



**Moore
Automated**

www.mooreautomated.com

Specializing In:

- Control Systems (DCS, PLC, CNC)
- Panel Controllers
- HMI and Display Panels
- Drives
- Encoders and Resolvers
- Power Supplies

20 Years Automation Experience



Moore Automated: Your Trusted Automation Solution Expert

Moore Automated is a global automation parts reseller focused on hard-to-find and obsolete industrial automation products. Today we already have 20 years experience in automation area. In past time we insist to offer best service to worldwide client, In future we will also offer good quality and satisfied service again.

Catalog Numbers 1769-L31, 1769-L32C, 1769-L32E, 1769-L35CR, 1769-L35E



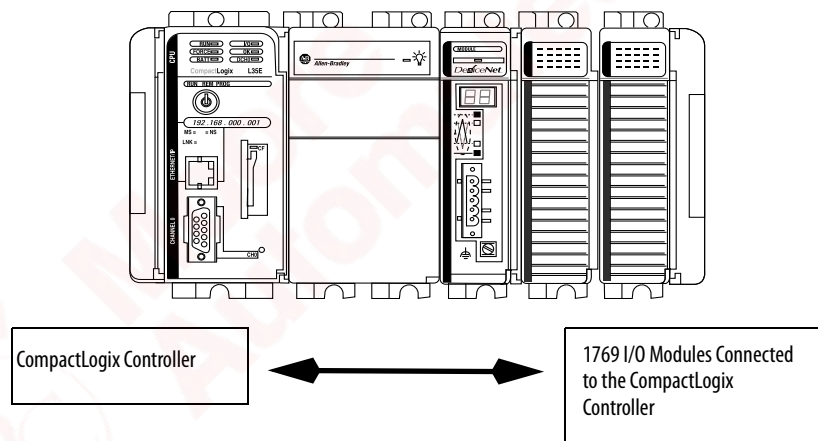
1769 CompactLogix Controllers Overview

This chapter introduces the 1769 CompactLogix controllers. These controllers offer state-of-the-art control, communication, and I/O elements in a distributed control package.

About the 1769 CompactLogix Controller

The 1769 CompactLogix controller offers state-of-the-art control, communication, and I/O elements in a distributed control package.

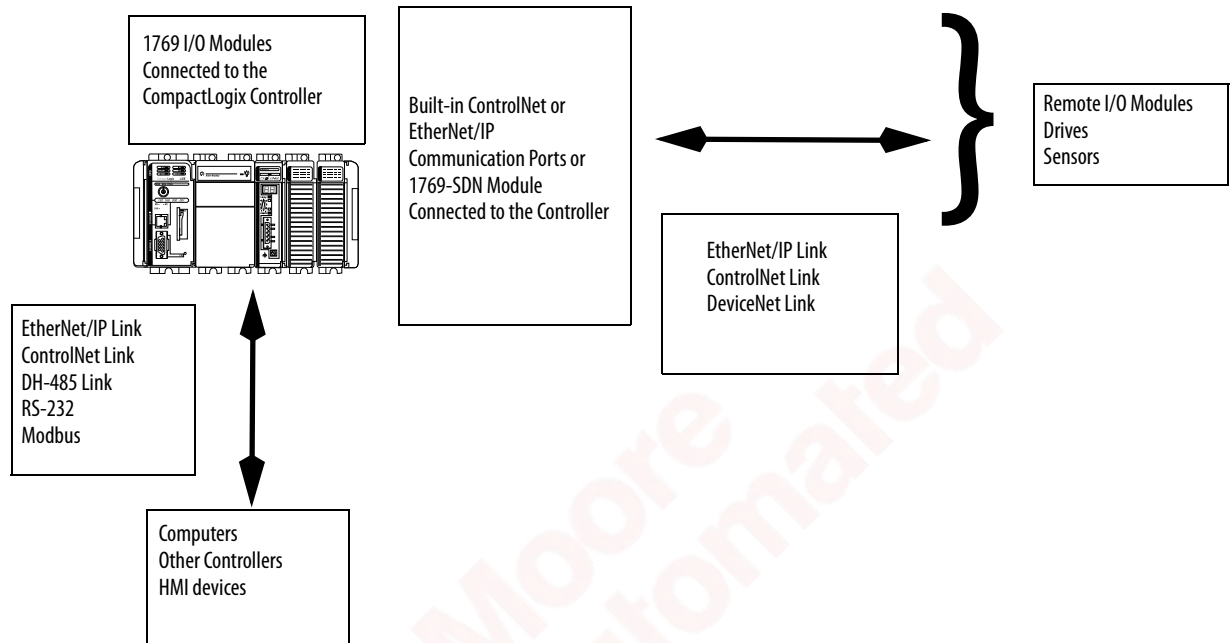
Figure 1 - CompactLogix Controller and 1769 I/O Modules



For a more flexible system, use:

- multiple controllers in a single chassis.
- multiple controllers joined across networks.
- I/O in multiple platforms that is distributed in many locations and connected over multiple I/O links.

