

CompactLogix Packaged Controllers

Catalog Numbers 1769-L23E-QB1B, 1769-L23E-QBFC1B, 1769-L23-QBFC1B

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Use this document as a guide to install the CompactLogix™ packaged controllers.

Verify Compatibility

IMPORTANT

The series B controllers are compatible only with the controller firmware and the RSLogix 5000 software versions as indicated in the table below.

Attempting to use controllers with incompatible software and firmware revisions can result in the following:

- An inability to connect to the series B controller in RSLogix 5000 software
- Unsuccessful firmware upgrades in ControlFLASH™ or AutoFlash utilities

This table shows the compatible pairs of RSLogix 5000 software versions and controller firmware revisions.

Controller	RSLogix 5000 Software Version or Later	Controller Firmware Revision or Later
1769-L23E-QB1B, 1769-L23E-QBFC1B, 1769-L23-QBFC1B	16.00.00	16.023
	17.01.02	17.012
	19.01.00	19.015
	20.01.00	20.013

Before You Begin

This section contains information you should understand before installing the CompactLogix packaged controller.

Restrictions

The maximum amount of expansion modules that can be used with the packaged controllers is two. Within that limit, the number of expansion I/O modules that can be attached to the packaged controller depends on the bus current draw of the modules being attached.

Each packaged controller has a specified amount of available bus current as shown in this table.

Packaged Controller Bus Current and Expansion Module Limits

Cat. No.	Total Available 5V DC Bus Current
1769-L23E-QB1B	1 A (1000 mA)
1769-L23E-QBFC1B	450 mA
1769-L23-QBFC1B	800 mA

To determine the number of expansion I/O modules you can add, total the bus current draw (maximum) of your planned expansion I/O modules and the end cap. If your result is less than

the packaged controller's maximum available bus current, you are within the expansion I/O limit of your packaged controller.

Example of Expansion I/O Calculation

In this example, these expansion I/O modules and bus current draws are planned for use with the 1769-L23E-QBFC1B packaged controller.

Planned Expansion I/O Module	Bus Current Draw, max⁽¹⁾
1769-OV16 Sink Output Module	200 mA
1769-IF4 Analog Input Module	105 mA
1769-ECR End Cap	5 mA
Total Bus Current Draw	310 mA

(1) The maximum bus current draw specification for each Compact I/O™ module is available in the Compact I/O Selection Guide, publication [1769-SG002](#). This publication also provides further explanation of and a table for the calculation of Compact I/O power supply requirements.

The total bus current draw of the Compact I/O modules (310 mA) is less than the total available bus current of the packaged controller (450 mA). These planned expansion I/O modules are within the limits of the 1769-L23E-QBFC1B packaged controller.

Parts (included with the controller)

These components are included with your CompactLogix packaged controller.

Cat. No.	Part
1747-KY	Key
1769-BA	Battery
1769-ECR	End cap

Parts (optional, not included with the controller)

In addition to the parts included with the packaged controller, you may choose to use these components specific to your application.

If using	Then use this component
RS-232 port to connect to the packaged controller.	1756-CP3 or 1747-CP3 serial cable.
EtherNet/IP port to connect to the packaged controller.	Standard Ethernet cable with an RJ45 connector, or, for industrial grade requirements, 1585J Ethernet connectivity media.
Panel mount method to install the packaged controller.	4 . . 8 M4 or #8 panhead screws (depending on the number of expansion modules used).

Replacement Parts

These CompactLogix packaged controller replacement parts are available for order.

Catalog No.	Description	Compatible Packaged Controllers
1769-BA	CompactLogix controller battery	1769-L23E-QB1B, 1769-L23E-QBFC1B, and 1769-L23-QBFC1B
1769-ECR	Compact right end cap	1769-L23E-QB1B, 1769-L23E-QBFC1B, and 1769-L23-QBFC1B
1769-RDQB	CompactLogix packaged controller door	1769-L23E-QB1B
1769-RDQBFC	CompactLogix packaged controller door	1769-L23E-QBFC1B and 1769-L23-QBFC1B

Required Tools

The only tool required for the installation of the CompactLogix packaged controller is a medium-sized Phillips-head screwdriver.

