

# Installation Instructions

Original Instructions



**Allen-Bradley**

by ROCKWELL AUTOMATION

## Stratix 5950 Security Appliance

Catalog Numbers 1783-SAD4TOSBK9, 1783-SAD4TOSPK9, 1783-SAD2T2SBK9, 1783-SAD2T2SPK9

Topic	Page
Summary of Changes	1
Prepare the Appliance	6
Ground the Appliance	7
Wire the DC Power Source	8
Attach the Power Connector	9
Wire the Alarm Connection	9
Specifications	10
Additional Resources	10

### 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
UK and European Hazardous Location Approval	4



**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 유지보수하기 전에 본 문서를 포함하여 설치, 설정 및 작동에 관한 참고 자료 색션의 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.

**DIKKAT:** 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, 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 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 przewodowania, 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.

**OBSE!** Läs detta dokument samt dokumentet, som står listat i avsnittet Övriga resurser, om installation, konfiguration 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.



**ATTENTION:**

- Installation, adjustments, putting into service, use, assembly, disassembly, and maintenance shall be carried out by suitably trained personnel in accordance with applicable code of practice. In case of malfunction or damage, no attempts at repair should be made. The module should be returned to the manufacturer for repair. Do not dismantle the module.
- 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 the surrounding air temperature range of -40...60 °C (-40...140 °F). The equipment must not be used outside of this range.
- Solid-state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation, and Maintenance of Solid-state Controls, publication [SGI-1.1](#), available from your local Rockwell Automation sales office or online at <http://www.rockwellautomation.com/literature>, describes some important differences between solid-state equipment and hard-wired electromechanical devices.

**IMPORTANT**

Any illustrations, charts, sample programs, and layout examples 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 upon the examples shown in this publication.



**ATTENTION:** This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in EN/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 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.

In addition to this publication, see the following:

- 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

**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>
<div style="display: flex; align-items: center;"> <div> <p><b>WARNING:</b> <b>Explosion Hazard -</b></p> <ul style="list-style-type: none"> <li>• Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous.</li> <li>• 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.</li> <li>• Substitution of components may impair suitability for Class I, Division 2.</li> <li>• If this product contains batteries, they must only be changed in an area known to be nonhazardous.</li> </ul> </div> </div>	<div style="display: flex; align-items: center;"> <div> <p><b>AVERTISSEMENT:</b> <b>Risque d'Explosion -</b></p> <ul style="list-style-type: none"> <li>• Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher l'équipement.</li> <li>• 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.</li> <li>• La substitution de composants peut rendre cet équipement inadapté à une utilisation en environnement de Classe I, Division 2.</li> <li>• S'assurer que l'environnement est classé non dangereux avant de changer les piles.</li> </ul> </div> </div>

The following hazardous locations strings are provided on the Stratix® 5950 security appliance:

- Class 1, Zone 2, Ex ec nC IIC T4 Gc X
- Class 1, Zone 2, AEx ec nC IIC T4 Gc

The following standards were used for the hazardous locations approvals and certifications:

- ANSI/ASA 12.12.01-2013
- CAN/CSA-C22.2 No. 60079-0:19, Feb. 2019
- CAN/CSA C22.2 No. 60079-7:16 October 2016
- CSA C22.2 No. 213-M1987
- UL 60079-0, 7th Ed., 2019-03-26
- UL 60079-7, 5th Ed., 2017-02-24

### UK and European Hazardous Location Approval

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#### The following applies to products marked C€ Ⓜ G: Such modules:

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- 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 the UKEX Regulation 2016 No. 1107. See the UKEX and EU Declaration of Conformity at [rok.auto/certifications](http://rok.auto/certifications) for details.
  - The type of protection is <Ex ec nC IIC T4 Gc>. Equipment protection by increased safety "e".
  - Equipment protection by increased safety "e", reference certificate number DEMK015ATEX1595X and UL23UKEX2886X.
  - 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 Regulation 2016 No. 1107 and ATEX directive 2014/34/EU.
- 



#### WARNING:

- 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/IEC 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.
  - 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.
  - The USB port is intended for temporary local programming purposes only and not intended for permanent connection and do not use the USB port in hazardous locations.
  - Provision shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 140% of the rated voltage when applied in Zone 2 environments.
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**ATTENTION:** To comply with the CE Low Voltage Directive (LVD), all connections to this equipment must be powered from a source compliant with the following:

- Safety extra low voltage (SELV) Supply
  - Protected extra low voltage (PELV) Supply
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**ATTENTION:** Use only Allen-Bradley 1783-SFP100FX, 1783-SFP100LX, 1783-SFP1GSX, or 1783-SFP1GLX SFP transceivers.

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**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.

