

Installation Instructions

Original Instructions



Allen-Bradley
by ROCKWELL AUTOMATION

POINT Guard I/O Safety Modules

Catalog Numbers 1734-IB8S, 1734-IB8SK, 1734-IE4S, 1734-IE4SK, 1734-OB8S, 1734-OB8SK, 1734-OBV2S, 1734-OBV2SK

POINT Guard I/O™ safety modules, when used as part of a POINT I/O™ system, distribute safety I/O on a safety-control network that meets the requirements up to and including SIL CL 3, and PLe, Cat. 4 as defined in IEC 61508, IEC 61511, IEC 62061, and ISO 13849-1. These modules are compatible with GuardLogix®, Compact GuardLogix, and SmartGuard™ controllers.



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：在安裝、配置、操作和維護本產品前，請閱讀本文檔以及“其他資源”部分列出的有關設備安裝、配置和操作的相應文檔。除了所有適用規範、法律和標準的相關要求之外，用戶還必須熟悉安裝和接線說明。

安裝、調整、投運、使用、組裝、拆卸和維護等各項操作必須由經過適當訓練的專業人員按照適用的操作規範實施。

如果未按照製造商指定的方式使用該設備，則可能會損害設備提供的保護。

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 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, 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 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.

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, bedient of onderhoud. 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.



**Rockwell
Automation**

Install the Module

IMPORTANT

Follow these guidelines when you install a module:

- Use the module in an environment that is within the general specifications.
- Use the module in an enclosure rated at IP54 (EN/IEC 60579) or higher.
- Use DIN rail that is 35 mm (1.38 in.) wide to mount the terminal base in the control panel.
- Place other heat sources an appropriate distance away from the module to maintain ambient temperatures around the module below specified maximums.
- You can mount your module horizontally or vertically.

Install the Terminal Bases

You need two terminal bases to install each POINT Guard I/O module. Use either: 2 terminal base assemblies, catalog numbers 1734-TB or 1734-TBS, or 2 one-piece terminal bases, catalog numbers 1734-TOP, 1734-TOPS, 1734-TOP3, or 1734-TOP3S.

IMPORTANT

Do not use the 1734-TB3 or 1734-TB3S terminal base assemblies.



WARNING: For ATEX applications, do not exceed 31.2V DC maximum.



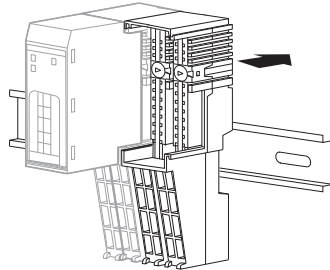
ATTENTION: This product is grounded through the DIN rail to chassis ground. Use zinc-plated yellow-chromate steel DIN rail to help assure proper grounding. The use of other DIN rail materials (for example, aluminum or plastic) that can corrode, oxidize, or are poor conductors, can result in improper 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. See the Industrial Automation Wiring and Grounding Guidelines, Rockwell Automation publication 1770-4.1, for more information.

Always follow the complete instructions and torque specifications in the terminal base installation instructions.

- POINT I/O Terminal Base Assembly, publication [1734-IN511](#)
- POINT I/O One-piece Terminal Base, publication [1734-IN028](#)

To install the terminal base, complete these steps.

1. Position the terminal base as shown.



2. Slide the terminal base and allow the interlocking pieces to engage the adjacent base, power supply, or adapter.
3. To seat the terminal base on the DIN rail, press firmly until the base snaps into place.



In high vibration environments, install slide locks to help prevent movement of the terminal base along the DIN rail.

Remove a Terminal Base

To remove a terminal base, complete these steps.



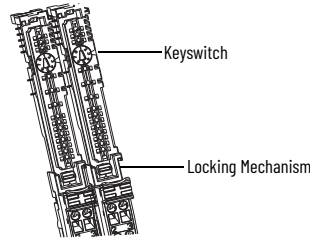
WARNING: When you insert or remove the module while backplane power is on, an electric arc can occur. This arc could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding. Repeated electric arcs cause excessive wear to contacts on both the module and its mating connector. Worn contacts can create electrical resistance that can affect module operation.

1. Pull up on the I/O module to remove it from the terminal base.
2. Remove the module to the right of the base you plan to remove. The interlocking portion of the base sits under the adjacent module.
3. To unlock the terminal base, use a screwdriver to rotate the orange DIN rail lock screw to the vertical locked position.
4. Lift the terminal base off of the DIN rail.

Insert the Module

Insert the module into two terminal bases before or after installing the terminal bases.

1. With a screwdriver, rotate the keyswitch on the terminal base clockwise until the number that is required for the module aligns with the notch to the right of the switch.



2. Verify that the orange DIN rail lock screw is in the horizontal unlocked position. You cannot insert the module if the locking mechanism is unlocked.
3. Insert the module straight down into the side-by-side terminal bases, and press to lock the module in place.

