Installation Instructions

Original Instructions

Allen-Bradley
by ROCKWELL AUTOMATION

POINT I/O 2 Relay Output Modules

Catalog Numbers 1734-OX2, series C

Topic	Page
Summary of Changes	1
Before You Begin	4
Install the Mounting Base	5
Install the I/O Module	6
Install the Removable Terminal Block	7
Wire the Module	8
Communicate with Your Module	10
Interpret Status Indicators	11
Specifications	12
Additional Resources	14

Summary of Changes

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

Topic	Page
Updated template	throughout
Updated Special Conditions for Safe Use	3
Added grounding information	5
Updated Environmental Specifications	13
Updated Certifications	14

Rockwell Automation

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。
包括安装、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.

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).

WARNING:
- 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.

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 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 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 help prevent personal injury resulting from accessibility to live parts. The enclosure must have suitable flame-retardant properties to help prevent or minimize the spread of flame, complying with a flame spread rating of 5VA or be approved for the application if nonmetallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain 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.

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.	**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.

WARNING: Special Conditions for Safe Use

- This equipment is not resistant to sunlight or other sources of UV radiation.
- This equipment shall be used within its specified ratings defined by Rockwell Automation.
- Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage at the supply terminals to the equipment.
- The instructions in the user manual shall be observed.
- Earthing is accomplished through mounting of modules on rail.
- Devices shall be used in an environment of not more than Pollution Degree 2.

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:
- 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.
- 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 -20...+55 °C (-4...+131 °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

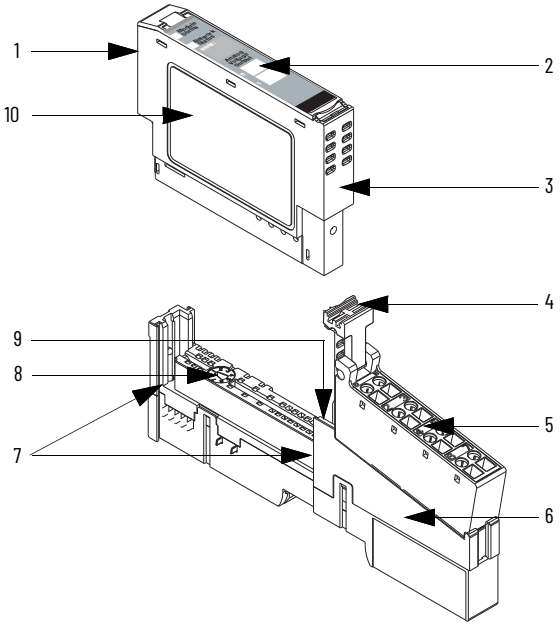
This series C of the POINT I/O™ 2 relay output module can be used with the following:

- DeviceNet® and PROFIBUS adapters
- ControlNet® and EtherNet/IP™ adapters, using Studio 5000 Logix Designer® application version 20 or later

See the figures to familiarize yourself with major parts of the module, noting that the wiring base assembly is one of the following:

- 1734-TB or 1734-TBS POINT I/O two-piece terminal base, which includes the 1734-RTB or 1734-RTBS removable terminal block, and 1734-MB mounting base
- 1734-TOP or 1734-TOPS POINT I/O one-piece terminal base

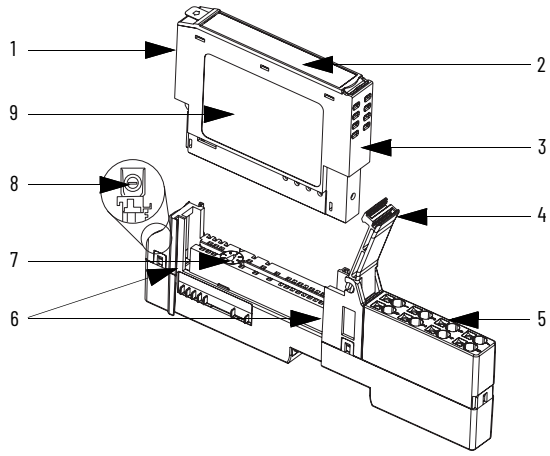
POINT I/O Module with 1734-TB or 1734-TBS Base



