

Allen-Bradley 1756 Series Service Manual

1756-L71

1. Description

Mfr. Part Number:

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Maximum	Analog I-O 4000
Maximum	I-O 128000
Part	Number/Catalog No. 1756-L71
Module	Type Processor Module
Series	ControlLogix
Brand	Allen-Bradley
Product	Type Programmable Automation Controller
Non-volatile	memory 1GB (ships with the controlelr)
No.	of task 32
Programs	per task 100 Programs
Event	Task All Triggers
Built-in	communication 1 USB port
Optional	Communication adapters • EtherNet/IP • ControlNet • DeviceNet • Data Highway Plus • Remote I/O • SynchLink • Third-party process and device networks
Redundancy	Full Support
Integrated	Motion • SERCOS interface • Analog options (encoder input, LDT input, SSI input) • Integrated Motion on the EtherNet/IP network
I-O	Memory 0.98 MB
User	Memory 2 MB
Maximum	Digital I-O 128,000
Current	Draw (1.2 Volts DC) 5 milliamps
Current	Draw (5.1 Volts) 800 milliamps
Power	Dissipation 7.5 Watts
Thermal	Dissipation 8.5 BTU per hour
Isolation	Voltage 30 Volts Continuous
Enclosure	None
Communication	DeviceNet, ControlNet,

3. Product Information

Mfr. Part Number:

1756-L71

Manufacturer: Allen-Bradley / Rockwell Automation

Description: Allen-Bradley 1756-L71 ControlLogix Logix5571 Processor with 2 Mbytes Memory

Full Description: Allen-Bradley 1756-L71 ControlLogix Logix5571 Controller with 2 MB User Memory and 1 x Built-in USB 2.0 Programming/Download Port; I/O Memory: 0.98 MB; 128,000 Digital I/O, 4,000 Analog I/O, 128,000 Total I/O The Allen Bradley ControlLogix Logix5571 Processor Module has 0.98 MB I-O Memory and 2 MB User Memory. Open-style enclosure and 1 2.0 full-speed USB port available. 2.5 Watts Power Dissipation. 8.5 BTU per hour Thermal Dissipation. Technical specifications for 1756-L71

Manufacturer Rockwell Automation

Maximum Analog I-O 4000

Maximum I-O 128000

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Programs per task 100 Programs

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Built-in communication 1 USB port

Optional Communication adapters • EtherNet/IP • ControlNet • DeviceNet • Data Highway Plus • Remote I/O • SynchLink • Third-party process and device networks

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Integrated Motion • SERCOS interface • Analog options (encoder input, LDT input, SSI input) • Integrated Motion on the EtherNet/IP network

I-O Memory 0.98 MB

User Memory 2 MB

Maximum Digital I-O 128,000

Current Draw (1.2 Volts DC) 5 milliamps

Current Draw (5.1 Volts) 800 milliamps

Power Dissipation 2.5 Watts

Thermal Dissipation 8.5 BTU per hour

Isolation Voltage 30 Volts Continuous

Enclosure None

Communication DeviceNet, ControlNet, EtherNet/IP, Remote I/O

UPC 10612598876010

UNSPSC 32151705 Description

The Allen-Bradley 1756-L71 is a ControlLogix Programmable Automation Controller. It has an available storage of 2 MB for user memory and an I/O memory of 0.98 MB. It also has an onboard 4-character alphanumeric display for easy monitoring of run-time and module information and controller diagnostics. It has an open-style enclosure and built-in One (1) 2.0 full-speed USB port available. The communication options that are available include DeviceNet, ControlNet, EtherNet/IP, Remote I/O Data Highway Plus, Third-party process and networks, and SynchLink. It also ships with a 1 GB non-volatile memory, but you can upgrade it to 2 GB with the 1784-SD2. It is recommended that the SD card be left installed in the controller. The 1756-L71 controller ships with three capacitor energy storage modules, two of which are removable. It has a current draw of 5 mA at 1.2 Volts DC and 800 mA at 5.1 Volts DC. The 1756-L71 controller also has a continuous isolation voltage of 30 Volts, a maximum power dissipation of 2.5 Watts, and a thermal dissipation of 8.5 BTU/hour. It has a maximum analog I/O, digital I/O, and a total I/O of 4,000, 128,000, as well as 128,000, respectively. It has an operating temperature range of 0 to 60 Degrees Celsius and a storage temperature range of -40 to 85 Degrees Celsius. Its maximum surrounding air temperature is 60 degrees Celsius and it has a noncondensing relative humidity of 5% to 95%. The controller has a vibration of 2G at 10 to 500 Hertz, an operating shock of 30G, and a non-operating shock of 50G that goes down to 45G when the SD card is installed. Other controllers may require the user to understand first PLC registers specifically Byte and Bit in order to start addressing program elements. With 1756-L71, the user simply needs to insert a program element and select the logical channel to where the I/O is physically wired. In other PLCs, the user may find the need to move a register to another to initiate conversion and processing just to get the analog data. This controller simply requires the user to find the logical channel where the I/O signal is physically terminated.

This controller is part of the modern Logix controller platform which are classified as Programmable Automation Controller (PAC). This PAC product range is ideally used for medium to large automation requirements, particularly compatible in control requirements of factory and Process Automation industries.

The 1756-L71 mainly feature 2MB user memory and 0.98 MB I/O memory. It is also shipped with a 1784-SD1 Secure Digital (SD) memory card amounting to 1 GB non-volatile memory which can be upgraded to 2GB by replacing with 1784-SD2 card. This controller can handle up to 128,000 Discrete input and output signals and 4000 Analog Input and output signals as well.

Being a modern controller, the 1756-L71 does not use battery to retain the contents of the Random Access Memory (RAM) or volatile memory instead, it is equipped with energy storage modules with catalog number 756-ESMCAp or 1756-ESMCApK. This energy storage module is of removable type which is capacitor based.

For industrial communication, the 1756-L71 supports installation of communication adapters. Other supported communication protocols by the 1756-L71 are EtherNet/IP, ControlNet, DeviceNet, Data Highway Plus, Remote I/O, SynchLink, Third-party process and device networks.

This controller is a chassis based controller. Which means a specific ControlLogix chassis must be installed in order to mount the module. Compatible chassis include 1756-A4, 1756-A4K, 1756-A7, 1756-A7K, 1756-A10, 1756-A10K, 1756-A13, 1756-A13K, 1756-A17, 1756-A17 K.

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