



ControlLogix 5570 and 5560 Controllers

Catalog Numbers 1756-L71, 1756-L72, 1756-L73, 1756-L73XT, 1756-L74, 1756-L75, 1756-L72EROM, 1756-L73EROM, 1756-L61, 1756-L62, 1756-L63, 1756-L63XT, 1756-L64, 1756-L65



Allen-Bradley

by ROCKWELL AUTOMATION

User Manual

Original Instructions

Before You Begin

Before you begin using your ControlLogix controller, verify that you have the applications that are required to configure and program the controller.

Required Software

Use [Table 3](#) to identify the minimum software versions that are required to use your ControlLogix controller.

Table 3 - Required Software for Controller Use

Cat. No.	Studio 5000 Environment	RSLogix 5000 Software	RSLinx® Classic
1756-L61/A	—	Version 12.06.00 or later	Any version
1756-L61/B	—	Version 13.04.00 or later	
1756-L62/A	—	Version 12.06.00 or later	
1756-L62/B	—	Version 13.04.00 or later	
1756-L63/A	—	- If not using a CompactFlash card, version 10.07.00 or later - If using a CompactFlash card, version 11.16.00 or later	
1756-L63/B	—	Version 13.04.00 or later	
1756-L63XT/B	—	Version 13.04.00 or later	Version 2.55.00 or later
1756-L64/B	—	Version 16.03.00 or later	Any version
1756-L65/B	—	Version 17.01.02 or later	
1756-L71	Version 21.00.00 or later	Version 20.01.02	Version 2.59.00 or later
1756-L72		Version 19.01.00 or later	Version 2.57.00 or later
1756-L73			
1756-L73XT			
1756-L74			
1756-L75			
1756-L72EROM			
1756-L73EROM			2.59.02 or later

Determine Required Controller Firmware

IMPORTANT The controller must be in Remote Program or Program mode and all major recoverable faults must be cleared to accept upgrades.

Use [Table 6](#) to determine what firmware revision is required for your controller.

Table 6 - Firmware Required for Controllers

Controller	Series	Use this firmware revision
1756-L61	A	12.x or later
	B	13.40 or later
1756-L62	A	12.x or later
	B	13.40 or later
1756-L63	A	- If not using a CompactFlash card, 10.x or later - If using a CompactFlash card, 11.x or later
	B	13.40 or later
1756-L63XT	B	13.40 or later
1756-L64	B	16 or later
1756-L65	B	17 or later
1756-L71	A	20 or later
1756-L72	A	19 or later
1756-L72EROM	A	19 or later
1756-L73	A	19 or later
1756-L73XT	A	19 or later
1756-L73EROM	A	19 or later
1756-L74	A	19 or later
1756-L75	A	19 or later

Estimate the ESM Support of the WallClockTime

The ESM provides support for the maintenance of the WallClockTime of the controller when power is not applied. Use this table to estimate the hold-up time of the ESM based on the temperature of the controller and installed ESM.

Temperature	Hold-up Time (in days)		
	1756-ESMCAP	1756-ESMNRM	1756-ESMNSE
20 °C (68 °F)	12	12	0
40 °C (104 °F)	10	10	0
60 °C (140 °F)	7	7	0

IMPORTANT Any action that causes the 1756-L7x controller to reset (hard or soft), without an ESM installed, results in the WallClockTime of the controller being reset to the factory default of 01/01/1998.

To check the status of the ESM, see [General Status Messages on page 174](#).

Maintain the Battery (Only 1756-L6x Controllers)

This section explains how to monitor and maintain the lithium batteries that the ControlLogix controllers support.

Table 8 - 1756-L6x Controllers and Compatible Batteries

Cat. No.	Series	Compatible Battery
1756-L61 1756-L62 1756-L63	A	1756-BA1 or 1756-BATA or 1756-BATM
1756-L61 1756-L62 1756-L63 1756-L64 1756-L65	B	1756-BA2
1756-L63XT	B	

For further information, see the [Additional Resources](#) section in the preface.

ControlLogix Controller Features

The ControlLogix controllers are part of the Logix 5000® family of controllers that are offered by Rockwell Automation. The sections that follow describe the differentiating features of the ControlLogix controllers.

System, Communication, and Programming Features

[Table 12](#) lists the system, communication, and programming features available with ControlLogix controllers.

Table 12 - ControlLogix Controller Features

Feature	1756-L61, 1756-L62, 1756-L63, 1756-L64, 1756-L65	1756-L71, 1756-L72, 1756-L73, 1756-L74, 1756-L75	1756-L72EROM, 1756-L73EROM
Controller tasks	32 tasks 100 programs/task - Event tasks: all event triggers	32 tasks 1000 programs/task starting in Logix Designer application version 24 and later 100 programs/task starting in Logix Designer application version 15 32 programs/task prior to Logix Designer application version 15 - Event tasks: all event triggers	
Communication ports	1 port - RS-232 serial	1 port - USB, 2.0 full-speed, Type B	
Communication options	- EtherNet/IP - ControlNet® - DeviceNet - Data Highway Plus™ - Remote I/O - SynchLink™ - Third-party process and device networks		EtherNet/IP
Serial port communication	- ASCII - DF1 full/half-duplex - DF1 radio modem - DH-485 - Modbus via logic	N/A	
Controller connections supported, max	250	500	
Network connections, per network module	128 ControlNet (1756-CN2/B) 100 ControlNet (1756-CN2/A) 40 ControlNet (1756-CNB) 256 EtherNet/IP; 128 TCP (1756-EN2x) 128 EtherNet/IP; 64 TCP (1756-ENBT)		256 EtherNet/IP; 128 TCP (1756-EN2x)
Controller redundancy	Full support except for motion applications		
Integrated motion	- Integrated Motion on the EtherNet/IP network - Sercos interface - Analog options: - Encoder input - LDT input - SSI input		
Programming languages	- Relay ladder - Structured text - Function block - Sequential function chart (SFC)		

Memory Options

The ControlLogix controller is available in different combinations of user memory. Use [Table 13](#) to determine which controller meets your memory requirements.

Table 13 - ControlLogix Controller Memory Options

Controller	Memory for Data and Logic	I/O	Back-up Memory
1756-L61	2 MB	478 KB	CompactFlash card ⁽¹⁾
1756-L62	4 MB		
1756-L63, 1756-L63XT	8 MB		
1756-L64	16 MB		
1756-L65	32 MB		
1756-L71	2 MB	0.98 MB (1006 KB)	SD card
1756-L72	4 MB		
1756-L73, 1756-L73XT	8 MB		
1756-L74	16 MB		
1756-L75	32 MB		
1756-L72EROM	4 MB		
1756-L73EROM	8 MB		

(1) These nonvolatile memory cards are optional and do not come with the controller.

IMPORTANT The 1756-L7x controllers ship with an SD card installed. We recommend that you leave the SD card installed, so if a fault occurs, diagnostic data is automatically written to the card and Rockwell Automation can use the data to troubleshoot the anomaly.

IMPORTANT We recommend that you use the SD cards available from Rockwell Automation (catalog numbers 1784-SD1 or 1784-SD2). While other SD cards can be used with the controller, Rockwell Automation has not tested the use of those cards with the controller. If you use an SD card other than those cards that are available from Rockwell Automation, you can experience data corruption or loss.

Also, SD cards that are not provided by Rockwell Automation can have different industrial, environmental, and certification ratings as those cards that are available from Rockwell Automation and can have difficulty with survival in the same industrial environments as the industrially rated versions available from Rockwell Automation.
