



**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.

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

Install a ControlLogix 5570 Controller



ATTENTION: Personnel responsible for the application of safety-related programmable electronic systems (PES) shall be aware of the safety requirements in the application of the system and shall be trained in using the system.

Environment and Enclosure



ATTENTION:

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

This equipment is not intended for use in residential environments and may not provide adequate protection to radio communication services in such environments.

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 help prevent personal injury resulting from accessibility to live parts. The enclosure must have suitable flame-retardant properties to help prevent or minimize the spread of flame, complying with a flame spread rating of 5VA or be approved for the application if nonmetallic. 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, Rockwell Automation publication [1770-4.1](#), for additional installation requirements
- NEMA Standard 250 and IEC 60529, as applicable, for explanations of the degrees of protection provided by enclosure

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.		WARNING: 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.

European Hazardous Location Approval

The following applies when the product bears the Ex 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 Zone 2 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.

	ATTENTION: This equipment is not resistant to sunlight or other sources of UV radiation.
	WARNING: • This equipment shall be mounted in an ATEX certified enclosure with a minimum ingress protection rating of at least IP54 (as defined in IEC60529) and used in an environment of not more than Pollution Degree 2 (as defined in IEC 60664-1) when applied in Zone 2 environments. The enclosure must utilize a tool removable cover or door. • This equipment shall be used within its specified ratings defined by Rockwell Automation. • This equipment must be used only with ATEX certified Rockwell Automation backplanes. • 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.

Before You Begin

To install a ControlLogix® chassis and power supply before you install your controller and power supply, see the following publications:

- ControlLogix Chassis Installation Instructions, publication [1756-IN621](#)
- ControlLogix Power Supply Installation Instructions, publication [1756-IN619](#)
- ControlLogix Redundant Power Supply Installation Instructions, publication [1756-IN620](#)

ControlLogix 5570 Controller Parts

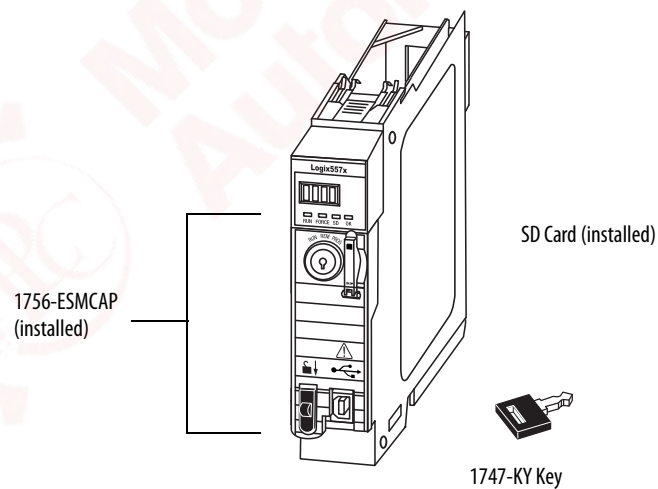
These sections describe parts that are included with ControlLogix 5570 controllers and available accessory parts.

Parts Included with ControlLogix 5570 Controllers

These parts are included with the controller:

- 1756-ESMCAP capacitor-based energy storage module (ESM)
- 1784-SD1 Secure Digital (SD) card, 1 GB
- 1747-KY controller key

Figure 1 - Parts with the ControlLogix 5570 Controller



IMPORTANT The controllers ship with an SD card installed. We recommend that you leave the SD card installed.

Parts Available for Use with ControlLogix 5570 Controllers

You can choose to use the parts included with the controller and these parts specific to your application.

If your application requires	Then use this part
USB connection from a computer to the controller	USB cable ⁽¹⁾
Nonvolatile memory	1784-SD1 (1 GB) or 1784-SD2 (2 GB)
ESM without WallClockTime back-up power	1756-ESMNSE This ESM does not have WallClockTime back-up power. Use this ESM if your application requires that the ESM ESM depletes its residual stored energy to 40 μJ or less before transporting it into or out of your application. ⁽²⁾ Additionally, you can use this ESM with only a 1756-L73 (8 MB) or smaller memory-sized controller.
ESM that secures the controller by blocking the USB connection and SD card use ⁽²⁾ This ESM provides your application an enhanced degree of security.	1756-ESMNRM

(1) The USB port is intended only for temporary local programming purposes and not intended for permanent connection. The USB cable is not to exceed 3.0 m (9.84 ft) and must not contain hubs.



