Installation Instructions

Original Instructions

Allen-Bradley

Stratix 8000 and 8300 Ethernet Managed Switches

Catalog Numbers 1783-MS06T, 1783-MS10T, 1783-RMS06T, 1783-RMS10T, 1783-MX08T, 1783-MX08F, 1783-MX04S, 1783-MX08S, 1783-MX04E, 1783-MX04T04E

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、稼動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 İlave Kaynaklar bölümünde yer listelenmiş dokümanları okuyun. Kullanıcılar yürürlükteki tüm yönetmelikler, yasalar ve standartların gereksinimlerine ek olarak kurulum ve kablolama talimatlarını da öğrenmek zorundadır.

Kurulum, ayarlama, 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：在安裝、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 vhodně 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.

OBS! 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, bediend 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.

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 for indoor use. 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 nonmetallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain more 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, publication 1770-4.1, for additional installation requirements.
- NEMA Standard 250 and EN/IEC 60529, as applicable, for explanations of the degrees of protection provided by enclosures.

Class A Notice for Taiwan and other Traditional Chinese Markets

ATTENTION: This is a Class A Information Product. When used in a residential environment, it may cause radio frequency interference. Under such circumstances, the user may be requested to take appropriate countermeasures.

警告　這是甲類資訊產品，在居住環境中使用時，可能會造成射頻干擾，
在這種情況下，使用者會被要求採取某些適當的對策。

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.

ATTENTION: This product is grounded through the DIN rail to chassis ground. Use zinc-plated yellow-chromate 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.

ATTENTION: Under certain conditions, viewing the optical port may expose the eye to hazard. When viewed under some conditions, the optical port may expose the eye beyond the maximum permissible exposure recommendations.

ATTENTION: This equipment is certified for use only within the surrounding air temperature range of -40…+60 °C (-40…+140 °F). The equipment must not be used outside of this range.

Electrical Safety Considerations

ATTENTION: Power to this equipment and all connected I/O must be supplied from a source compliant with the following:

- Class 2 approved to UL1310
- SELV source approved to EN/IEC60950-1, EN/IEC61010-2-201 or EN/IEC62368-1 (ES1)
- PELV source approved to EN/IEC60950-1, EN/IEC61010-2-201 or EN/IEC62368-1 (ES1)

ATTENTION: Under certain conditions, viewing the small form-factor pluggable (SFP) optical transceiver may expose the eye to hazard. When viewed under some conditions, the optical port may expose the eye beyond the maximum permissible exposure recommendations.

ATTENTION: Class 1 laser product. Laser radiation is present when the small form-factor pluggable (SFP) optical transceiver is open and interlocks bypassed. Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

European Hazardous Location Approval

The following applies to products marked CE 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 Directive 2014/34/EU. See the EC Declaration of Conformity at http://www.rockwellautomation.com/products/certification for details.
- The type of protection is Ex nA nC IIC T4 Gc according to EN 60079-15.
- Comply to Standards EN 60079-0:2012, EN 60079-15:2010, reference certificate number DEMKO 08ATEX143397X.
- 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 ATEX directive 2014/34/EU.

Special Conditions for Safe Use

WARNING:

- This equipment is not resistant to sunlight or other sources of UV radiation.
- This equipment shall be mounted in an ATEX Zone 2 certified enclosure with a minimum ingress protection rating of at least IP54 (in accordance with EN 60079-15) 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.
- The instructions in the user manual shall be observed.
- 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.

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.

North American Zones:
UL 60079-0, 5th Ed, 2009-10-21l; UL 60079-15, 3rd Ed, 2009-7-17; CAN/CSA C22.2 No. 60079-15-12 Ed. 1; CAN/CSA C22.2 No. 60079-0-11 Ed. 2

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.

WARNING: If you connect or disconnect wiring while the field-side 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.

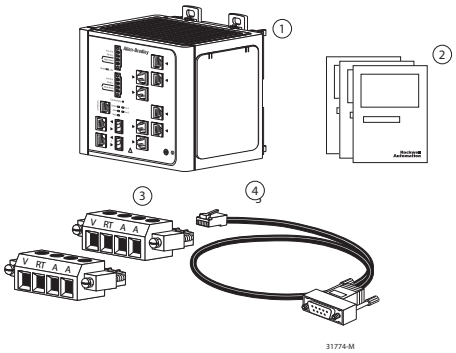
WARNING: When you insert or remove the CompactFlash while power is on, an electric arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

WARNING: When you insert or remove the small form-factor pluggable (SFP) optical transceiver 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.