Note that all module circuits and connections (including the PE terminals) are isolated from ground and the DIN mounting rail! When it is necessary to provide a ground reference, appropriate connections have to be made by the installer.

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#### 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.
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**WARNING:**

- Use supply wires suitable for 30 °C (86 °F) above surrounding ambient.
- When used in a Class I, Division 2, hazardous location, this equipment must be mounted in a suitable enclosure with proper wiring method that complies with the governing electrical codes.
- 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.
- When you insert or remove the CompactFlash/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.
- When you insert or remove the small form factor pluggable (SFP) optical transceiver while power is on, an electric arc can occur. This could cause an explosion in hazardous location installations.
- Do not use the USB port in hazardous locations.

**ATTENTION:**

- The USB port is intended for temporary local programming purposes only and not intended for permanent connection.
- The USB cable is not to exceed 3.0 m (9.84 ft) and must not contain hubs.
- 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.
- 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.
- Class 1 laser product. Laser radiation is present when the system is open and interlocks bypassed. Only trained and qualified personnel should be allowed to install, replace, or service this equipment.
- If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- 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.
- In case of malfunction or damage, no attempts at repair should be made. The module should be returned to the manufacturer for repair. Do not dismantle the module.
- 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.
- Use only a soft dry anti-static cloth to wipe down equipment. Do not use any cleaning agents.

## Before You Begin

**IMPORTANT** This device is intended to be mounted for vertical installation only.  
Exposure to some chemicals may degrade the sealing properties of materials used in the relays.

Observe these guidelines before you install the Stratix 5950 security appliance.

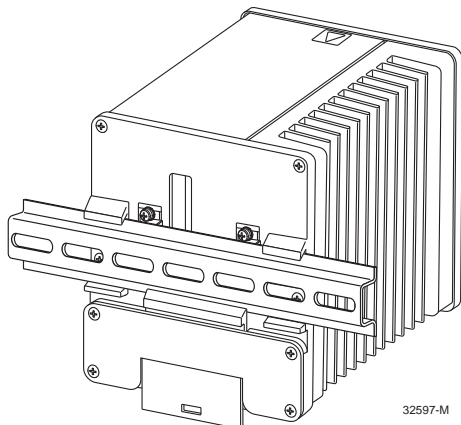
- For 10/100 ports and 10/100/1000 ports, the cable length from an appliance to an attached device cannot exceed 100 m (328 feet).
- Clearance to front and rear panels meets these conditions:
  - Front-panel status indicators can be easily read.
  - Access to ports is sufficient for unrestricted cabling.
  - Front-panel direct current (DC) power connectors and the alarm relay connector are within reach of the connection to the DC power source.
- To help prevent the appliance from overheating, observe the following minimum clearances:
  - Top and bottom: 1.0 in. (25 mm)
  - Sides: 1.0 in. (25 mm)
  - Front: 1.0 in. (25 mm)
- Temperature surrounding the unit does not exceed 60 °C (140 °F).
- Use supply wires suitable for 30 °C (86 °F) above surrounding air temperature.

## Prepare the Appliance



**ATTENTION:** When using DIN rail mounting, additional grounding is also accomplished through the DIN rail to chassis ground. Use zinc-plated yellow-chromate steel DIN rail to assist in proper grounding. The use of other DIN rail materials (for example, aluminum or plastic) that can corrode, oxidize, or are poor conductors, can impede proper grounding. Secure DIN rail to mounting surface approximately every 200 mm (7.8 in.) using end-anchors appropriately and using a washer plate along the entire length of the DIN rail.

1. Mount the appliance.  
The appliance has a spring-loaded latch on the rear panel for mounting on a DIN rail.



- a. Position the rear panel of the appliance directly in front of the DIN rail.  
Make sure that the DIN rail fits in the space between the two hooks near the top of the appliance and the spring-loaded latch near the bottom.
  - b. Holding the bottom of the appliance away from the DIN rail, place the two hooks on the back of the appliance over the top of the DIN rail.
  - c. Push the appliance toward the DIN rail to cause the spring-loaded latch at the bottom rear of the appliance to move down and snap into place.
2. (Optional) Install a small form factor pluggable (SFP) module.



**WARNING:** If you connect or disconnect the communication cable with power applied to this module or any device on the network, an electric arc can occur. This can cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.  
If you connect or disconnect wiring while the field-side power is on, an electric arc can occur. This can cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.



**ATTENTION:** SFP modules are static-sensitive devices. Always use an ESD wriststrap or similar individual grounding device when handling SFP modules. 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.

**IMPORTANT** Installing and removing an SFP module can shorten its useful life. Do not remove and insert SFP modules more often than is absolutely necessary.