Component Description

	Description		Description
1	Module locking mechanism	6	1734-TB or 1734-TBS mounting base
2	Slide-in writable label	7	Interlocking side pieces
3	Insertable I/O module	8	Mechanical keying (orange)
4	Removable terminal block (RTB) handle	9	DIN rail locking screw (orange)
5	Removable terminal block with screw (1734-RTB) or spring clamp (1734-RTBS)	10	Module wiring diagram

POINT I/O Module with 1734-TOP or 1734-TOPS Base



Component Description

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2	Slide-in writable label	7	Mechanical keying (orange)
3	Insertable I/O module	8	DIN rail locking screw (orange)
4	Removable terminal block (RTB) handle	9	Module wiring diagram
5	One-piece terminal base with screw (1734-TOP) or spring clamp (1734-TOPS)		

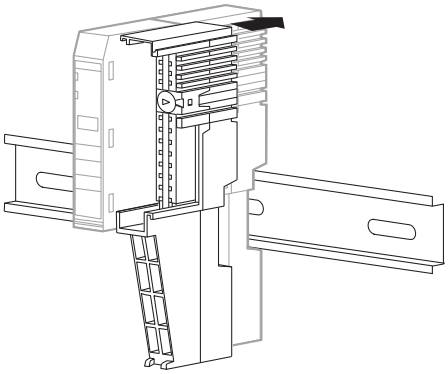
Install the Mounting Base

To install the mounting base on the DIN rail (Allen-Bradley® part number 199-DR1; 46277-3; EN50022), proceed as follows:

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

WARNING: 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.

1. Position the mounting base vertically above the installed units (adapter, power supply, or existing module).



2. Slide the mounting base down allowing the interlocking side pieces to engage the adjacent module or adapter.
3. Press firmly to seat the mounting base on the DIN rail. The mounting base snaps into place.
   Be sure that the orange DIN rail locking screw is in the horizontal position and that it has engaged the DIN rail.

ATTENTION: Use the end cap from your adapter or interface module to cover the exposed interconnections on the last mounting base on the DIN rail. Failure to do so could result in equipment damage or injury from electric shock.

Install the I/O Module

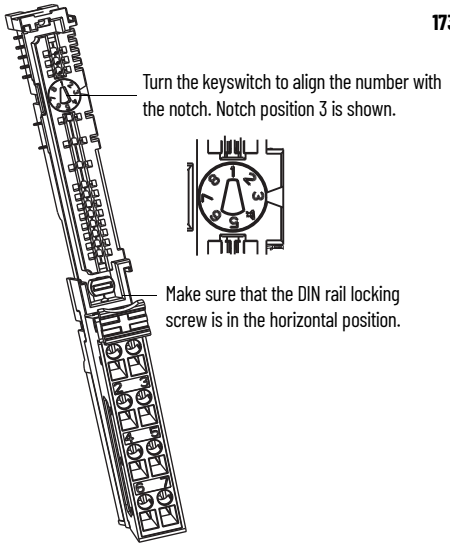
The module can be installed before or after base installation. Make sure that the mounting base is correctly keyed before installing the module into the mounting base. In addition, make sure that the mounting base locking screw is positioned horizontal referenced to the base.

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

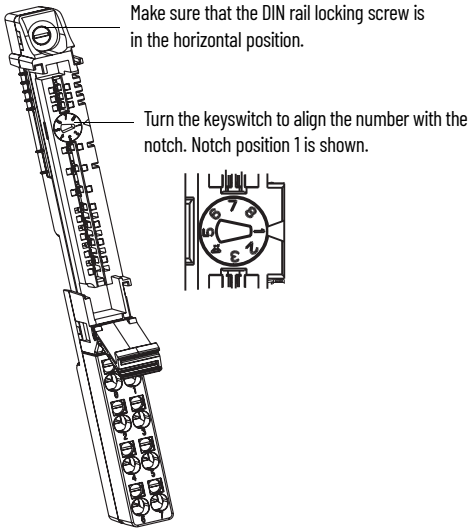
To install the module, proceed as follows.