WARNING: Do not use the USB port in hazardous locations.



ATTENTION:

- The USB port is intended only for temporary local programming purposes and not intended for permanent connection.
- The USB cable is not to exceed 3.0 m (9.84 ft) and must not contain hubs.

Controller Installation

To install the controller, complete the tasks summarized in this table.

✓	Task	Page
	Insert the Controller into the Chassis	19
	Insert the Key	20
	Install the SD Card	21
	Remove the SD Card	23
	Install the ESM	24

Insert the Controller into the Chassis

When installing a ControlLogix controller, you can do the following:

- Place the controller in any slot.
- Use multiple controllers in the same chassis.

You can install or remove a ControlLogix controller while chassis power is on and the system is operating.



WARNING: When you insert or remove the module while backplane power is on, an electric 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. Repeated electrical arcing causes excessive wear to contacts on both the controller and its mating connector on the chassis. Worn contacts may create electrical resistance that can affect controller operation.

Table 4 - Prevent Electrostatic Discharge



ATTENTION: 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.

IMPORTANT

The ESM begins charging when one of these actions occurs:

- The controller and ESM are installed into a powered chassis.
- Power is applied to the chassis that contains a controller with the ESM installed.
- An ESM is installed into a powered controller.

After power is applied, the ESM charges for up to two minutes as indicated by CHRG or ESM Charging on the status display.

Install the SD Card

Complete these steps to install the SD card in the controller.

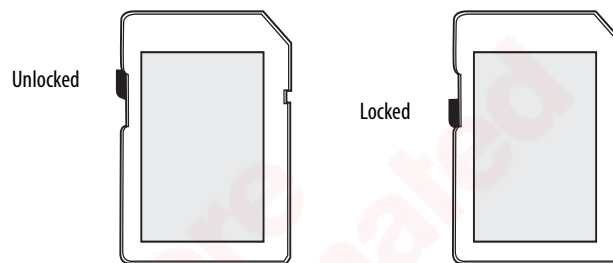
We recommend that you leave the SD card in the controller, even when it is not used. If the controller experiences a major nonrecoverable fault, fault information is saved to the card.



WARNING: When you insert or remove the Secure Digital (SD) memory card while power is on, an electric arc can occur. This could cause an explosion in hazardous location installations.

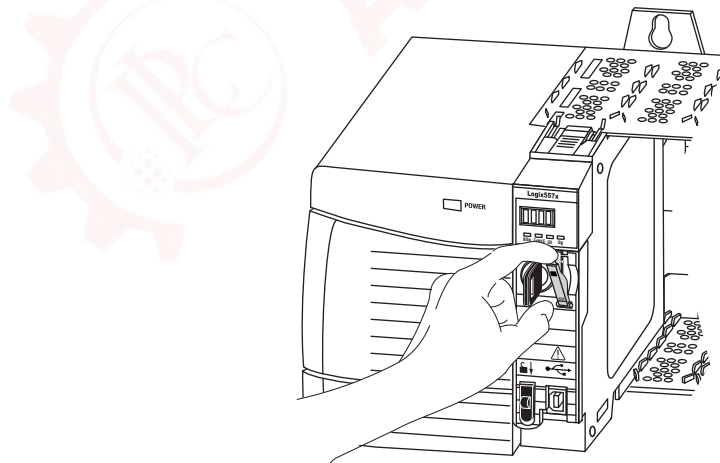
Be sure that power is removed or the area is nonhazardous before proceeding.

1. Verify that the SD card is locked or unlocked according to your preference.



For more information about the lock/unlock memory settings, see the

2. Open the door for the SD card.



3. Insert the SD card into the SD card slot.

Remove the SD Card

The controller ships with an SD card installed. Complete these steps to remove the SD card from the controller.



WARNING: When you insert or remove the Secure Digital (SD) memory card while power is on, an electric 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.

