



Compact GuardLogix 5370 Controllers

Catalog Numbers 1769-L30ERMS, 1769-L33ERMS, 1769-L33ERMSK, 1769-L36ERMS, 1769-L37ERMS, 1769-L37ERMSK, 1769-L38ERMS, 1769-L38ERMSK

Topic	Page
Functional Safety	4
Machinery Directive	4
Install the Secure Digital Card	4
Assemble the System	4
Mount the System	5
Wire Power to the Control System	7
Connect to the Controller Via a USB Cable	7
Connect the Controller to an EtherNet/IP Network	7
Specifications	8
Additional Resources	8

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Updated UK and European Hazardous Location Approval for UKEX certifications	3
Updated the operating temperature specification	8
Installation information from the Compact GuardLogix 5370 Controllers User Manual, publication 1769-UM022 , has been merged into this document	Throughout



ATTENTION:

- If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- This equipment is certified for use only within a surrounding air temperature range of 0...60 °C (32...140 °F). The equipment must not be used outside of its range.

IMPORTANT

Any illustrations, charts, sample programs, and layout examples that are shown in this publication are intended solely for the purposes of example. Since there are many variables and requirements associated with any particular installation, Rockwell Automation does not assume responsibility or liability for actual use based on the examples that are shown in this publication.



ATTENTION: Read this document and the documents listed in the Additional Resources section about installation, configuration and operation of this equipment before you install, configure, operate or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice. If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

注意：在安装、配置、操作和维护本产品前，请阅读本文档以及“其他资源”部分列出的有关设备安装、配置和操作的相应文档。除了所有适用规范、法律和标准的相关要求之外，用户还必须熟悉安装和接线说明。

安装、调整、投运、使用、组装、拆卸和维护等各项操作必须由经过适当训练的专业人员按照适用的操作规范实施。

如果未按照制造商指定的方式使用该设备，则可能会损害设备提供的保护。

ATENCIÓN: Antes de instalar, configurar, poner en funcionamiento o realizar el mantenimiento de este producto, lea este documento y los documentos listados en la sección Recursos adicionales acerca de la instalación, configuración y operación de este equipo. Los usuarios deben familiarizarse con las instrucciones de instalación y cableado y con los requisitos de todos los códigos, leyes y estándares vigentes.

El personal debidamente capacitado debe realizar las actividades relacionadas a la instalación, ajustes, puesta en servicio, uso, ensamblaje, desensamblaje y mantenimiento de conformidad con el código de práctica aplicable. Si este equipo se usa de una manera no especificada por el fabricante, la protección provista por el equipo puede resultar afectada.

ATENÇÃO: Leia este e os demais documentos sobre instalação, configuração e operação do equipamento que estão na seção Recursos adicionais antes de instalar, configurar, operar ou manter este produto. Os usuários devem se familiarizar com as instruções de instalação e fiação além das especificações para todos os códigos, leis e normas aplicáveis.

É necessário que as atividades, incluindo instalação, ajustes, colocação em serviço, utilização, montagem, desmontagem e manutenção sejam realizadas por pessoal qualificado e especializado, de acordo com o código de prática aplicável.

Caso este equipamento seja utilizado de maneira não estabelecida pelo fabricante, a proteção fornecida pelo equipamento pode ficar prejudicada.

ВНИМАНИЕ: Перед тем как устанавливать, настраивать, эксплуатировать или обслуживать данное оборудование, прочитайте этот документ и документы, перечисленные в разделе «Дополнительные ресурсы». В этих документах изложены сведения об установке, настройке и эксплуатации данного оборудования. Пользователи обязаны ознакомиться с инструкциями по установке и прокладке соединений, а также с требованиями всех применимых норм, законов и стандартов.

Все действия, включая установку, наладку, ввод в эксплуатацию, использование, сборку, разборку и техническое обслуживание, должны выполняться обученным персоналом в соответствии с применимыми нормами и правилами.

Если оборудование используется не предусмотренным производителем образом, защита оборудования может быть нарушена.