Figure 2 - CompactLogix System Overview



The CompactLogix controller, part of the Logix family of controllers, provides a small, powerful, cost-effective system consisting of the following:

- RSLogix™ 5000 programming software
- Built-in communication ports for EtherNet/IP (1769-L32E and 1769-L35E only) and ControlNet (1769-L32C and 1769-L35CR only) networks
- A 1769-SDN communication interface module providing I/O control and remote device configuration over DeviceNet
- A built-in serial port on every CompactLogix controller
- Compact I/O modules providing a compact, DIN-rail or panel-mounted I/O system

Table 1 - CompactLogix Controller Combinations

Controller	Available Memory	Communication Options	Number of Tasks Supported	Number of Local I/O Modules Supported
1769-L35CR	1.5 MB	1 port ControlNet - supports redundant media 1 port RS-232 serial (system or user protocols)	8	30
1769-L35E		1 port EtherNet/IP 1 port RS-232 serial (system or user protocols)		
1769-L32C	750 KB	1 port ControlNet 1 port RS-232 serial (system or user protocols)	6	16
1769-L32E		1 port EtherNet/IP 1 port RS-232 serial (system or user protocols)		
1769-L31	512 KB	1 port RS-232 serial (system or user protocols) 1 port RS-232 serial (system protocol only)	4	

Design a CompactLogix System

When designing a CompactLogix system, determine the network configuration and the placement of components in each location. To design your CompactLogix system, you must select the following:

- I/O devices
- A communication network
- Controllers
- Power supplies
- Software

Install the 1769-L3x Controllers

Topic	Page
Verify Compatibility	18
Before You Begin	19
Set the Node Address (ControlNet only)	19
Connect the 1769-BA Battery	20
Install a CompactFlash Card (optional)	21
Assemble the System	22
Mount the System	23
Make RS-232 Connections to the Controller	26
Make Ethernet Connections to the Controller	28
Make ControlNet Connections to the Controller	32
Install the Appropriate EDS Files	36
Load the Controller Firmware	36
Select the Controller's Operating Mode	39

Use this chapter to install the CompactLogix™ controller, which must be the leftmost module in the first bank of the system.



WARNING: This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC publication 60664-1), at altitudes up to 2000 meters (6562 ft) without derating.

This equipment is considered Group 1, Class A industrial equipment according to IEC/CISPR Publication 11. Without appropriate precautions, there may be potential difficulties ensuring electromagnetic compatibility in other environments due to conducted as well as radiated disturbance.

This equipment is supplied as open-type equipment. It must be mounted within an enclosure that is suitably designed for those specific environmental conditions that will be present and appropriately designed to prevent personal injury resulting from accessibility to live parts. The enclosure must have suitable flame-retardant properties to prevent or minimize the spread of flame, complying with a flame spread rating of 5VA, V2, V1, V0 (or equivalent) if non-metallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain additional information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.

In addition to this publication, see the following:

- Industrial Automation Wiring and Grounding Guidelines, Allen-Bradley® publication [1770-4.1](#), for additional installation requirements
 - NEMA 250 and IEC 60529, as applicable, for explanations of the degrees of protection provided by different types of enclosure
-



WARNING: This equipment is sensitive to electrostatic discharge, which can cause internal damage and affect normal operation. Follow these guidelines when you handle this equipment:

- Touch a grounded object to discharge potential static.
 - Wear an approved grounding wriststrap.
 - Do not touch connectors or pins on component boards.
 - Do not touch circuit components inside the equipment.
 - Use a static-safe workstation, if available.
 - Store the equipment in appropriate static-safe packaging when not in use.
-