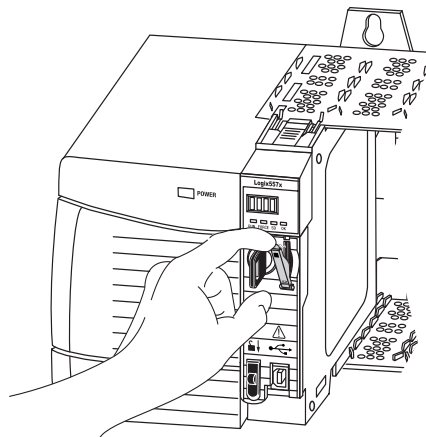
IMPORTANT

- Verify that the SD card status indicator is off and that the card is not in use before removing it.
- We recommend that you do the following:
 - Leave an SD card installed.
 - Use the SD cards available from Rockwell Automation (catalog number 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 do not have the same industrial, environmental, and certification ratings as those cards that are available from Rockwell Automation.

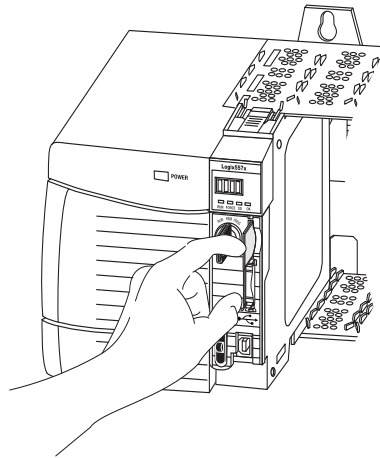
1. Verify that the SD card is not in use by checking to be sure that the SD indicator is Off.

TIP You can also put the controller into Hard Run mode to keep the controller from writing to the SD card while it is removed.

2. Open the door to access the SD card.



3. Press and release the SD card to eject it.



4. Remove the SD card and close the door.

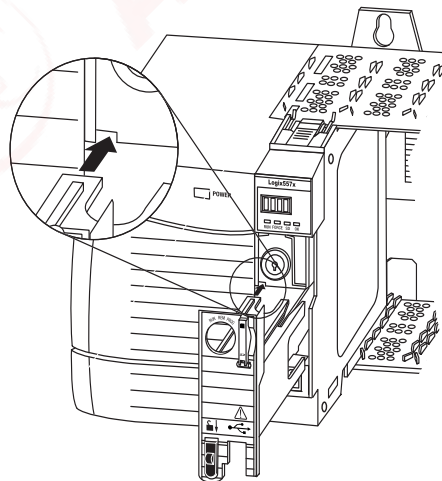
Install the ESM

To install an ESM in the controller, complete these steps.



ATTENTION: To avoid potential damage to the product when inserting the ESM, align it in the track and slide forward with minimal force until the ESM snaps into place.

1. Align the tongue-and-groove slots of the ESM and controller.



2. Slide the ESM back until it snaps into place.

The ESM begins charging after installation. The following status messages indicate charging status:

- ESM Charging
- CHRG

After you install the ESM, it can take up to 15 seconds for the charging status messages to display.

IMPORTANT Allow the ESM to finish charging before removing power from the controller. Failure to do so can result in the loss of the application program. A type 1, code 40 major fault is logged on powerup.

To verify that the ESM is fully charged, check the status display to confirm that messages CHRG or ESM charging are no longer indicated.

TIP We recommend that you check the WallClockTime object attributes after installing an ESM to verify that the time of the controller is correct.

The ESM contains a real-time clock. If the ESM is new or came from another controller, the WallClockTime object attributes for your controller can change.

Uninstall the ESM



WARNING: If your application requires the ESM to deplete its residual stored energy to 40 μ J or less before you transport it into or out of the application, use only the **1756-(SP)ESMNSE(XT)** module. In this case, complete these steps before you remove the ESM.

- Turn power off to the chassis.

After you turn power off to the chassis, the controller's OK status indicator transitions from green to steady red to OFF.

- Wait **at least 20 minutes** for the residual stored energy to decrease to 40 μ J or less before you remove the ESM.

There is no visual indication of when the 20 minutes has expired. **You must track that time period.**



WARNING: When you insert or remove the energy storage module while backplane power is on, an electric 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. Repeated electrical arcing causes excessive wear to contacts on both the module and its mating connector.

IMPORTANT Before you remove an ESM, make the necessary adjustments to your program to account for potential changes to the WallClockTime attribute.

Complete these steps to remove an ESM module from the controller.