注意：本製品を設置、構成、稼働または保守する前に、本書および本機器の設置、設定、操作についての参考資料の該当箇所に記載されている文書に目を通してください。ユーザーは、すべての該当する条例、法律、規格の要件に加えて、設置および配線の手順に習熟している必要があります。

設置調整、運転の開始、使用、組立て、解体、保守を含む諸作業は、該当する実施規則に従って訓練を受けた適切な作業員が実行する必要があります。

本機器が製造メーカーにより指定されていない方法で使用されている場合、機器により提供されている保護が損なわれる恐れがあります。

ACHTUNG: Lesen Sie dieses Dokument und die im Abschnitt „Weitere Informationen“ aufgeführten Dokumente, die Informationen zu Installation, Konfiguration und Bedienung dieses Produkts enthalten, bevor Sie dieses Produkt installieren, konfigurieren, bedienen oder warten. Anwender müssen sich neben den Bestimmungen aller anwendbaren Vorschriften, Gesetze und Normen zusätzlich mit den Installations- und Verdrahtungsanweisungen vertraut machen.

Arbeiten im Rahmen der Installation, Anpassung, Inbetriebnahme, Verwendung, Montage, Demontage oder Instandhaltung dürfen nur durch ausreichend geschulte Mitarbeiter und in Übereinstimmung mit den anwendbaren Ausführungsvorschriften vorgenommen werden.

Wenn das Gerät in einer Weise verwendet wird, die vom Hersteller nicht vorgesehen ist, kann die Schutzfunktion beeinträchtigt sein.

ATTENTION: Lisez ce document et les documents listés dans la section Ressources complémentaires relatifs à l'installation, la configuration et le fonctionnement de cet équipement avant d'installer, configurer, utiliser ou entretenir ce produit. Les utilisateurs doivent se familiariser avec les instructions d'installation et de câblage en plus des exigences relatives aux codes, lois et normes en vigueur.

Les activités relatives à l'installation, le réglage, la mise en service, l'utilisation, l'assemblage, le démontage et l'entretien doivent être réalisées par des personnes formées selon le code de pratique en vigueur.

Si cet équipement est utilisé d'une façon qui n'a pas été définie par le fabricant, la protection fournie par l'équipement peut être compromise.

주의：본 제품 설치, 설정, 작동 또는 유지 보수하기 전에 본 문서를 포함하여 설치, 설정 및 작동에 관한 참고 자료 섹션의 문서들을 반드시 읽고 숙지하십시오. 사용자는 모든 관련 규정, 법규 및 표준에서 요구하는 사항에 대해 반드시 설치 및 배선 지침을 숙지해야 합니다.

설치, 조정, 가동, 사용, 조립, 분해, 유지보수 등 모든 작업은 관련 규정에 따라 적절한 교육을 받은 사용자를 통해서만 수행해야 합니다.

본 장비를 제조사가 명시하지 않은 방법으로 사용하면 장비의 보호 기능이 손상될 수 있습니다.

ATTENZIONE: Prima di installare, configurare ed utilizzare il prodotto, o effettuare interventi di manutenzione su di esso, leggere il presente documento ed i documenti elencati nella sezione "Altre risorse", riguardanti l'installazione, la configurazione ed il funzionamento dell'apparecchiatura. Gli utenti devono leggere e comprendere le istruzioni di installazione e cablaggio, oltre ai requisiti previsti dalle leggi, codici e standard applicabili.

Le attività come installazione, regolazioni, utilizzo, assemblaggio, disassemblaggio e manutenzione devono essere svolte da personale adeguatamente addestrato, nel rispetto delle procedure previste. Qualora l'apparecchio venga utilizzato con modalità diverse da quanto previsto dal produttore, la sua funzione di protezione potrebbe venire compromessa.

DİKKAT: Bu ürünün kurulumu, yapılandırılması, işletilmesi veya bakımı öncesinde bu dokümanı ve bu ekipmanın kurulumu, yapılandırılması ve işletimi ile ilgili ilave kaynaklar bölümünde yer listelenmiş dokümanları okuyun. Kullanıcılar yürürlükteki tüm yönetmelikler, yasalar ve standartların gereksinimlerine ek olarak kurulum ve kablolama talimatlarını da öğrenmek zorundadır.

Kurulum, ayarlar, hizmete alma, kullanma, parçaları birleştirme, parçaları sökme ve bakım gibi aktiviteler sadece uygun eğitimleri almış kişiler tarafından yürürlükteki uygulama yönetmeliklerine uygun şekilde yapılabilir.

Bu ekipman üretici tarafından belirlenmiş amacın dışında kullanılırsa, ekipman tarafından sağlanan koruma bozulabilir.