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.

Parts List

Verify that you have these items.



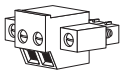
1 Stratix® 8000/8300 switch

2 Documentation

3 Power and alarm relay connectors (qty. 2)

4 Console cable

If you plan to install a PoE expansion module, verify that you have a PoE power connector.



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

Required Tools

Obtain these tools:

- Ratcheting torque screwdriver that exerts up to 1.69 N•m (15 in•lbs) of pressure
- #6 ring terminal lug for 5.3 mm^2 (10 AWG) wire, such as Thomas & Bett part number 10RC6 or equivalent
- Crimping tool, such as Thomas & Bett part number WT2000, ERG-2001, or equivalent
- 5.3 mm^2 (10 AWG) copper ground wire, such as Belden part number 9912 or equivalent
- Wire-stripping tool
- For panel-mounting without a DIN rail, M5 or #10-24 or #10-32 bolts or screws with 1.27 cm (0.5 in.) O.D. flat washers

For simplified cabling, the automatic medium-dependent interface crossover (auto-MDIX) feature is enabled by default on the switch. With auto-MDIX enabled, the switch detects the required cable type for copper Ethernet connections and configures the interfaces accordingly. You can use either a crossover or a straight-through cable for connections to a 10/100 or 10/100/1000 Ethernet switch port, regardless of the type of device on the other end of the connection.

Site Requirements

Observe these site requirements:

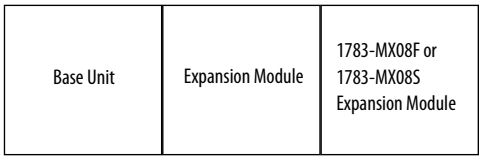
- Clearance to front and rear panels meets these conditions:
  - Front-panel status indicators can be easily read.
  - Access to ports is sufficient for unrestricted cabling.
  - Front-panel direct current (DC) power and relay connector is within reach of the connection to the DC power source.
- To prevent the switch from overheating, observe these minimum clearances:
  - Top and bottom: 105 mm (4.13 in.)
  - Left and right: 90 mm (3.54 in.)
  - Front: 65 mm (2.56 in.)
- Temperature surrounding the unit does not exceed 60 °C (140 °F).
- Cabling is away from sources of electrical noise, such as radios, power lines, and fluorescent lighting fixtures.

Attach Expansion Modules

IMPORTANT If you are adding expansion modules, attach the expansion modules to the switch before mounting the switch.

The switch can operate as a standalone device with two uplink ports and four or eight Fast Ethernet ports, or you can increase the number of Fast Ethernet ports by 8 or 16 by connecting expansion modules.

You can install as many as two expansion modules per base unit. However, only one of the two modules can be a 1783-MX08F or 1783-MX08S fiber expansion module. If you install a 1783-MX08F or 1783-MX08S fiber expansion module, the module must be in the right-most position.

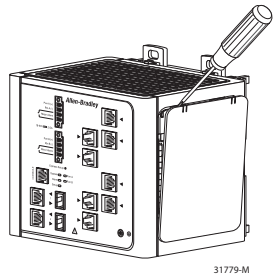


Depending on the mix of switches and expansion modules, you can have as many 24 Fast Ethernet ports.

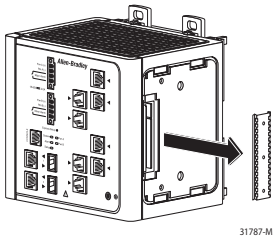
To connect the expansion modules to the switch, follow these steps.

IMPORTANT You must add expansion modules to the base unit before you apply power to the switch. Remove power from the switch when reconfiguring it.

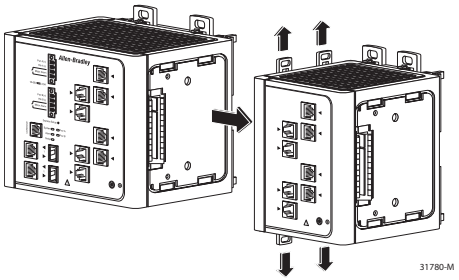
1. Remove the right side panel by firmly grasping both sides of it in the middle and pulling it outward.
   If necessary, use a screwdriver to pry open the side panel.



