Allen-Bradley 1747-L543

The 1747-L543 is a controller module for the SLC 500 Modular Hardware by Allen-Bradley. It comes with Memory or 64 KB, and built-in communication interfaces such as 9-Pin RS-232 Port and 3 Wire terminal Data Highway Plus (DH+) protocol. It is capable of 4096 Inputs points and 4096 Outputs points. Technical specifications for 1747-L543

Manufacturer Rockwell Automation
Brand Allen-Bradley
Part Number/Catalog No. 1747-L542
Series SLC 500
Inputs 4096
Module Type SLC 5/04 Processor
Outputs 4096
Analog I/O 480
Memory: Up to 64 KB, Battery Backed-RAM
Program Scan Time 0.9 ms/K
User Memory 64,000 Words
I/O Chassis 3
Chassis Module Slots 30
I/O Scan Time 0.225 milliseconds
Communication Data Highway Plus (DH+), RS-232
Backup Memory 1747-M13
Operating Temperature 0 to 60 degrees Celsius
Battery back-up memory: Yes; 1747-BA
UPC 10662468653036
UNSPSC 32151705 Description

The Allen-Bradley 1747-L543 is an SLC 500 processor. This hardware is a processor which features maximum discrete input and output capacities of 4096 each. It has an integrated memory of 64K words, specifically 60K words for data and program and 4K words for data only. It also comes with a Flash EPROM backup memory and 107 programming instructions. The 64 KB RAM of the 1747-L543 processor is battery-backed. The I/O chassis of the 1747-L543 is a maximum of 3, and it has a maximum of 30 I/O module slots. The communication ports present on this processor are a DH+ port and an RS-232 port. The 1747-L543 It also has status LEDs present for forced I/O, run, CPU fault, RS-232, and DH+.

Program scan time of the 1747-L543 processor is 0.9 milliseconds/K on average, its typical I/O scan time is 0.225 milliseconds, and bit execution is 0.37 µs. It also has a program scan hold-up time after the loss of power between 20 milliseconds and 3 seconds, which is also dependent on the loading of the power supply. The 1747-L543 also runs on backplane currents of 1 A at 5 Volts DC and of 125 mA at 24 Volts DC. Its operating shock is 30 G, and it can withstand an acceleration

of 2.5 G at 57 to 2000 Hertz and a displacement of 0.015 inches, peak-to-peak, at 5 to 57 Hertz. Its non-condensing relative humidity is between 5 and 95%, its storage temperature is -40 to 85 degrees Celsius, and its operating temperature is 0 to 60 degrees Celsius.

The 1747-L543 SLC is a SLC 5/04 controller which has the highest memory capacity among the Three (3) variants of 5/04 processors. This processor has integrated 64KB user memory which is sized to handle 4096 Input and outputs. Integrated front-panel indicators is included to allow quick diagnosis of the module’s status.

The 1747-L543 application range is with medium to large control applications. This processor is supports distributed I/O topology that is a proven architecture for designing a centralized control over a widely spreaded I/O signals across the controlled area of the process. SLC racks may be installed near these IO signals, eliminating the need of long cable runs and multiple use of processors. Instead of processors, communication scanners are installed in each distributed IO rack while communication adapter is installed to rack where the CPU resides.

Though the SLC product family is a discontinued product family, Allen-Bradley has released most recent revisions compatible for each Microsoft operating systems.

This processor is capable of being programmed to perform basic control requirement through the basic bit logic instructions while it is also capable of performing advanced applications such as Proportional-Integral-Derivate (PID) controls, Motion and Position control as well as implement complex control strategies. This processor has an intuitive diagnostic buffer that when connected online, fault details and information are provided.