Table 2 - North American Hazardous Location Approval

The following information applies when operating this equipment in hazardous locations.		Informations sur l'utilisation de cet équipement en environnements dangereux.	
Products marked "CL I, DIV 2, GP A, B, C, D" are suitable for use in Class I Division 2 Groups A, B, C, D, Hazardous Locations and nonhazardous locations only. Each product is supplied with markings on the rating nameplate indicating the hazardous location temperature code. When combining products within a system, the most adverse temperature code (lowest "T" number) may be used to help determine the overall temperature code of the system. Combinations of equipment in your system are subject to investigation by the local Authority Having Jurisdiction at the time of installation.		Les produits marqués "CL I, DIV 2, GP A, B, C, D" ne conviennent qu'à une utilisation en environnements de Classe I Division 2 Groupes A, B, C, D dangereux et non dangereux. Chaque produit est livré avec des marquages sur sa plaque d'identification qui indiquent le code de température pour les environnements dangereux. Lorsque plusieurs produits sont combinés dans un système, le code de température le plus défavorable (code de température le plus faible) peut être utilisé pour déterminer le code de température global du système. Les combinaisons d'équipements dans le système sont sujettes à inspection par les autorités locales qualifiées au moment de l'installation.	
	WARNING: Explosion Hazard - - Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous. - Do not disconnect connections to this equipment unless power has been removed or the area is known to be nonhazardous. Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product. - Substitution of components may impair suitability for Class I, Division 2. - If this product contains batteries, they must only be changed in an area known to be nonhazardous.		AVERTISSEMENT: Risque d'Explosion – - Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher l'équipement. - Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher les connecteurs. Fixer tous les connecteurs externes reliés à cet équipement à l'aide de vis, loquets coulissants, connecteurs filetés ou autres moyens fournis avec ce produit. - La substitution de composants peut rendre cet équipement inadapté à une utilisation en environnement de Classe I, Division 2. - S'assurer que l'environnement est classé non dangereux avant de changer les piles.

Table 3 - European Hazardous Location Approval

European Zone 2 Certification (The following applies when the product bears the Ex or EEx Marking)
This equipment is intended for use in potentially explosive atmospheres as defined by European Union Directive 94/9/EC and has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of Category 3 equipment intended for use in potentially explosive atmospheres, given in Annex II to this Directive. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-15 and EN 60079-0.



WARNING:

- This equipment must be installed in an enclosure providing at least IP54 protection when applied in Zone 2 environments.
- This equipment shall be used within its specified ratings defined by Allen-Bradley.
- Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 40% when applied in Zone 2 environments.
- Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product.
- Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous.



ATTENTION: This equipment is not resistant to sunlight or other sources of UV radiation.

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-L31, 1769-L32C, 1769-L32E, 1769-L35CR, 1769-L35E	16.00.00	16.023
	17.01.02	17.012
	19.01.00	19.015
	20.01.00	20.013

Before You Begin

Consider the following when planning your CompactLogix system:

- The CompactLogix controller is always the leftmost module in the system.
- The controller must be within four modules of the system power supply. Some I/O modules may be up to eight modules away from the power supply. See the documentation for your 1769 I/O modules for details.
- The 1769-L32E controller supports as many as 16 I/O modules and the 1769-L35E controller supports as many as 30 I/O modules. Both controllers can use a maximum of 3 I/O banks with 2 expansion cables.
- Each I/O bank requires its own power supply.
- Only one controller can be used in a CompactLogix system.
- A 1769-ECR right end cap or 1769-ECL left end cap is required to terminate the end of the communication bus.

Parts List

These components are shipped with the controller.

Component	Description
	1769-BA battery
	1747-KY controller key

You may also use these components with the controller.

If you want to	Then use this component
Connect a device to the RS-232 port	1756-CP3 or 1747-CP3 serial cable
Add nonvolatile memory	1784-CF128 Industrial CompactFlash card
Connect a device to the EtherNet/IP port	Standard Ethernet cable with RJ-45 connector
Connect a device to the ControlNet port	• ControlNet taps for connections from controller channels A or B to the ControlNet network • 1786-CP cable for connections from a programming terminal to the ControlNet network via the controller's network access port (NAP)

Set the Node Address (ControlNet only)

Every ControlNet network requires at least one module that can store parameters and configure the network with those parameters upon startup. The CompactLogix controller is called a keeper because it keeps the network configuration.

The CompactLogix controller can keep the network parameters at any legal node address (01...99). Multiple devices on any one network can act as the network keepers. Each device capable of being the network keeper acts to back up the current keeper. This back-up function is automatic and requires no action on your part.

