

Allen-Bradley 1756 Series Service Manual

1756-LSP

1. Description

The 1756-LSP is part of the 5570 GuardLogix Programmable Automation Controller (PAC). This module is a safety partner module which acts as a co-processor for safety functions. It is a chassis-based module with integrated memory that corresponds to the memory of the installed primary control. This memory may be a 1MB-3.75MB safety memory. It is installed beside the primary

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Power	Dissipation 3.5 W
Module	Type Safety Partner module
Series	GuardLogix 5560
Part	Number/Catalog No. 1756-LSP
Brand	Allen-Bradley
Product	Type Programmable Automation Controller
Compatible	Primary controllers 1756-L61S, -L62S, L63S
Safety	Memory Depending on the installed primary controller
Replacement	battery 1756-BA2 (0.50 g lithium)
Current	draw @ 5.1 VDC 1200 mA
Current	draw @ 24VDC 14 mA
Thermal	Dissipation 11.9 BTU/Hr.
Slot	Width 2 (primary and partner modules needed; each is one slot)
Chassis	1756-A4, 1756-A7, 1756-A10, 1756-A13, 1756-A17
Power	supply standard 1756-PA50, 1756-PA72, 1756-PA75, 1756-PB50, 1756- PB72, 1756-PB75
I-O	Memory N/A
User	Memory N/A
Maximum	I-O N/A
Maximum	Analog I-O N/A
Maximum	Digital I-O N/A
Current	Draw (5.1 Volts DC) 1200 Milliampere
Current	Draw (24 Volts DC) 14 Milliampere
Thermal	Dissipation 11.9 BTU per hour
Isolation	Voltage 30 Volts Continuous
Enclosure	None (Open-Style)
UPC	10612598321732 Description
The	AI

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Technical specifications for 1756-LSP

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Series GuardLogix 5560

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Current draw @ 5.1 VDC 1200 mA

Current draw @ 24VDC 14 mA

Thermal Dissipation 11.9 BTU/Hr.

Slot Width 2 (primary and partner modules needed; each is one slot)

Chassis 1756-A4, 1756-A7, 1756-A10, 1756-A13, 1756-A17

Power supply standard 1756-PA50, 1756-PA72, 1756-PA75, 1756-PB50, 1756- PB72, 1756-PB75

I-O Memory N/A

User Memory N/A

Maximum I-O N/A

Maximum Analog I-O N/A

Maximum Digital I-O N/A

Current Draw (5.1 Volts DC) 1200 Milliamperes

Current Draw (24 Volts DC) 14 Milliamperes

Thermal Dissipation 11.9 BTU per hour

Isolation Voltage 30 Volts Continuous

Enclosure None (Open-Style)

UPC 10612598321732 Description

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The Allen-Bradley 1756-LSP is a GuardLogix safety partner controller. It has 250 connections but it does not have any user memory for standard tasks. Its safety memory depends on the memory of the corresponding primary controller. Its main purpose is to provide a redundancy, a second channel that is isolated for the system's safety-related functions. This controller has current draws of 1200 mA at 5.1V DC and 14 mA at 24V DC. Its power dissipation is 3.5 W and its thermal dissipation is 11.9 BTU/hr. The isolation voltage is a continuous 30V which is basic insulation that has been type-tested from RS-232 port-to-system at 720V DC for 60 seconds. Its operating temperature is from 0-60 °C and its non-operating temperature is from -40-85 Deg. C. It also comes with a maximum surrounding air temperature of 60 Deg. C. and a non-condensing relative humidity of 5-95%. Its operating shock is 30 g, its non-operating shock is 50 g, and its operating vibration is 2 g at 10-500 Hz. The configuration of the 1756-LSP safety partner is dependent on the primary controller since it does not have its own key switch and communication port although it has an RS-232 port. It comes with a battery for the clock and backup power. The controller also has LED status indicators allowing you to monitor its current state. The controller ships with a nonvolatile memory, a CompactFlash card to be exact. It measures 27 x 17 x 7 centimeters and weighs 0.7 lbs. The 1756-LSP safety partner is used for the 1756-L61S, 1756-L62S, and the 1756-L63S controllers. It should be installed in the slot to the right of the primary controller to satisfy SIL 3 requirements. It also has an open-type enclosure.

The Allen-Bradley 1756-LSP is a 5560 GuardLogix component module. This module is a Safety Partner module, used with a primary controller for implementing safety functions that is compliant up to and including (SIL) 3 and Performance Level (e) applications. The 1756-LSP is compatible for use with 1756-L61S, 1756-L62S, and 1756-L63S primary controllers. It acts as a redundant co-processor providing an isolated safety controller functionality.

The 1756-LSP has a safety memory that corresponds to the user memory of the primary controller. If used with the 1756-L61S and 1756-L62S, the 1756-LSP safety memory is 1MB while 3.75 MB if used with the 1756-L63S.

The 1756-LSP is installed to the immediate slot beside the primary controller. It occupies a single slot of the module; however, as this module requires pairing to a primary controller, the module pair occupies 2 slots of the chassis. The primary and the partner controller, specifically the 1756-LSP is compatible for installation to any ControlLogix chassis such as 1756-A4, 1756-A7, 1756-A10, 1756-A13, and 1756-A17 along a variety of ControlLogix standard power supplies such as 1756-PA50, 1756-PA72, 1756-PA75, 1756-PB50, 1756-PB72, and 1756-PB75. This module has a current draw of 1200 milliamperes @ 5.1 Volts DC and 14 milliamperes @ 24 Volts DC. It also has a power dissipation of 3.5 Watts and thermal dissipation of 11.9 British Thermal Units (BTU) per hour. Additionally, the 1756-LSP operates at temperature range of 0 °C...+60 °C (+32...+140 °F) while the non-operating temperature is -40...+85 °C (-40...+185 °F). It is also designed to be operated in an environment with a shock rating of 30 g and 50 g of non-operating shock.