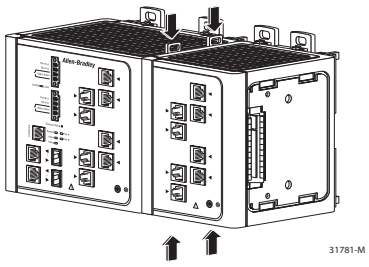
2. Remove the protective EMI-connector cover from the side panel.



3. Push the upper module latches up and the lower module latches down. Then slide the switch and module together.
   The expansion module is shown with the side panel removed. Do not remove this panel unless you plan to install another module.



4. Push the upper and lower module latches in to secure the module to the switch.



5. If you are installing a second module, repeat this procedure, but secure the second module to the right side of the first module.

IMPORTANT You cannot install an expansion module to the right of the 1783-MX08F or 1783-MX08S fiber expansion module.

Mount the Switch

You can mount the switch on one of the following:

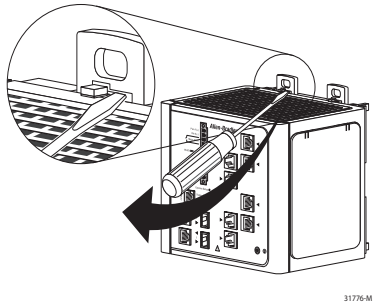
- DIN rail
- Wall or panel

IMPORTANT The switch must be mounted in an upright orientation, as shown in these instructions. Alternative mounting orientations are not supported.

Mount the Switch on a DIN Rail

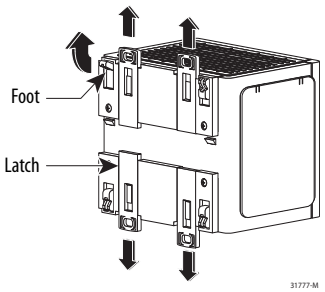
To mount the switch on a DIN rail, follow these steps.

1. Insert a sharp tool, such as a screwdriver, in the space next to the tab, push gently to release the catch, then turn the screwdriver to push the tab out.

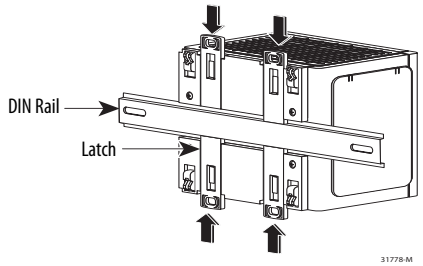


2. If you are using a heavy-duty 35 mm x 15 mm (1.38 in. x 0.59 in.) DIN rail, rotate all feet to the extended positions.

   Otherwise, if you are using 35 mm x 7.5 mm (1.38 in. x 0.30 in.) DIN rail, rotate the feet to the recessed positions.



3. Position the rear panel of the switch directly in front of the DIN rail, making sure that the DIN rail fits in the space between the two latches.



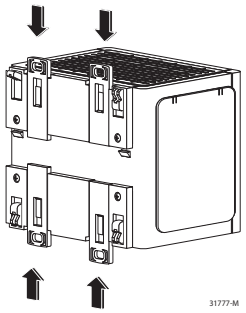
4. Push the DIN rail latches in after the switch is over the DIN rail to secure the switch to the rail.

Mount the Switch on a Wall or Panel

To mount the switch on a wall or a panel, you need M5 or #10-24 or #10-32 bolts or screws with 1.27 cm (0.5 in.) O.D. flat washers. This hardware is not provided with the switch.

To mount the switch to a wall or a panel, follow these steps.

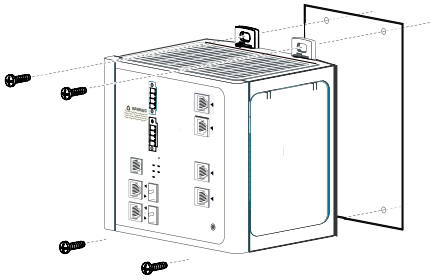
1. If the DIN rail latches are pushed out, push them in so they are fully locked in place.



2. Rotate all feet to their recessed positions so that the switch can mount flat on the wall or pane.

   If greater air circulation around the switch is required, rotate the feet to their extended positions before mounting the switch on the wall.

