Dissipation 6.2 Watts
Current	Draw (5.1 Volts) 1.20 Miliamperes
Current	Draw (1.2 Volts DC) 5.0 Miliamperes
User	Memory 3 MB
Module	Type ControlLogix Controller
Part	Number/Catalog No. 1756-L81E
Enclosure	None (Open-Style)
Brand	Allen-Bradley
Communication	interfaces One (1) Ethernet; One (1) USB
Chassis	1756-A4, 1756-A4K, 1756-A7, 1756-A7K, 1756-A10, 1756-A10K, 1756-A13, 1756-A13K, 1756-A17, 1756-A17 K Series B, Series C
Standard	Power Supply 1756-PA50, 1756-PA72, 1756-PA72K, 1756-PA75, 1756-PA75K, 1756-PB50, 1756-PB72, 1756-PB72K, 1756-PB75, 1756-PB75K, 1756-PH75, 1756-PC75
Redundant	Power Supply 1756-PA75R, 1756-PA75RK, 1756-PB75R, 1756-PB75RK, 1756-PSCA2, 1756-PSCA2K
Series	ControlLogix
I-O	Memory N/A
Maximum	I-O 128,000
Maximum	Analog I-O 4,000
Maximum	Digital I-O 128,000
Thermal	Dissipation 21.2 BTU per hour Description
The	Allen-Bradley 1756-L81E is a ControlLogix controller from the ControlLogix 5580 pr

3. Product Information

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Mfr. Part Number:

1756-L81E

Manufacturer: Allen-Bradley / Rockwell Automation

Description: Allen-Bradley 1756-L81E ControlLogix Logix5580 Processor, 3MB, EtherNet/USB

Full Description: Allen Bradley 1756-L81E ControlLogix5580 Logix 5580 Controller, 3MB User Memory, USB 2.0 Port (12 Mbps), 1GB Ethernet Port, 60 EtherNet/IP Devices, 32 Tasks, 1000 Programs/Task, 4 Character Alpha/Numeric Display, Supported in Studio 5000 Automation Engineering & Design Environment The 1756-L81E controller is one of the standard ControlLogix series industrial controllers that is designed and manufactured by Allen-Bradley/Rockwell Automation. It has 1 USB port and an embedded Ethernet port. The 1756-L81E standard controller can communicate on the Ethernet network at speeds of 10 Mbps, 100 Mbps, and 1000 Mbps. In addition to the Ethernet network, the 1756- Technical specifications for 1756-L81E

Manufacturer Rockwell Automation

Isolation Voltage 50 Volts Continuous

Power Dissipation 6.2 Watts

Current Draw (5.1 Volts) 1.20 Milliamperes

Current Draw (1.2 Volts DC) 5.0 Milliamperes

User Memory 3 MB

Module Type ControlLogix Controller

Part Number/Catalog No. 1756-L81E

Enclosure None (Open-Style)

Brand Allen-Bradley

Communication interfaces One (1) Ethernet; One (1) USB

Chassis 1756-A4, 1756-A4K, 1756-A7, 1756-A7K, 1756-A10, 1756-A10K, 1756-A13, 1756-A13K, 1756-A17, 1756-A17 K Series B, Series C

Standard Power Supply 1756-PA50, 1756-PA72, 1756-PA72K, 1756-PA75, 1756-PA75K, 1756-PB50, 1756-PB72, 1756-PB72K, 1756-PB75, 1756-PB75K, 1756-PH75, 1756-PC75

Redundant Power Supply 1756-PA75R, 1756-PA75RK, 1756-PB75R, 1756-PB75RK, 1756-PSCA2, 1756-PSCA2K

Series ControlLogix

I-O Memory N/A

Maximum I-O 128,000

Maximum Analog I-O 4,000

Maximum Digital I-O 128,000

Thermal Dissipation 21.2 BTU per hour Description

The Allen-Bradley 1756-L81E is a ControlLogix controller from the ControlLogix 5580 product family, the latest and most modern designed ControlLogix series. It is a Programmable Automation Controller (PAC) that comes with modern connectivity and modern features allowing it to be used as migration platform for legacy controllers such as PLC5 and SLC500 controllers and solutions for demanding industrial application requirements.

The 1756-L81E lies in the low-end of the 1756-L8 series controllers as it only comes with a 3MB user memory and shipped with a 2GB non-volatile memory via the 1784-SD2 Secure Digital (SD) card. This controller is capable of handling a maximum number of 128,000 Discrete Input and Output signals and 4000 Analog Input and Output signals. It also eliminates the need of a battery to back-up the RAM of the controller as it is provided with the environmentally friendly energy storage solution.

This controller is a controller module that only requires a single slot in the chassis. It may be installed to a variety of ControlLogix chassis such as 1756-A4, 1756-A4K, 1756-A7, 1756-A7K, 1756-A10, 1756-A10K, 1756-A13, 1756-A13K, 1756-A17, 1756-A17 K Series B, Series C chassis. It is also capable of being configured in simplex and redundant or high-availability systems with compatibility to a wide variety of power supplies such as 1756-PA50, 1756-PA72, 1756-PA72K, 1756-PA75, 1756-PA75K, 1756-PB50, 1756-PB72, 1756-PB72K, 1756-PB75, 1756-PB75K, 1756-PH75, 1756-PC75 standard power supplies and 1756-PA75R, 1756-PA75RK, 1756-PB75R, 1756-PB75RK, 1756-PSCA2, 1756-PSCA2K redundant power supplies.

It has a built-in USB 2. It offers multiple communication options and supports a maximum of 60 Ethernet/IP nodes. The 1756-L81E is installed in any slot of the ControlLogix Chassis and occupies a single slot. It has a T4 (ATEX, IECx, and North America) temperature code and an open-style casing. Its operating temperature ranges between 0 Degree Celsius and 60 deg. Celsius (32 degree Fahrenheit and 140 Degree Fahrenheit) at 5-95% ambient humidity without condensation. The 1756-L81E is IECx, CSA, and c-UL-us certified, and it has an IEC 61000-6-4 rated emission. It is rated to withstand a shock of 30G and a vibration of 2G at 10-500Hz.