注意事項：在安装、設定、操作或維護本產品前，請先閱讀此文件以及列於「其他資源」章節中有關安裝、設定與操作此設備的文件。使用者必須熟悉安裝和配線指示，並符合所有法規、法律和標準要求。

包括安裝、調整、交付使用、使用、組裝、拆卸和維護等動作都必須交由已經過適當訓練的人員進行，以符合適用的實作法規。

如果將設備用於非製造商指定的用途時，可能會造成設備所提供的保護功能受損。

POZOR: Než začnete instalovat, konfigurovat či provozovat tento výrobek nebo provádět jeho údržbu, přečtěte si tento dokument a dokumenty uvedené v části Dodatečné zdroje ohledně instalace, konfigurace a provozu tohoto zařízení. Uživatelé se musejí vedle požadavků všech relevantních vyhlášek, zákonů a norem nutně seznámit také s pokyny pro instalaci a elektrické zapojení.

Činnosti zahrnující instalaci, nastavení, uvedení do provozu, užívání, montáž, demontáž a údržbu musí vykonávat vhodné proškolený personál v souladu s příslušnými prováděcími předpisy.

Pokud se toto zařízení používá způsobem neodpovídajícím specifikaci výrobce, může být narušena ochrana, kterou toto zařízení poskytuje.

UWAGA: Przed instalacją, konfiguracją, użytkowaniem lub konserwacją tego produktu należy przeczytać niniejszy dokument oraz wszystkie dokumenty wymienione w sekcji Dodatkowe źródła omawiające instalację, konfigurację i procedury użytkowania tego urządzenia. Użytkownicy mają obowiązek zapoznać się z instrukcjami dotyczącymi instalacji oraz oprzewodowania, jak również z obowiązującymi kodeksami, prawem i normami.

Działania obejmujące instalację, regulację, przekazanie do użytkowania, użytkowanie, montaż, demontaż oraz konserwację muszą być wykonywane przez odpowiednio przeszkolony personel zgodnie z obowiązującym kodeksem postępowania.

Jeśli urządzenie jest użytkowane w sposób inny niż określony przez producenta, zabezpieczenie zapewniane przez urządzenie może zostać ograniczone.

OBBS! Läs detta dokument samt dokumentet, som står listat i avsnittet Övriga resurser, om installation, konfigurering och drift av denna utrustning innan du installerar, konfigurerar eller börjar använda eller utföra underhållsarbete på produkten. Användare måste bekanta sig med instruktioner för installation och kabeldragning, förutom krav enligt gällande koder, lagar och standarder.

Åtgärder som installation, justering, service, användning, montering, demontering och underhållsarbete måste utföras av personal med lämplig utbildning enligt lämpligt bruk.



Om denna utrustning används på ett sätt som inte anges av tillverkaren kan det hända att utrustningens skyddsanordningar försätts ur funktion.

LET OP: Lees dit document en de documenten die genoemd worden in de paragraaf Aanvullende informatie over de installatie, configuratie en bediening van deze apparatuur voordat u dit product installeert, configureert, bedient of onderhoudt. Gebruikers moeten zich vertrouwd maken met de installatie en de bedradingsinstructies, naast de vereisten van alle toepasselijke regels, wetten en normen.


Activiteiten zoals het installeren, afstellen, in gebruik stellen, gebruiken, monteren, demonteren en het uitvoeren van onderhoud mogen uitsluitend worden uitgevoerd door hiervoor opgeleid personeel en in overeenstemming met de geldende praktijkregels.

Indien de apparatuur wordt gebruikt op een wijze die niet is gespecificeerd door de fabrikant, dan bestaat het gevaar dat de beveiliging van de apparatuur niet goed werkt.

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.
<p>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.</p>	<p>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.</p>
 <p>WARNING: Explosion Hazard –</p> <ul style="list-style-type: none"> 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. 	 <p>AVERTISSEMENT: Risque d'Explosion –</p> <ul style="list-style-type: none"> 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.

UK and European Hazardous Location Approval


The following applies to products marked  II 3 G. Such modules:

- Are Equipment Group II, Equipment Category 3, and comply with the Essential Health and Safety Requirements relating to the design and construction of such equipment given in Annex II to EU Directive 2014/34/EU and Schedule 1 of UKEX Regulation 2016 No. 1107. See the UKEX and EU Declaration of Conformity at rok.auto/certifications for details.
- Comply to Standards EN IEC 60079-0:2018, EXPLOSIVE ATMOSPHERES - PART 0: EQUIPMENT - GENERAL REQUIREMENTS, Issue Date 07/2018, CENELEC EN 60079-7:2015+A1:2018 Explosive atmospheres. Equipment protection by increased safety "e", reference certificate number DEMK015ATEX1388X and UL22UKEX2514X.
- Are intended for use in areas in which explosive atmospheres caused by gases, vapors, mists, or air are unlikely to occur, or are likely to occur only infrequently and for short periods. Such locations correspond to Zone 2 classification according to UKEX Regulations 2016 No. 1107 and ATEX directive 2014/34/EU.
- May have catalog numbers followed by a "K" to indicate a conformal coating option.