1. Use a bladed screwdriver to rotate the keyswitch on the mounting base clockwise until the number required for the type of module you are installing aligns with the notch in the base.
2. Verify that the DIN rail locking screw is in the horizontal position. **You cannot insert the module if the locking mechanism is unlocked**.

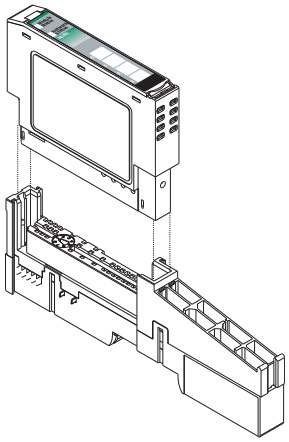
1734-TB Base



1734-TOP Base



3. Insert the module straight down into the mounting base and press to secure. The module locks into place.

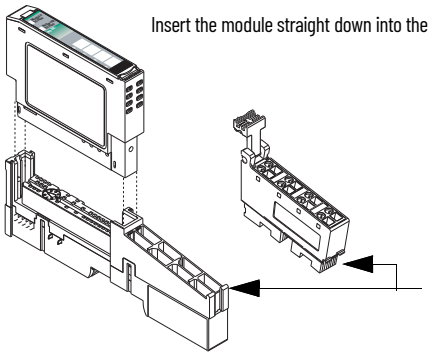


Install the Removable Terminal Block

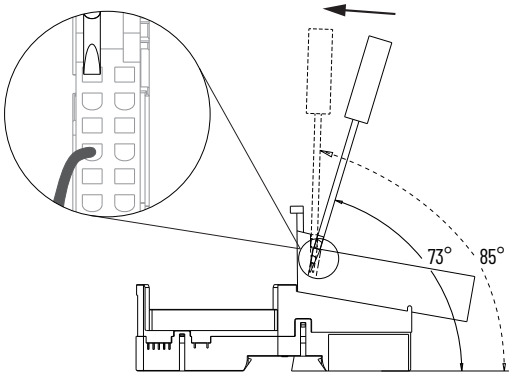
An RTB is supplied with your wiring base assembly. To remove, pull up on the RTB handle. This allows the mounting base to be removed and replaced as necessary without removing any of the wiring. To reinsert the Removable Terminal Block, proceed as follows.

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

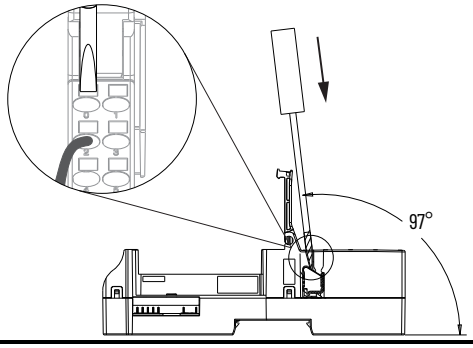
1. Insert the end opposite the handle into the base unit.
   This end has a curved section that engages with the wiring base.
2. Rotate the terminal block into the wiring base until it locks itself in place.
3. If an I/O module is installed, snap the RTB handle into place on the module.



WARNING: For 1734-RTBS and 1734-RTB3S, to latch and unlatch the wire, insert a bladed screwdriver (catalog number 1492-N90 – 3 mm diameter blade) into the opening at approximately 73° (blade surface is parallel with top surface of the opening) and push up gently.



WARNING: For 1734-TOPS and 1734-TOP3S, to latch and unlatch the wire, insert a bladed screwdriver (catalog number 1492-N90 – 3 mm diameter) into the opening at approximately 97° (blade surface is parallel with top surface of the opening) and press in (do not push up or down).



Remove a Mounting Base

To remove a mounting base, you must remove any installed module and the module installed in the base to the right. Remove the removable terminal block, if wired.