Installation Checklist

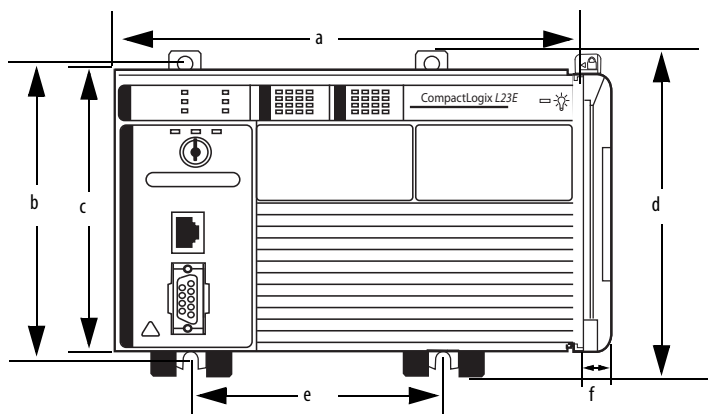
This table lists tasks that must be completed to fully install and begin using your packaged controller.

✓	Installation Tasks
	Install the Battery
	Connect Expansion Modules (optional)
	Panel Mount the System or DIN-rail Mount the System
	Grounding Considerations
	Wiring Power to the System
	Wire the I/O Removable Terminal Blocks
	Connect Using the RS-232 Connection
	Connect Using the Ethernet Connection
	Download and Install EDS Files
	Download Packaged Controller Firmware
	Use the AutoFlash Feature of RSLogix 5000 Software to Load Firmware or Use the ControlFLASH Utility to Load Firmware

Packaged Controller Dimensions

1769-L23E-QB1B Packaged Controller

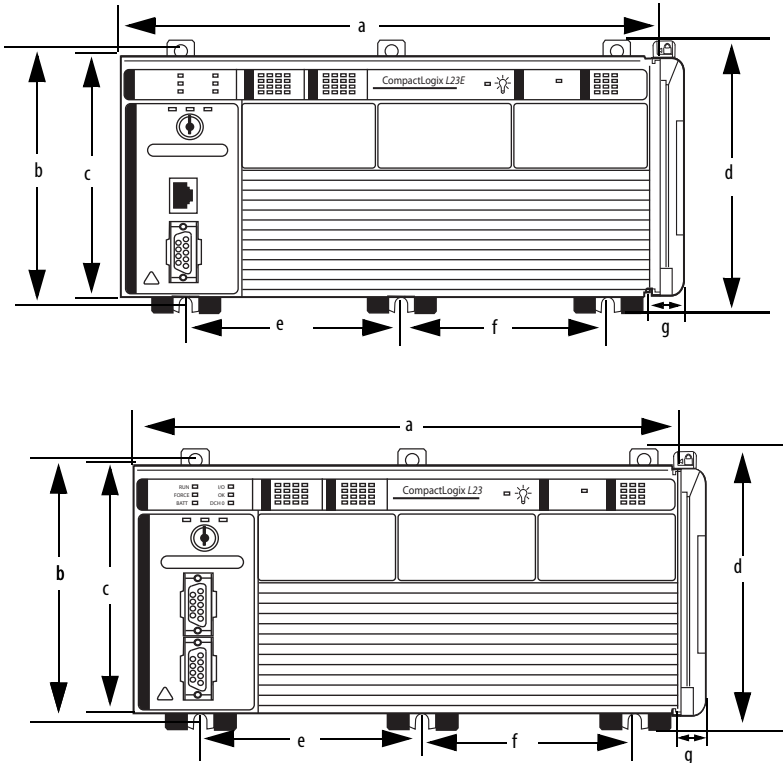
The 1769-L23E-QB1B controller has these approximate dimensions.



Measurement	Dimension, approximate
a	185.2 mm (7.29 in.)
b	123.86 mm (4.88 in.)
c	118 mm (4.65 in.)
d	132 mm (5.20 in.)
e	132.9 mm (5.23 in.)
f	18 mm (0.71 in.)

1769-L23E-QBFC1B and 1769-L23-QBFC1B Packaged Controllers

The 1769-L23E-QBFC1B and 1769-L23-QBFC1B packaged controllers have these approximate dimensions.



Measurement ⁽¹⁾	Dimension, approximate
a	249.25 mm (9.81 in.)
b	123.86 mm (4.88 in.)
c	118 mm (4.65 in.)
d	132 mm (5.20 in.)
e	98.475 mm (3.88 in.)
f	98.475 mm (3.88 in.)
g	18 mm (0.71 in.)

(1) Applies to both the 1769-L23E-QBFC1B and 1769-L23-QBFC1B packaged controllers.