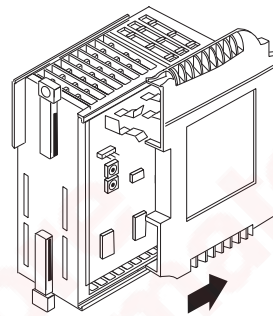
Node address switches are set to the 99 position at shipment, as shown in the figure.



43868

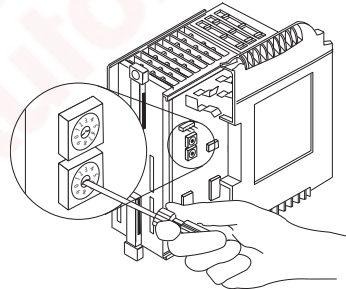
Use these steps to set the node address.

1. Slide the side cover forward.



43860

2. Use a small screwdriver to set the node address via the controller switches.



31504-M

3. Write the node address on the front panel overlay after setting the node address switches.

Connect the 1769-BA Battery

The controller is shipped with the 1769-BA battery that is packed separately. To connect the battery, follow this procedure.



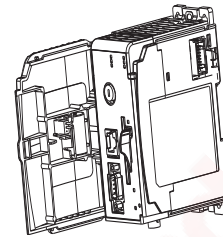
ATTENTION: The 1769-BA battery is the only battery you can use with the 1769-L32E and 1769-L35E controllers. The 1747-BA battery is not compatible with the 1769-L32E and 1769-L35E controllers and may cause problems.



WARNING: When you connect or disconnect the battery, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

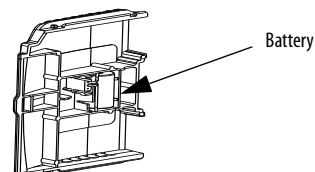
For safety information on the handling of lithium batteries, including handling and disposal of leaking batteries, see Guidelines for Handling Lithium Batteries Technical Data, publication [AG-5.4NOV04](#).

1. Remove the battery door by sliding it forward.



IMPORTANT Do not remove the plastic insulation covering the battery. The insulation is necessary to protect the battery contacts.

1. Insert the battery connector into the connector port.
The connector is keyed to be installed with the correct polarity.
2. Insert the battery into the battery port in the battery door.



3. Slide the battery door back until it clicks into position.

TIP At the end of its life, the used battery should be collected separately from any unsorted municipal waste and recycled.



Install a CompactFlash Card (optional)



ATTENTION: Do not remove the CompactFlash card while the controller is reading from or writing to the card, as indicated by a flashing green CF status indicator. This could corrupt the data on the card or in the controller, as well as corrupt the latest firmware in the controller.

The optional industrial CompactFlash card provides nonvolatile memory for a CompactLogix controller. The card is not required for controller operation.



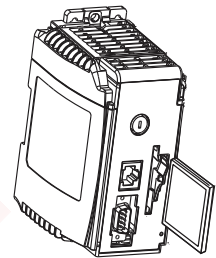
WARNING: When you insert or remove the CompactFlash card while power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations.

Be sure that power is removed or the area is nonhazardous before proceeding.

To install a CompactFlash card, push the locking tab to the right and insert the industrial CompactFlash card into the socket on the front of the controller.

The label of the CompactFlash card faces toward the left. Match the orientation arrow on the card with the arrow on the front of the controller.

To remove the CompactFlash card, push the locking tab away from the CompactFlash card and pull the CompactFlash card from the socket.



44732

Assemble the System

The controller can be attached to an adjacent I/O module or power supply before or after mounting.

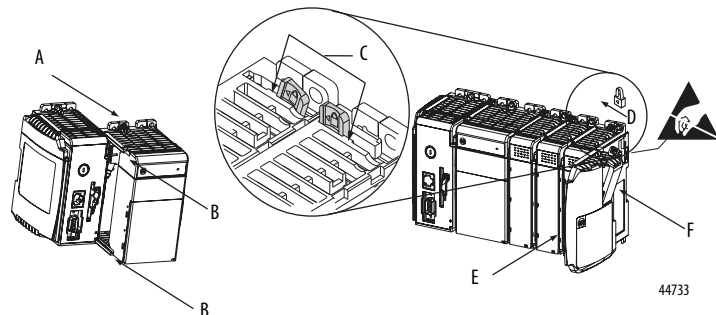


WARNING: The CompactLogix controller is not designed for removal and insertion under power.

If you insert or remove the module while backplane power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations.