Special Conditions for Safe Use

	<p>WARNING:</p> <ul style="list-style-type: none"> This equipment shall be mounted in an UKEX/ATEX Zone 2 certified enclosure with a minimum ingress protection rating of at least IP54 (in accordance with EN 60079-0) and used in an environment of not more than Pollution Degree 2 (as defined in EN 60664-1) when applied in Zone 2 environments. The enclosure must be accessible only by the use of a tool. This equipment shall be used within its specified ratings defined by Rockwell Automation. Provision shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 140% of the peak rated voltage when applied in Zone 2 environments. This equipment must be used only with UKEX/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.
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Environment and Enclosure

	<p>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.</p> <p>This equipment is not intended for use in residential environments and may not provide adequate protection to radio communication services in such environments.</p> <p>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 or be approved for the application 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.</p> <p>In addition to this publication, see the following:</p> <ul style="list-style-type: none"> Industrial Automation Wiring and Grounding Guidelines, 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
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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.

Removal and Insertion Under Power



ATTENTION: The Compact GuardLogix® control systems do not support removal and insertion under power (RIUP). These events occur while the Compact GuardLogix system is under power:

- Any break in the connection between the power supply and the controller, for example, removing the power supply, controller, or an I/O module, may subject the logic circuitry to transient conditions above the normal design thresholds and may result in damage to system components or unexpected behavior.
- Removing an end cap or an I/O module faults the controller and may also result in damage to system components.

Functional Safety

When marked, TÜV certifies the controllers for Functional Safety: Capable of Cat. 4/PL e according to EN ISO 13849-1 and SIL 3 according to EN 62061/IEC 61508 when used as described in the GuardLogix 5570 and Compact GuardLogix 5370 Controller Systems Safety Reference Manual, publication [1756-RM099](#).

Machinery Directive

The controllers are in conformity with the essential requirements of the Machinery Directive (2006/42/EC) when installed in accordance with the instructions that are contained in the product documentation. The following standards, and technical specifications have been applied as indicated.

- IEC 61508 Parts 1...7:2010
- EN 62061:2005/AC:2010/A1:2013
- EN ISO 13849-1:2008/AC:2009
- EN 61511-1:2004
- EN 50156-1:2004
- EN 746-1:1997/A1:2009
- EN 746-2:2010
- IEC 61131-2:2007
- EN 50178:1997
- EN 60204-1:2006/A1:2009
- NFPA 79:2015
- NFPA 85:2015
- NFPA 86:2015
- NFPA 87:2015
- ANSI B11.19:2010
- ANSI/RIA R15.06:1999
- EN 61326-3-1:2008

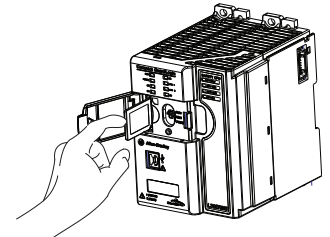
Install the Secure Digital Card

The controller ships from the factory with the 1784-SD1 Secure Digital (SD) card installed.



WARNING: When you insert or remove the Secure Digital (SD) Card while power is on, an electric arc can occur. This arc could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

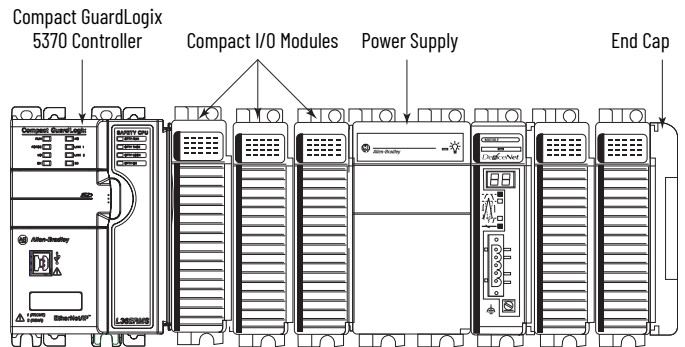
1. Open the door for the SD card.
2. Insert the SD card into the SD card slot, following the orientation logo that is printed on the card.
3. Gently press the card until it clicks into place.
4. Close the SD card door.