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

WARNING: When you connect or disconnect the Removable Terminal Block (RTB) with field side power applied, an electric arc can occur. This could cause an explosion in hazardous location installations.
Be sure that power is removed or the area is nonhazardous before proceeding.

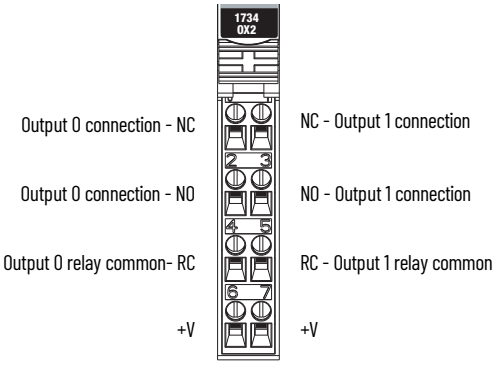
1. Unlatch the RTB handle on the I/O module.
2. Pull on the RTB handle to remove the removable terminal block.
3. Press the module lock on the top of the module.
4. Pull on the I/O module to remove from the base.
5. Repeat steps 1, 2, 3, and 4 for the module to the right.
6. Use a small-bladed screwdriver to rotate the orange base locking screw to a vertical position.
   This releases the locking mechanism.
7. Lift straight up to remove.

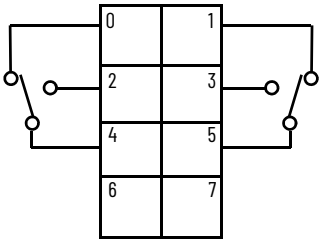
Wire the Module

To wire the module, see the diagrams and tables.

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.

POINT I/O 2 Relay Output Module

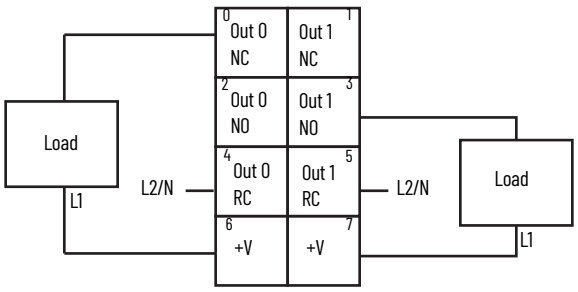




NC = Normally closed
NO = Normally open
RC = Relay common
+V = Positive supply

ATTENTION: Relay contacts are not powered by the internal power bus. Load power can be provided by the internal power bus or an external power source.

POINT I/O 2 Relay Output Module Wiring — Load Powered by Internal Power Bus



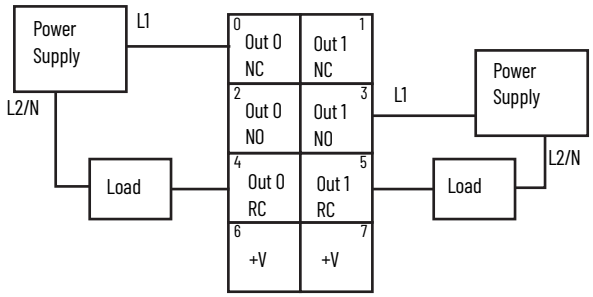
NC = Normally closed
NO = Normally open
RC = Relay common
+V = Positive supply
Out = Output channel relay contacts
Power Supply = can range from +5V DC...240V AC

Table 1 - Module Wiring

Channel	Output	Common	Supply
0 (NC)	0	4	6
0 (NO)	2	4	6
1 (NC)	1	5	7
1 (NO)	3	5	7

Supply voltage can range from +5V DC...240V AC, depending on relay load.
12V/24V DC, 120V/240V AC power for the module is provided by the internal power bus.