## Ground the Appliance



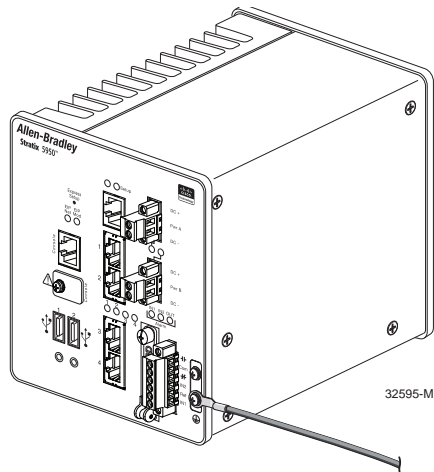
**ATTENTION:** For proper grounding, you must always connect the power supply functional-ground screw when connecting the power supply. You must provide an acceptable grounding path for each device in your application. For more information on proper grounding guidelines, refer to publication [1770-4.1](#), Industrial Automation Wiring and Grounding Guidelines.

To connect to the external grounding screws, use at least a 4 mm<sup>2</sup> conductor.

The ground lug is not supplied with the appliance.

You can use one of these options:

- Single-ring terminal
  - Two single-ring terminals
1. Remove the ground screw from the appliance by using a Phillips screwdriver or a ratcheting torque screwdriver with a Phillips head. Store the ground screw for later use.
  2. Determine the wire length to be stripped by using the manufacturer guidelines.
  3. Insert the ground wire into the ring terminal lug, and using a crimp tool, crimp the terminal to the wire.
  4. If two ring terminals are being used, repeat this action for a second ring terminal.
  5. Slide the ground screw through the terminal.
  6. Insert the ground screw into the ground screw opening.
  7. Tighten the ground screws and ring terminal to the appliance front panel to 0.4 N•m (3.5 lb•in) by using a ratcheting-torque screwdriver. Do not exceed the recommended torque.
  8. Attach the other end of the ground wire to a grounded, bare metal surface, such as a ground bus, a grounded DIN rail, or a grounded bare rack.



## Wire the DC Power Source

The Stratix 5950 security appliance does not support Power over Ethernet (PoE).

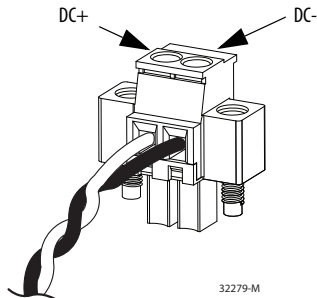


**WARNING:** Before performing any of the following procedures, make sure that power is removed from the DC circuit or the area is nonhazardous before proceeding.



**ATTENTION:** To comply with the CE Low Voltage Directive (LVD), this equipment must be powered from a source compliant with the safety extra low voltage (SELV) or protected extra low voltage (PELV).

1. Measure a length of  $0.82...0.52 \text{ mm}^2$  (18...16 AWG) copper wire long enough to connect to the DC power source.



2. Strip each of the two wires to  $6.3 \text{ mm}$  (0.25 in.)  $\pm$  0.5 mm (0.02 in.) by using an 18-gauge wire-stripping tool.  
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 wire exposed after installation.
3. Insert the exposed part of the positive wire into the connection that is labeled DC+ and the exposed part of the return wire into the connection labeled DC-.  
Make sure that you cannot see any wire lead. Only let wire with insulation extend from the connector.
4. Torque the power connector captive screws (above the installed wire leads) to 0.56 N•m (5.0 lb•in) by using a ratcheting-torque screwdriver.
5. Connect the other end of the positive wire (the one connected to DC+) to the positive terminal on the DC power source.
6. Connect the other end of the return wire (the one connected to DC-) to the return terminal on the DC power source.

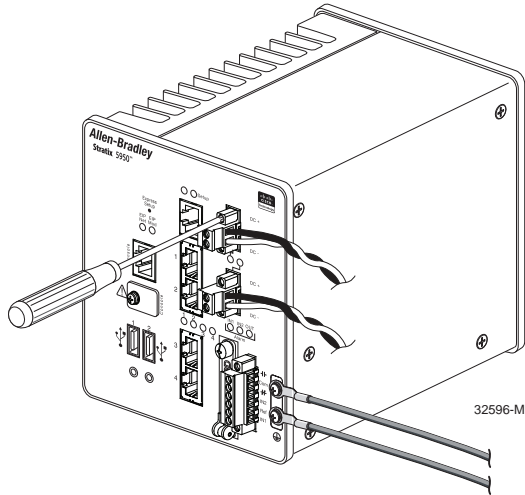
**IMPORTANT** You can use a second power source to provide redundant power. The alarm relays on the appliance can be used to warn you if one of the power supplies fails. The appliance operates properly with only one power source connected at either Pwr A or Pwr B.

7. If you are installing the appliance and are using a second power source, repeat these steps with the second power connector.