Be sure that power is removed or the area is nonhazardous before proceeding.

Refer to the illustration when installing a controller.



44733

1. Disconnect line power.
2. Check that the lever of the adjacent module (A) is in the unlocked (fully right) position.

3. Use the upper and lower tongue-and-groove slots (B) to secure the modules together.
4. Move the module back along the tongue-and-groove slots until the bus connectors line up with each other.
5. Use your fingers or a small screwdriver to push the module's bus lever back slightly to clear the positioning tab (C).
6. Move the module's bus lever fully to the left (D) until it clicks, being sure it is locked firmly in place.



ATTENTION: When attaching the controller, power supply, and I/O modules, make sure the bus connectors are securely locked together to be sure of proper electrical connection.

This equipment is not resistant to sunlight or other sources of UV radiation.

7. Attach an end-cap terminator (E) to the last module in the system by using the tongue-and-groove slots as before.
8. Lock the end-cap bus terminator (F).

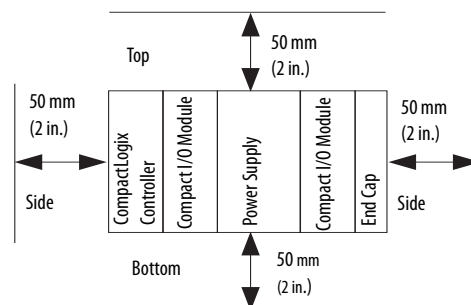
Mount the System



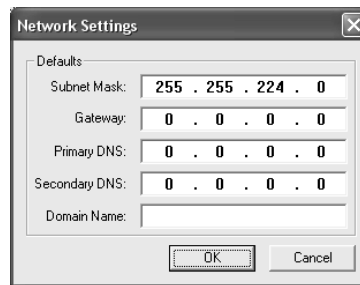
ATTENTION: During panel or DIN-rail mounting of all devices, be sure that all debris (such as metal chips or wire strands) is kept from falling into the controller. Debris that falls into the controller could cause damage while the controller is energized.

Minimum Spacing

Maintain spacing from enclosure walls, wireways, and adjacent equipment. Allow 50 mm (2 in.) of space on all sides, as shown. This provides ventilation and electrical isolation.

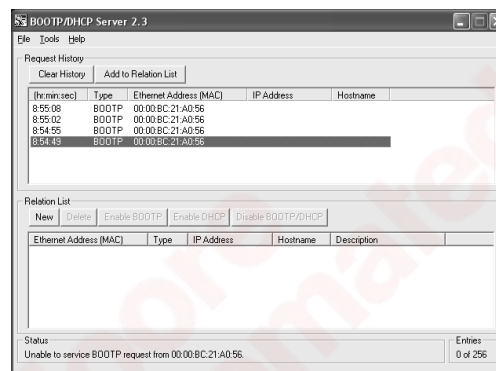


- Click OK.



In the BOOTP Request History dialog box, you see the hardware addresses of devices issuing BOOTP requests.

- Double-click the hardware address of the device you want to configure.

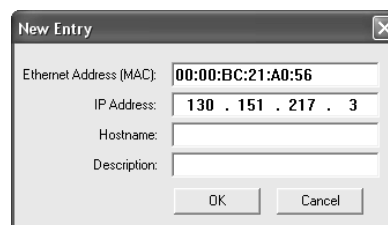


TIP The hardware address is on the sticker on the left-side circuit board of the controller next to the battery.

The hardware address will be in this format: 00-0b-db-14-55-35.

The New Entry dialog box displays the device's Ethernet Address (MAC).

- Enter the IP address.
- Click OK.



- To permanently assign this configuration to the device, highlight the device and click Disable BOOTP/DHCP.

When you cycle power, the device uses the configuration you assigned and does not issue a BOOTP request.

Moore Automated: Your Strategic Partner for Industrial Spares and Solutions

Moore Automated - Global Supplier Of Industrial Automation Parts

- Expert Consultancy: Technical sales specialists with 10+ years of industry expertise
- 24/7 Responsive Support: AI-powered customer service and engineer hotline
- Quality Commitment: 12-month global warranty on all products
- Supply Chain Assurance: Million-level SKU inventory for industrial spare parts
- Worldwide Delivery: DDP (Delivered Duty Paid) logistics solutions covering 150+ countries



**Moore
Automated**

www.mooreautomated.com

Email: miya@mvme.cn | WhatsApp: 86 - 180 2077 6792