3. Position the rear panel of the switch against the wall or a panel in the desired location, as shown in this figure.



4. Place M5 or #10-24 or #10-32 bolts or screws with 1.27 cm (0.5 in.) O.D. flat washers through each DIN rail latch, and screw them into the wall.

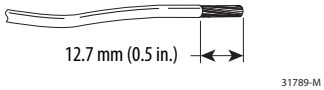
Ground the Switch

Follow these steps to connect the switch to a protective ground.

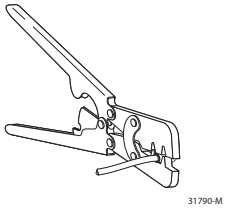
1. Use a screwdriver to remove the ground screw from the front panel of the switch.

   Store the ground screw for later use.

2. If your ground wire is insulated, use a wire stripping tool to strip the 5.3 mm^2 (10 AWG) ground wire to 12.7 mm (0.5 in.) ± 0.5 mm (0.02 in.).

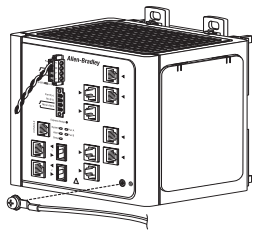


3. Insert the ground wire into the ring terminal lug.
4. Use a crimping tool to crimp the ring terminal to the wire.



5. Slide the ground screw through the ring terminal.

6. Insert the ground screw into the ground-screw opening on the front panel.



31791-M

7. Use a ratcheting torque screwdriver to tighten the ground screw and ring terminal lug to the switch front panel to 0.96 N•m (8.5 lb•in).
8. Attach the other end of the ground wire to a grounded bare-metal surface, such as a ground bus, or a grounded DIN rail.

Wire the Power Source for the Switch

Follow these steps to wire DC power to the switch.

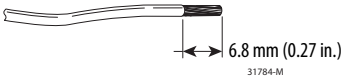
1. Locate the power and alarm relay connector and identify the positive and return DC power connections.

   The positive DC power connection is labeled V, and the negative DC power connection is the adjacent connection labeled RT. Connections labeled A are used for the alarm relay connectors.

31783-M

2. Measure a length of 0.82...0.52 mm^2 (18...20 AWG) copper wire long enough to connect to the DC power source.
3. Using an 18-gauge wire-stripping tool, strip each of the two wires to 6.3 mm (0.25 in.) ± 0.5 mm (0.02 in.).

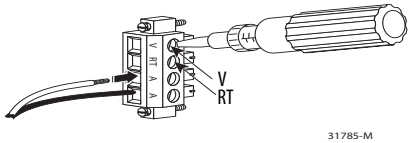
   Do not strip more than 6.8 mm (0.27 in.) of insulation from the wire. Stripping more than the recommended amount of wire can leave exposed wire from the connector after installation.



31784-M

4. Insert the exposed part of the positive wire into the connection labeled V and the exposed part of the return wire into the connection labeled RT.

   Make sure that you cannot see any wire lead. Only wire with insulation can extend from the connector.



31785-M

5. Use a ratcheting-torque screwdriver to torque the power and relay connector captive screws above the installed wire leads to 0.23 N•m (2.0 lb•in).
6. Connect the other end of the positive wire (the one connected to V) to the positive terminal on the DC power source, and connect the other end of the return wire (the one connected to RT) to the return terminal on the DC power source.

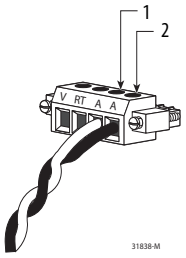
   You can use a second power source to provide redundant power. The alarm relays on the switch can be used to warn you if one of the power supplies fails. The switch operates properly with only one power source connected at either Pwr A or Pwr B.
7. If you are installing the switch and are using a second power source, repeat these with a second power and relay connector.

Wire External Alarms

The alarm relays on the switch are normally open. To connect an external alarm device to the relays, you must connect two relay contact wires to complete an electrical circuit. Because each external alarm device requires two connections to a relay, the switch supports a maximum of two external alarm devices.

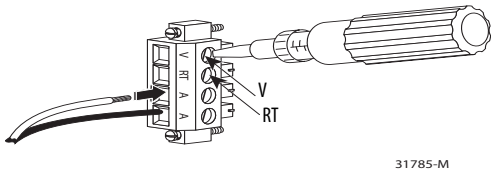
To wire alarms, follow these steps.