Assemble the System

This section describes how to assemble a local bank. Follow these rules, when you assemble the system.

- The controller must be the leftmost device in the system.
- Only one controller can be used on a local 1769 CompactBus. The controller supports the local bank and up to two more banks.
- The controller has a power supply distance rating of four. This rating means that the controller must be within four slots of the power supply. You can install as many as three modules between the power supply and the controller, as shown in the following graphic.



- This table shows how many local expansion modules each controller supports across multiple I/O banks.

Cat. No.	Local Expansion Modules Supported, Max
1769-L30ERMS	8
1769-L33ERMS 1769-L33ERMSK	16
1769-L33ERMOS	—
1769-L36ERMS 1769-L37ERMS 1769-L38ERMS	30
1769-L36ERMOS 1769-L37ERMOS ⁽¹⁾ 1769-L38ERMOS ⁽¹⁾	—

(1) Available at firmware revision 31.

System Assembly Rules (Continued):

- Each I/O bank requires its own power supply.
- You must complete the end of the last bank in a Compact GuardLogix 5370 controller system with a 1769-ECx end cap. You can complete a bank at the left or right end of the bank dependent upon your system design.
For example, if a Compact GuardLogix 5370 controller system uses one bank, you must use a 1769-ECR right end cap to complete the right end of the bank.
- For examples of Compact GuardLogix 5370 controller systems that use one bank or multiple banks, see [Mount the System on page 5](#).
- For requirements related to the physical placement of Compact I/O™ local expansion modules, see the Compact GuardLogix 5370 Controllers User Manual, publication [1769-UM022](#).



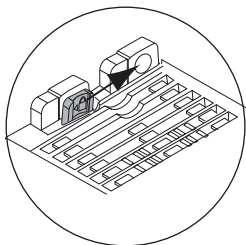
ATTENTION: Do not remove or replace this module while power is applied. Interruption of the backplane can result in unintentional operation or machine motion.



WARNING: Remove power before removing or inserting this module. If you insert or remove the module while backplane power is on, an electric arc can occur. This arc could cause an explosion in hazardous location installations.
Be sure that power is removed or the area is nonhazardous before proceeding.

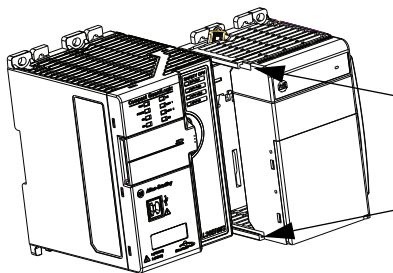
1. Verify that line power is disconnected.

2. Make sure that the bus lever of the 1769 Compact I/O™ power supply is in the unlocked position, that is, fully to the right.



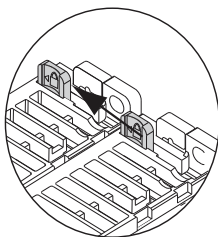
3. Use the upper and lower tongue-and-groove slots to attach the controller to the power supply.

4. Move the power supply back along the tongue-and-groove slots until the bus connectors align with each other.



5. Use your fingers or a small screwdriver to push the power supply bus lever back slightly to clear the positioning tab.

6. Move the power supply bus lever fully to the left until it clicks; make sure that it locks.



7. To install additional I/O modules or end caps, refer to their respective installation instructions.

IMPORTANT

You must install a 1769-ECR or 1769-ECRK Compact I/O end cap onto the right side of the Compact GuardLogix 5370 controller system either at the end of the controller or at the end of any local expansion modules that can be installed onto the controller.
The end cap covers the exposed interconnections on the right side of the controller or module. Failure to use a protective covering could result in equipment damage or injury from electric shock.

Mount the System

You can mount a Compact GuardLogix 5370 control system on a DIN rail or on a panel.

- Use EN 50 022 - 35 x 7.5 mm (1.38 x 0.30 in.) or EN 50 022 - 35 x 15 mm (1.38 x 0.59 in.) DIN rails.
- Use four M4 or #8 pan head screws for panel-mounting.



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.

Ground Through a DIN Rail



ATTENTION: This product is grounded through the DIN rail to chassis ground. Use zinc-plated chromate-passivated steel DIN rail to assure proper grounding. The use of other DIN rail materials (for example, aluminum or plastic) that can corrode, oxidize, or are poor conductors, can result in improper or intermittent grounding. Secure DIN rail to mounting surface approximately every 200 mm (7.8 in.) and use end-anchors appropriately. Be sure to ground the DIN rail properly. Refer to Industrial Automation Wiring and Grounding Guidelines, Rockwell Automation publication [1770-4.1](#), for more information.