Cat. No.	Key 1 (Left)	Key 2 (Right)
1734-IB8S, 1734-IB8SK	8	1
1734-OB8S, 1734-OB8SK	8	2
1734-OBV2S, 1734-OBV2SK	8	2
1734-IE4S, 1734-IE4SK	8	3

Insert the Removable Terminal Block

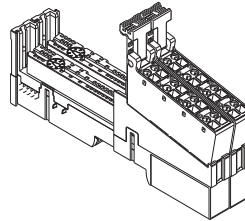
If a removable terminal block (RTB) is supplied with your terminal base assembly, you can remove it by pulling up on the RTB handle. This action lets you remove and replace the terminal base without the need to rewire the RTB.



WARNING: When you connect or disconnect the removable terminal block with field-side power applied, 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.

To insert the RTB, complete the following steps.

1. Insert the bottom of the RTB, or the end opposite the handle, into the base unit. The end has a curved section that engages with the terminal base.



2. Press the top of the RTB onto the terminal base until it locks in place.
3. If an I/O module is installed, snap the RTB handle into place on the module.

For information about how to wire the module and examples, see the POINT Guard I/O Safety Modules User Manual, publication [1734-UM013](#).

Specifications

Attribute	1734-IB8S, 1734-IB8SK	1734-IE4S, 1734-IE4SK	1734-OB8S, 1734-OB8SK	1734-OBV2S, 1734-OBV2SK
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)	-20 °C ≤ Ta ≤ +55 °C (-4 °F ≤ Ta ≤ +131 °F)			
Temperature, surrounding air, max	55 °C (131 °F)			
Enclosure type rating	None (open-style)			
Voltage and current ratings				
Field Power	19.2...28.8V DC, 25 mA (no load), SELV/PELV 150VA max	19.2...28.8V DC, 65 mA, Class 2	19.2...28.8V DC, 50 mA (no load), SELV/PELV 150VA max	19.2...28.8V DC, 65 mA (no load), SELV/PELV 150VA max
Output/Sensor Output ⁽¹⁾	24V DC 0.7 A max per output @ 40 °C (104 °F) 0.5 A max per output @ 55 °C (131 °F) 2.8 A max per module @ 40 °C (104 °F) 0.55 A max per module @ 55 °C (131 °F)	24V DC 150 mA max per output @ 55 °C (131 °F)	24V DC 1.0 A max per output @ 40 °C (104 °F) 0.5 A max per output @ 55 °C (131 °F) 8.0 A max per module @ 40 °C (104 °F) 2.0 A max per module @ 55 °C (131 °F)	24V DC 1.25 A max per output @ 40 °C (104 °F) 0.5 mA max per output @ 55 °C (131 °F) 2.0 A max per module @ 40 °C (104 °F) 0.8 mA max per module @ 55 °C (131 °F)
Input	11...30V DC, 3.5 mA @ 40 °C (104 °F), SELV/PELV 150VA max 11...28.8V DC, 3.5 mA @ 55 °C (131 °F), SELV/PELV 150VA max	+/-10V DC Voltage 0...20 mA Current	—	
Tach	—	0...24V DC	—	
Backplane	5V DC, 125 mA	5V DC, 110 mA	5V DC, 125 mA	5V DC, 125 mA
Isolation voltage	50V (continuous), Basic Insulation Type between field side and system, No isolation between individual channels. Tested according to UL 61010-1			
Wire type	—	Shielded on signal ports	—	
Pilot duty rating	Test Outputs: Not rated	Sensor Outputs: Not rated	Outputs: Not rated	DC-13, DC-14, Inrush Electronically limited 1.8 A
Temp code	T4			
Indicators	1 yellow - lock status 1 green/yellow - power status 8 - I/O channel status	1 yellow - lock status 1 green/yellow - power status 4 - I/O channel status	1 yellow - lock status 1 green/yellow - power status 8 - I/O channel status	1 yellow - lock status 1 green/yellow - power status 4 - I/O channel status

(1) Sensor Output only applies to the 1734-IE4S and 1734-IE4SK modules.

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation. You can view or download publications at rok.auto/literature.

Resource	Description
POINT Guard I/O Safety Modules User Manual, publication 1734-UM013	Describes how to install, configure, program, and use POINT Guard I/O Safety 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 controllers in Studio 5000 Logix Designer® application projects.
GuardLogix 5580 and Compact GuardLogix 5380 Controller Systems Safety Reference Manual, publication 1756-RM012	Provides information on safety application requirements for GuardLogix 5580 and Compact GuardLogix 5380 controllers in Studio 5000 Logix Designer application projects.
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.
Technical Documentation Center, rok.auto/techdocs	Quickly access and download technical specifications, installation instructions, and user manuals.

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.

For technical support, visit rok.auto/support.

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.    

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

EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2663 0600

ASIA PACIFIC: Rockwell Automation SEA Pte Ltd, 2 Corporation Road, #04-05, Main Lobby, Corporation Place, Singapore 618494, Tel: (65) 6510 6608

UNITED KINGDOM: Rockwell Automation Ltd., Pitfield, Kiln Farm, Milton Keynes, MK11 3DR, United Kingdom, Tel: (44)(1908) 838-800

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