1. Measure two strands of twisted-pair wire (18...20 AWG) long enough to connect to the external alarm device.
2. Use a wire stripper to remove the casing from both ends of each wire to 6.3 mm (0.25 in.) ± 0.5 mm (0.02 in.).
3. Insert the exposed wires for the external alarm device into the two connections labeled A, as shown in the following figure.



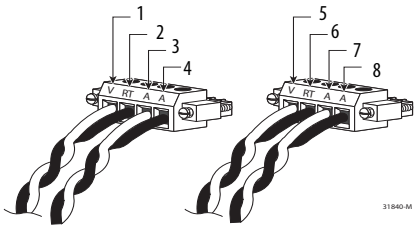
1	External device, relay wire A connection 1
2	External device, relay wire A connection 2

4. Use a screwdriver to torque the power and relay connector captive screw (above the installed wire leads) to 0.23 N•m (2.0 lb•in).



5. Repeat these steps to insert the input and output wires of an additional external alarm device into the second power and relay connector.

The following figure shows the completed wiring for two power supplies and two external alarm devices.



1	Power source A positive connection	5	Power source B positive connection
2	Power source A return connection	6	Power source B return connection
3	External device 1, relay wire major alarm connection	7	External device 2, relay wire minor alarm connection
4	External device 1, relay wire major alarm connection	8	External device 2, relay wire minor alarm connection

Install the Power and Relay Connector on the Switch

ATTENTION: Exposure to some chemicals can degrade the sealing properties of materials used in the relay. Periodically inspect the relay and check for any degradation. If the relay appears damaged in any way, replace the switch.

Sealed Device: Relay Model AGN200A03, manufactured by Matsushita Electric Works

Relay Cover: Manufacture of Plastic Material—Nippon Oil Corp.
Designation of Plastic Material—Type FC-100
Generic Name of Plastic Material —Liquid crystal polymer

Relay Body: Manufacture of Plastic Material—Ueno Fine Chemicals Industry Ltd.
Designation of Plastic Material— Type 2125G
Generic Name of Plastic Material—Liquid crystal polymer

Relay Epoxy: Manufacture of Material—Resinous Kasei Co. Ltd.
Designation of Material – Type A-2500BK
Generic Name of Plastic Material—Epoxy Resin

Sealed Device: Relay Model B4GA003Z, manufactured by Fujitsu Takamisawa Electric Co. Ltd.

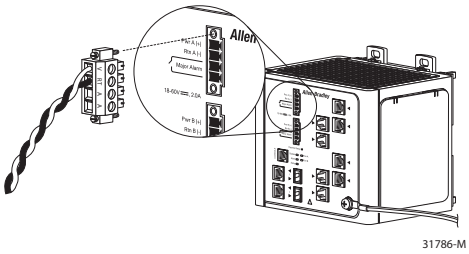
Relay Cover: Manufacture of Plastic Material —Sumitomo Chemical Co. Ltd.
Designation of Plastic Material—Type E4009
Generic Name of Plastic Material—Liquid crystal polymer

Relay Body: Manufacture of Plastic Material—Sumitomo Chemical Co. Ltd.
Designation of Plastic Material—Type E6807LHF
Generic Name of Plastic Material—Liquid crystal polymer

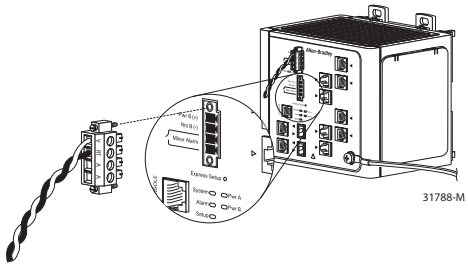
Relay Epoxy: Manufacture of Material—Sumitomo Bakelite Co. Ltd.
Designation of Material—Type 'SUMIMAC' ECR-9750K2
Generic Name of Plastic Material—Epoxy Resin

To install the DC power source and relay connector to the front panel of the switch, follow these steps.

1. Insert the power and relay connector into the Pwr A receptacle on the front panel of the switch.



2. Use a screwdriver to tighten the captive screws on the sides of the power and relay connector.
3. If a second power source is required, insert a second power and relay connector into the Pwr B receptacle on the switch front panel.



4. Use a screwdriver to tighten the captive screws on the sides of the second power and alarm relay connector.

Wire the Power Source for the PoE Expansion Module

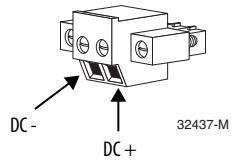
Follow these instructions if you have a PoE expansion module.