Ground Through a Panel



ATTENTION: This product is intended to be mounted to a well-grounded mounting surface such as a metal panel. Additional grounding connections from the power supply's mounting tabs or DIN rail (if used) are not required unless the mounting surface cannot be grounded. Refer to Industrial Automation Wiring and Grounding Guidelines, Rockwell Automation publication [1770-4.1](#), for additional information.

Minimum Spacing

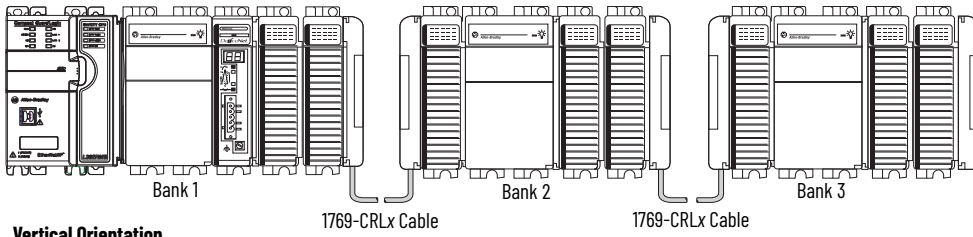
IMPORTANT

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

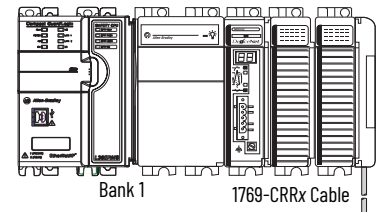
A Compact GuardLogix 5370 controller system must be mounted so that the modules are horizontal to each other. If you separate modules into multiple banks, the banks can be vertical or horizontal to each other.