## Attach the Power Connector

To attach the power connector, follow these steps.

1. Insert the power connector into the Pwr A receptacle on the appliance front panel.
2. Use a screwdriver to tighten the captive screws on the sides of the power connector.
3. If a second power source is required, insert a second power connector into the Pwr B receptacle on the appliance front panel.
4. Tighten the captive screws on the sides of the second power connector by using a screwdriver.
5. To apply power to an appliance that is directly connected to a DC power source, locate the circuit breaker on the panel board that services the DC circuit and appliance.
6. Switch the circuit breaker to the ON position.

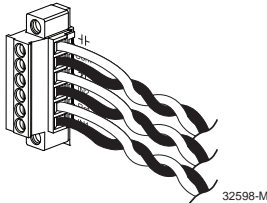


## Wire the Alarm Connection

To wire the alarm connection, follow these steps.

1. Measure a length of 0.82...0.52 mm<sup>2</sup> (18...16 AWG) copper wire long enough to connect to the alarm connector.
2. 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.).
3. 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 wire exposed after installation.
4. Insert the exposed part of the wire into an alarm connection.

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



5. Repeat for all alarm wire connections.
6. Torque the power connector captive screws (above the installed wire leads) to 0.56 N•m (5.0 lb•in) by using a ratcheting-torque screwdriver.
7. Insert the alarm connector into the alarm receptacle on the appliance front panel.
8. Tighten the captive screws on the sides of the alarm connector by using the screwdriver.

## Specifications

Attribute	1783-SAD4TOSBK9, 1783-SAD4TOSPK9, 1783-SAD2T2SBK9, 1783-SAD2T2SPK9
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...60 °C (-40...140 °F)
Temperature, ambient, max	For UL certified enclosed equipment: 60 °C (140 °F)
Temperature, surrounding air, max	For UL certified enclosed equipment: 60 °C (140 °F)
Enclosure type rating	None (open-style)
Voltage and current ratings	12...48V DC, 2.0A Max – User Supply
Alarm relay	30V DC, 1 A or 48V DC, 0.5 A
Isolation voltage	60V (continuous), Basic Insulation Type
Wire size	<ul style="list-style-type: none"> <li>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.</li> <li>Functional Ground 4 mm<sup>2</sup> (12...10 AWG) solid or stranded copper wire.</li> <li>Alarm connections 0.8...1.0 mm<sup>2</sup> (18...16 AWG) solid or stranded, UL/CSA-rated style 1007 or 1569 twisted-pair copper appliance wiring material (AWM) wire (such as Belden part number 9318), 6.3 mm (0.25 in.) ± 0.5 mm (0.02 in.) strip length.</li> <li>DC Power 0.8...1.0 mm<sup>2</sup> (18...16 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max, 6.3 mm (0.25 in.) ± 0.5 mm (0.02 in.) strip length.</li> </ul>
Screw torque	<ul style="list-style-type: none"> <li>Ground terminal, 0.4 N•m (3.5 lb•in)</li> <li>Power terminal, 0.56 N•m (5 lb•in)</li> <li>Alarm terminal, 0.56 N•m (5 lb•in)</li> </ul>
Insulation stripping length	DC Power 6.3 mm (0.25 in.) ± 0.5 mm (0.02 in.)
Wire type	Copper
Pilot duty rating	Alarm: Not rated
North American temp code	T4
ATEX Temp Code	T4

## Additional Resources

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

Resource	Description
Stratix Ethernet Device Specifications Technical Data, publication <a href="#">1783-TD002</a>	Provides specification information for Ethernet switches and other devices.
Stratix 5950 Security Appliance User Manual, publication <a href="#">1783-UM010A</a>	Provides information about installing, configuring, monitoring, and troubleshooting the appliance.
Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a>	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, <a href="http://rok.auto/certifications">rok.auto/certifications</a> .	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.

**Notes:**

# Rockwell Automation Support

Use these resources to access support information.

<b>Technical Support Center</b>	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	<a href="http://rok.auto/support">rok.auto/support</a>
<b>Local Technical Support Phone Numbers</b>	Locate the telephone number for your country.	<a href="http://rok.auto/phonesupport">rok.auto/phonesupport</a>
<b>Technical Documentation Center</b>	Quickly access and download technical specifications, installation instructions, and user manuals.	<a href="http://rok.auto/techdocs">rok.auto/techdocs</a>
<b>Literature Library</b>	Find installation instructions, manuals, brochures, and technical data publications.	<a href="http://rok.auto/literature">rok.auto/literature</a>
<b>Product Compatibility and Download Center (PCDC)</b>	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	<a href="http://rok.auto/pcdc">rok.auto/pcdc</a>

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## 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](http://rok.auto/pec).

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