Power supply requirements for a PoE expansion module depend on your application.

Application	Power Input per Port	Power Consumption	Allen-Bradley Products
PoE only IEEE 802.3af	44…57V DC (48V DC, nom)	15.4 W, max	Switched mode power supplies: • 1606-XL Standard • 1606-XLE Essential • 1606-XLP Compact • 1606-XLS Performance
PoE and PoE + IEEE 802.3at Type 2	50…57V DC (54V DC, nom)	15.4 W, max for PoE 30 W, max for PoE+	

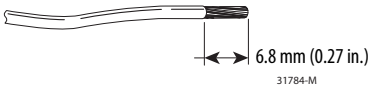
Follow these steps to wire DC power to the PoE expansion module.

1. Locate the power connector and identify the positive and return DC power connections.

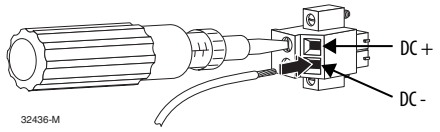


2. Measure a length of 0.82...0.52 mm^2 (18...20 AWG) copper wire long enough to connect to the DC power source.
3. Use an 18-gauge wire-stripping tool to strip each of the two wires to 6.3 mm (0.25 in.) ± 0.5 mm (0.02 in.).

   Do not strip more than 6.8 mm (0.27 in.) of insulation from the wire. Stripping more than the recommended amount of wire can leave exposed wire from the connector after installation.



4. Insert the exposed part of the positive wire into the DC + connection and the exposed part of the return wire into the DC - connection.
5. Make sure that you cannot see any wire lead; only wire with insulation can extend from the connector.



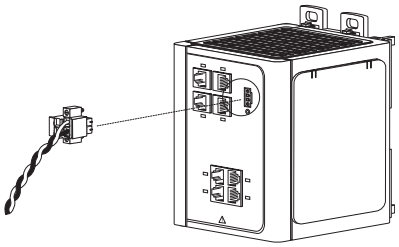
6. Use a ratcheting-torque screwdriver to torque the power connector captive screws above the installed wire leads to 0.23 N•m (2.0 lb•in).
7. Connect the other end of the positive wire (the one connected to DC +) to the positive terminal on the DC power source, and connect the other end of the return wire (the one connected to DC -) to the return terminal on the DC power source.

IMPORTANT Do not connect the negative (return) terminal of the DC power source to earth ground.

Install the Power Connector on the PoE Expansion Module

If you have a PoE expansion module, follow these steps to install the DC power connector on the PoE expansion module.

1. Insert the power connector into the DC input terminal block on the PoE expansion module.



2. Use a screwdriver to tighten the captive screws on the sides of the power connector.

Install an SFP Module

ATTENTION: Use SFP modules from only Rockwell Automation. For details about supported modules, see the Stratix Ethernet Device Specifications Technical Data, publication 1783-TD001.

You can use any combination of compatible SFP modules:

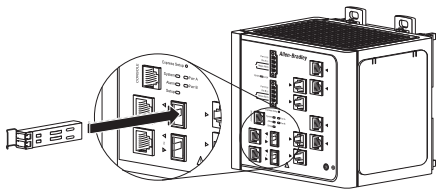
- Each SFP module must be of the same type as the SFP module on the other end of the cable. The cable must not exceed the stipulated cable length for reliable communications.
- Once you install SFP modules in the switch, be aware that the overall temperature rating of the combined modules (switch and SFP modules) is limited to the lowest maximum temperature rating and the highest minimum temperature rating.

To install an SFP module into an SFP slot, follow these steps.

1. Attach an ESD-preventive wriststrap to your wrist and to a grounded bare metal surface.
2. Grasp both sides of the SFP module and align the module sideways in front of the slot opening.

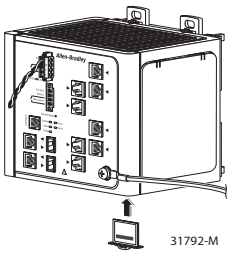
ATTENTION: If the SFP module cannot be fully inserted, stop! Do not force the module into the slot. Rotate the SFP module 180° and try again.

3. Insert the SFP module into the slot until you feel the connector on the module snap into place in the rear of the slot.