Example of Banks and System Configurations

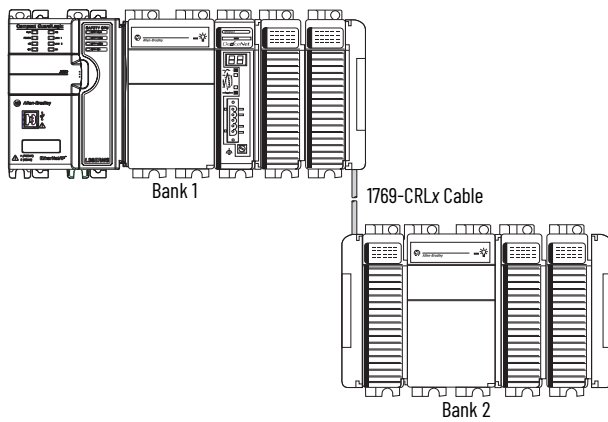
Horizontal Orientation



Vertical Orientation



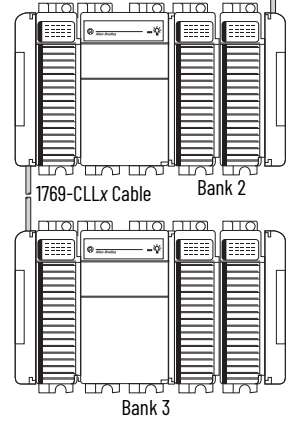
Vertical Orientation



Compact I/O Communication Bus Expansion Cables

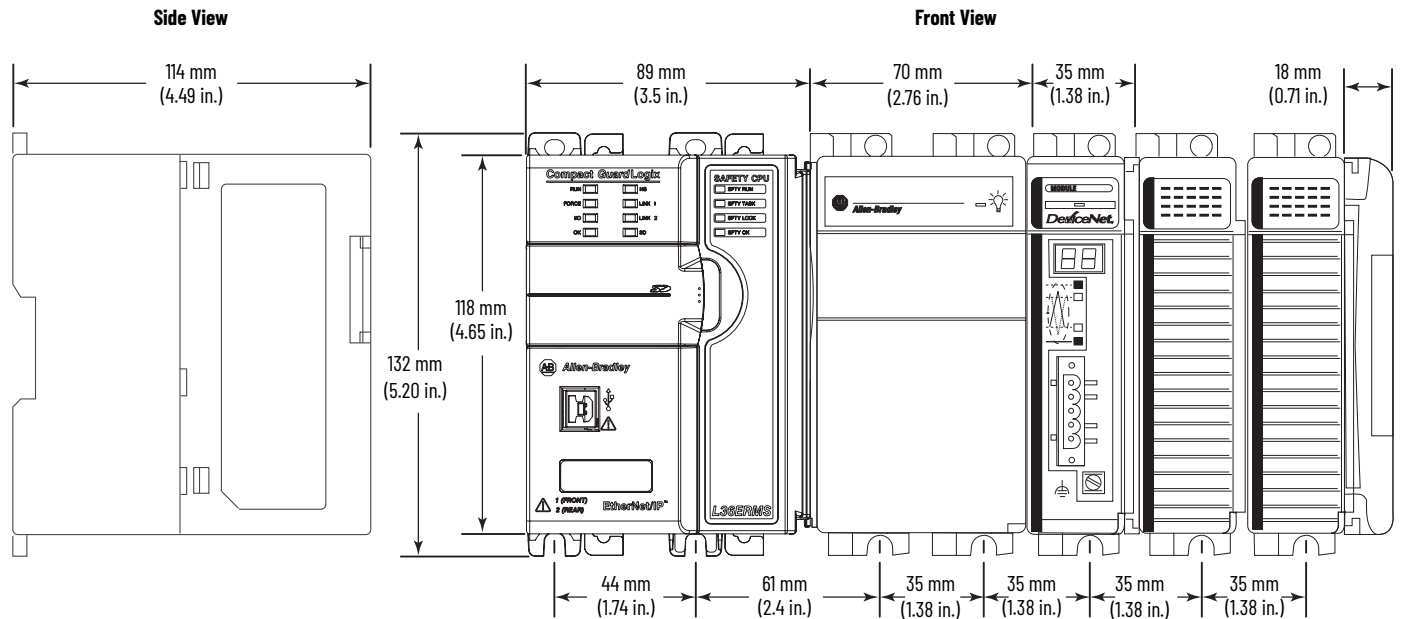
Cat. No.	Cable Type
1769-CLLx	Left bank to left bank expansion
1769-CRRx	Right bank to right bank expansion
1769-CRLx	Right bank to left bank expansion

For more information on these cables, see 1769 Compact I/O Communication Bus Expansion Cables Installation Instructions, publication [1769-IN014](#).



System Dimensions

This figure shows the system dimensions.



Wire Power to the Control System

The way that you wire power to the Compact GuardLogix 5370 controller system is based on the 1769 Compact I/O power supply that your application uses. For more information on how to wire power to your system, see the Compact I/O Expansion Power Supplies Installation Instructions, publication [1769-IN028](#).

Connect to the Controller Via a USB Cable

Use a USB cable to connect your computer to the USB port. With this connection, you can update firmware and download programs to the controller directly from your computer.



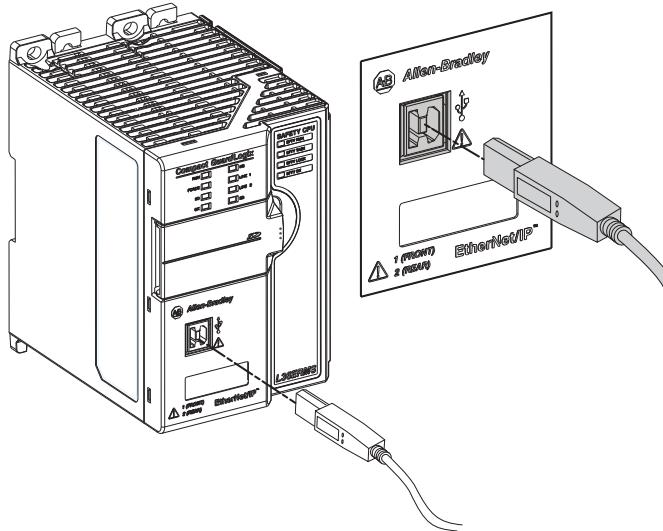
ATTENTION: The USB cable must not exceed 3.0 m (9.84 ft) and must not contain hubs.



WARNING: The USB port is intended for temporary local programming purposes only and not intended for permanent connection. If you connect or disconnect the USB cable with power applied to this module or any device on the USB network, 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.

Plug the USB cable into the Compact GuardLogix 5370 controller as shown.



Connect the Controller to an EtherNet/IP Network

This product has two Ethernet ports.

Ports	Requirements
Copper Ethernet	Connector/cable: RJ45 connector according to IEC 60603-7; 2-pair or 4-pair Category 5e minimum cable, according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702



WARNING: If you connect or disconnect the communications cable with power applied to this module or any device on the network, an electric arc can occur. This could cause an explosion in hazardous location installations.