1. Remove the key from the mode switch.

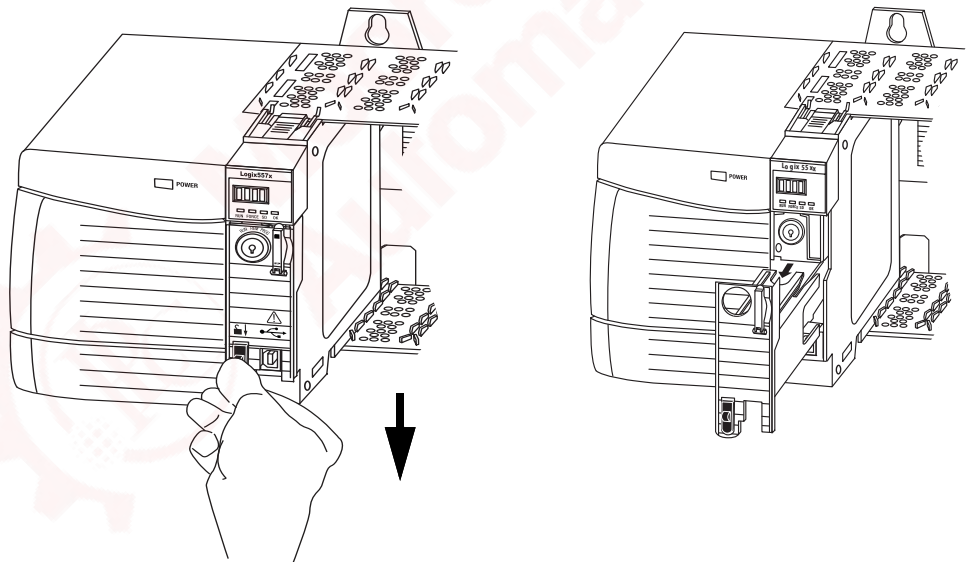
IMPORTANT The next step depends on which of the following conditions applies to your application.

- If you are removing the ESM from a powered 1756-L7x controller, go to [step 2](#).
- If you are removing the ESM from a 1756-L7x controller that is not powered, because the chassis power is turned off or the controller has been removed from a powered chassis, **do not immediately remove** the ESM.

Wait until the OK status indicator on the controller transitions from green to steady red to OFF before you remove the ESM.

After the OK status indicator transitions to Off, go to [step 2](#).

2. Use your thumb to press down on the black release and pull the ESM away from the controller.



Before You Begin

To install a ControlLogix® chassis and power supply before you install your controller and power supply, see the following publications:

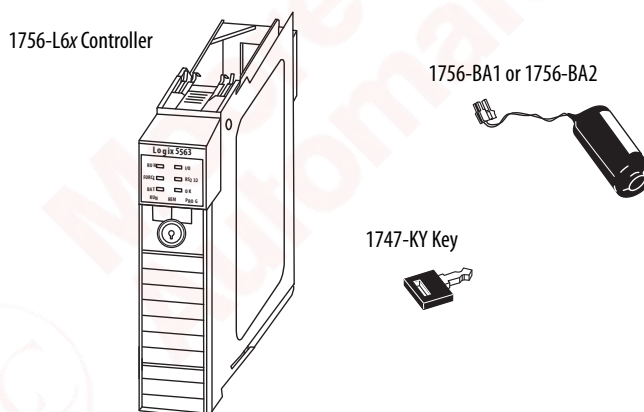
- ControlLogix Chassis Installation Instructions, publication [1756-IN621](#)
- ControlLogix Power Supply Installation Instructions, publication [1756-IN619](#)
- ControlLogix Redundant Power Supply Installation Instructions, publication [1756-IN620](#)

ControlLogix 5560 Controller Parts

These sections describe parts that are included with ControlLogix 5560 controllers and available accessory parts:

- One of the following batteries is included with your controller:
 - For series A controllers, catalog number 1756-BA1
 - For series B controllers, catalog number 1756-BA2
- Key, catalog number 1747-KY

Figure 2 - Parts Included with ControlLogix 5560 Controllers



Parts Not Included with the Controller

You can choose to use the parts included with the controller and these parts specific to your application.

If your application requires	Then use this component
RS-232 connection to the controller	1756-CP3 serial cable
Nonvolatile memory	1784-CF128 CompactFlash card
Expanded battery life for extended memory retention	1756-BATM battery module ⁽¹⁾

(1) The 1756-BATM can be used with series A controllers, but it cannot be used with series B controllers. Series B controllers use battery power differently than previous controllers and therefore battery considerations for this series controller vary. For more information to determine what battery to use, see the ControlLogix Controllers Selection Guide, publication [1756-SG001](#).

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