Install the CompactFlash Card

The switches ship with the CompactFlash card installed. When you need to install the card, grasp the tab on the card and insert it into the slot at the bottom of the switch.

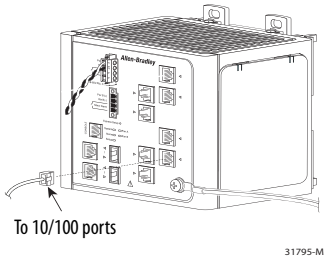


IMPORTANT You can install and remove the CompactFlash card while the switch is powered. However, if you do not have a CompactFlash card installed in the switch, you are unable to do the following:

- Start the Device Manager web interface when you apply power to the switch.
- Save configuration changes you made with the AOP via software.
- Start up the switch.

Connect to 10/100 Copper Ports

1. Insert a straight-through, twisted four-pair, Category 5e or better cable with an RJ45 connector into the port.



2. Insert the other cable end into an RJ45 connector on the other device.

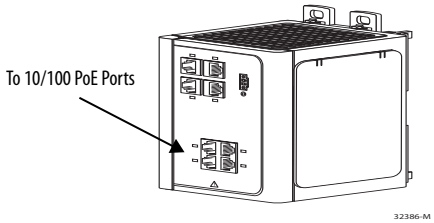
Connect to PoE Expansion Module Ports

Two expansion modules provide PoE capability:

- The 1783-MX04E PoE expansion module provides four PoE ports. You can configure as many as four ports in any combination of PoE and PoE+.
- The 1783-MX04T04E PoE expansion module provides four PoE ports and four non-PoE ports. You can configure as many as four ports in any combination of PoE and PoE+.

The PoE expansion modules each require a separate power supply. For power supply requirements based on your application, refer to page 13.

1. Insert a straight-through, twisted four-pair, Category 5e or better cable with an RJ45 connector into the port.

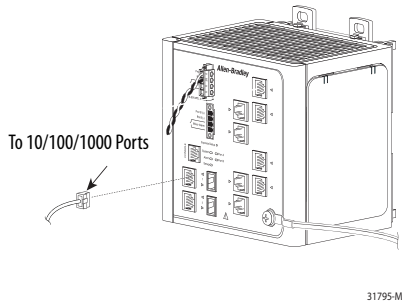


2. Insert the other cable end into an RJ45 connector on the other PoE powered device.

Connect to Dual-purpose Uplink Ports

The switches have two dual-purpose uplink ports. Each dual-purpose uplink port has a 10/100/1000 RJ45 connector for a copper interface and a slot for an SFP module. Only one port of the dual-purpose port can be active at a time. If an SFP module port is connected, the SFP module port has priority.

1. Insert a straight-through, twisted four-pair, Category 5e or better cable with an RJ45 connector into the port.

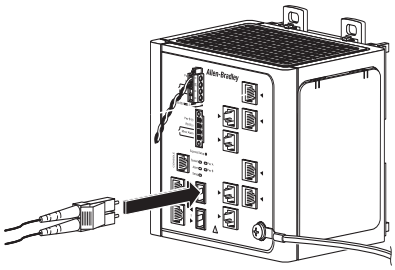


2. Insert the other cable end into an RJ45 connector on the other device.

Connect to SFP Fiber Ports

If you installed an SFP module, follow these steps.

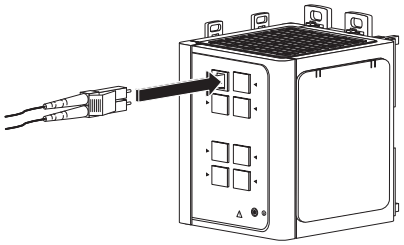
1. Insert a fiber-optic cable with an LC connector into the SFP fiber port.



2. Insert the other cable end into the other device.

Connect to 100BaseFX Ports

1. Insert a fiber-optic cable with an LC connector into the 100BASE-FX port of the 1783-MX08F expansion module.



2. Insert the other cable end into the other device.

Remove Power from an Expansion Module with PoE

Expansion modules with PoE capability in the following configuration require special instructions to disconnect power:

- The modules are connected to the same power supply
- The PoE ports on both modules are connected to each other via Ethernet cables

If you use the above configuration, you must disconnect both DC+ and DC- connections to power down an individual module.