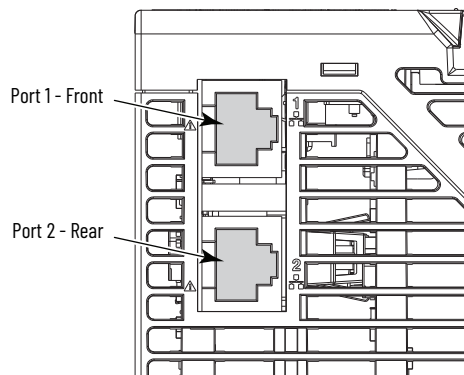
Be sure that power is removed or the area is nonhazardous before proceeding.

Connect the RJ45 connector of the Ethernet cable to one of the Ethernet ports on the controller. The ports are on the bottom of the controller.



ATTENTION: Do not plug a DH-485 network cable or a NAP cable into the Ethernet port. Undesirable behavior or damage to the port can result.

Bottom of Controller



IMPORTANT Depending on the Ethernet network topology of your application, you can connect both ports of the controller to the EtherNet/IP™ network. For more information on EtherNet/IP network topologies, see the Compact GuardLogix 5370 Controllers User Manual, publication [1769-UM022](#).

Connect to Different EtherNet/IP Network Topologies

The Compact GuardLogix 5370 controllers have embedded switch technology and two EtherNet/IP ports that let you use it in different EtherNet/IP network topologies:

- Device Level Ring network topology - Both ports on the controller are connected to the network with requirements about how the connections are made.
- Linear network topology - Both ports on the controller are connected to the network with requirements about how the connections are made.
- Star network topology - One port on the controller is connected to the network.

For more information, see the Compact GuardLogix 5370 Controllers User Manual, publication [1769-UM022](#).

Specifications

Attribute	1769-L30ERMS, 1769-L33ERMS, 1769-L33ERMSK, 1769-L36ERMS, 1769-L37ERMS, 1769-L37ERMSK, 1769-L38ERMS, 1769-L38ERMSK
Voltage ranges	850 mA at 5.0V DC, 700 mA at 24.0V DC
Power dissipation, max	6.5 W max
Wire category ⁽¹⁾	2 - communication ports
Temperature, operating • IEC 60068-2-1 (Test Ad, Operating Cold), • IEC 60068-2-2 (Test Bd, Operating Dry Heat), • IEC 60068-2-14 (Test Na, Operating Thermal Shock)	0 °C ≤ Ta ≤ +60 °C (+32 °F ≤ Ta ≤ +140 °F)
Temperature, surrounding air, max	60 °C (140 °F)
Wire screw torque	0.4 N•m (3.5 lb•in)
Wire size	0.5...1.5 mm 2 (22...16 AWG) solid or stranded shielded copper wire rated at 105 °C (221 °F), or greater, 3.5 mm (0.14 in.) max diameter including insulation, single wire connection only.

(1) Use this Conductor Category rating information for planning conductor routing. See Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#) and the appropriate system-level installation manual.

Additional Resources

These documents contain more information concerning related products from Rockwell Automation.

Resource	Description
Compact GuardLogix 5370 Controllers User Manual, publication 1769-UM022	Provides information on how to install, configure, and operate Compact GuardLogix 5370 controllers.
GuardLogix 5570 and Compact GuardLogix 5370 Controller Systems Safety Reference Manual, publication 1756-RM099	Provides information on safety application requirements for GuardLogix 5570 and Compact GuardLogix 5370 Controller systems in Studio 5000 Logix Designer® projects.
CompactLogix™ Controllers Specifications Technical Data, publication 1769-TD015	Provides detailed specifications for Compact GuardLogix controllers.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation® industrial system.
Product Certifications website, rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at rok.auto/literature. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, and product notification updates.	rok.auto/support
Knowledgebase	Access Knowledgebase articles.	rok.auto/knowledgebase
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

Waste Electrical and Electronic Equipment (WEEE)







At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

Your comments help us serve your documentation needs better. If you have any suggestions on how to improve our content, complete the form at rok.auto/docfeedback.

Rockwell Otomasyon Ticaret A.Ş. Kar Plaza İş Merkezi E Blok Kat:6 34752 İçerenköy, İstanbul, Tel: +90 (216) 5698400 EEE Yönetmeliğine Uygundur

Connect with us.    

rockwellautomation.com

expanding human possibility™

AMERICAS: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

ASIA PACIFIC: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

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