Specifications

Stratix 8000 and 8300 Switches

Attribute	1783-MS06T, 1783-MS10T, 1783-RMS06T, 1783-RMS10T
Temperature, operating IEC 60068-2-1 (Test Ad, Operating Cold) IEC 60068-2-2 (Test Bd, Operating Dry Heat) IEC 60068-2-14 (Test Nb, Operating Thermal Shock)	-40 °C < Ta < +60 °C (-40 °F < Ta < +140 °F)
Temperature, surrounding air, max	60 °C (140 °F)
Enclosure type rating	None (open-style)
Power input	2 A max, 18…60V DC, CL 2/SELV
Alarm relay	1A max, 30V DC max, CL 2/SELV
Isolation voltage	75 V (continuous), basic insulation type, power to ground, power to network channels, and power to alarm. No isolation between individual Ethernet ports No isolation between Console port and system
Wire size, Ethernet connections	RJ45 connector according to IEC 60603-7, 2 or 4 pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702
Wire size, power and alarm connections	0.5… 0.8 mm^2 (20…18 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater, 1.2 mm (3/64 in.) insulation, max
Wire size, ground connection	3.3…5.3 mm^2 (12…10 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater
Screw torque, power and alarm terminals	0.23 N•m (2.0 in•lb)
Screw torque, ground terminals	0.96 N•m (8.5 in•lb)
Pilot duty rating	Alarm not rated
North American temp code	T4
ATEX temp code	T4

Stratix 8000 and 8300 Expansion Modules

Attribute	1783-MX04E	1783-MX04T04E	1783-MX08T	1783-MX08F	1783-MX04S	1783-MX08S
Temperature, operating IEC 60068-2-1 (Test Ad, Operating Cold) IEC 60068-2-2 (Test Bd, Operating Dry Heat) IEC 60068-2-14 (Test Nb, Operating Thermal Shock)	-40 °C < Ta < +60 °C (-40 °F < Ta < +140 °F)					
Temperature, surrounding air, max	60 °C (140 °F)					
Enclosure type rating	None (open-style)					
Backplane power	3.3V DC @ 0.94 A	3.3V DC @ 1.08 A	3.3V DC, 1.7 A max	3.3V DC, 3.6A max	3.3V DC, 2.5 A max	3.3V DC, 4.0 A max
PoE power, max	48/54V DC, 2.5 A	48/54V DC, 2.4 A	—			
Isolation voltage	60V (continuous), basic insulation type, expansion backplane to network ports, expansion backplane to power ports, and power ports to network ports. No isolation between individual network ports.		75V (continuous), basic insulation type, expansion backplane to network channels. No isolation between individual Ethernet ports.	—		
Wire size, Ethernet connections	RJ45 connector according to IEC 60603-7, 2 or 4 pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702					
Screw torque, PoE power	0.23 N•m (2.0 in•lb)		—			
North American temp code	T4					
ATEX temp code	T4					

Notes:

Notes:

Additional Resources

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

Resource	Description
Stratix Ethernet Device Specifications Technical Data, publication 1783-TD001	Provides specification information for Ethernet switches and other devices.
Stratix Ethernet Switches User Manual, publication 1783-UM007	Provides information about configuring, monitoring, and troubleshooting the switches.
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 http://www.rockwellautomation.com/global/literature-library/overview.page. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.

Rockwell Automation Support

Use the following resources to access support information.

Technical Support Center	Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates.	https://rockwellautomation.custhelp.com/
Local Technical Support Phone Numbers	Locate the phone number for your country.	http://www.rockwellautomation.com/global/support/get-support-now.page
Direct Dial Codes	Find the Direct Dial Code for your product. Use the code to route your call directly to a technical support engineer.	http://www.rockwellautomation.com/global/support/direct-dial.page
Literature Library	Installation Instructions, Manuals, Brochures, and Technical Data.	http://www.rockwellautomation.com/global/literature-library/overview.page
Product Compatibility and Download Center (PCDC)	Get help determining how products interact, check features and capabilities, and find associated firmware.	http://www.rockwellautomation.com/global/support/pcdc.page

Documentation Feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete the How Are We Doing? form at http://literature.rockwellautomation.com/idc/groups/literature/documents/du/ra-du002_-en-e.pdf.

Rockwell Automation maintains current product environmental information on its website at http://www.rockwellautomation.com/rockwellautomation/about-us/sustainability-ethics/product-environmental-compliance.page.

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