POINT I/O 2 Relay Output Module Wiring — Load powered by external power bus



NC = Normally closed
NO = Normally open
RC = Relay common
+V = Positive supply
Out = Output channel relay contacts
Power Supply = can range from +5V DC...240V AC

Channel	Output	Common	Supply
0 (NC)	0	4	6
0 (NO)	2	4	6
1 (NC)	1	5	7
1 (NO)	3	5	7

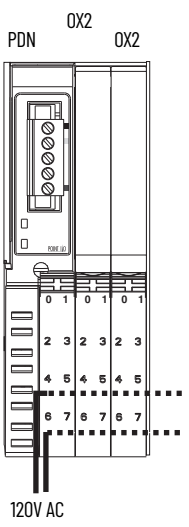
Supply voltage can range from +5V DC to 240V AC, depending on relay load.
12V/24V DC, 120V/240V AC power for the module is provided by the internal power bus.

ATTENTION: This product is grounded through the DIN rail to chassis ground. Use zinc-plated chromate-passivated steel DIN rail to ensure 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 Industrial Automation Wiring and Grounding Guidelines, Rockwell Automation publication 1770-4.1, for more information.

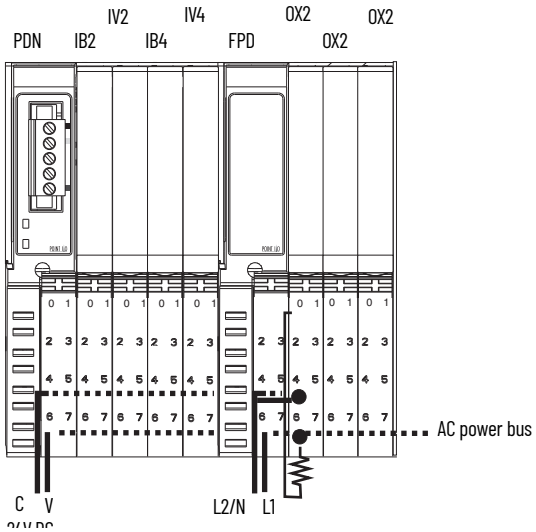
ATTENTION:
- Do not attempt to increase load current or wattage capability beyond the maximum rating by connecting 2 or more outputs in parallel. The slightest variation in relay switching time may cause one relay to momentarily switch the total load current.
- Verify that all relay wiring is properly connected before applying any power to the module.
- Total current draw through the wiring base unit is limited to 10 A. Separate power connections to the terminal base unit may be necessary.
- Use the end cap from your adapter or interface module to cover the exposed interconnections on the last mounting base on the DIN rail. Failure to do so could result in equipment damage or injury from electric shock.

Wiring Alternatives

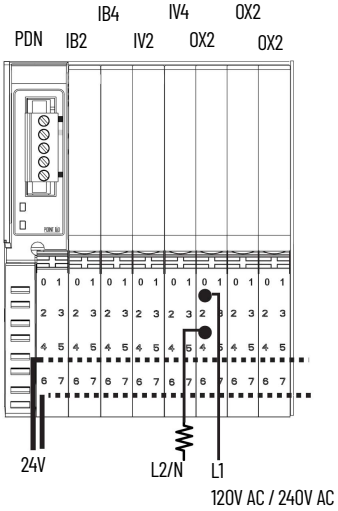
Wiring with AC modules only



Wiring using a 1734-FPD to create a new AC power bus



Wiring Using External Power Source for AC Relay Power



Communicate with Your Module

POINT I/O modules send (produce) and receive (consume) I/O data (messages). You map this data onto the processor memory.

This output module does not produce input data (scanner Rx). This module consumes 1 byte of I/O data (scanner Tx).

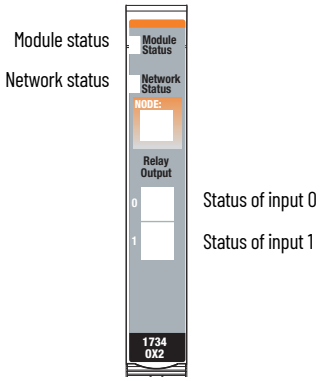
Default Data Map

Message size: 1 Byte

	07	06	05	04	03	02	01	00	
Consumes (scanner Tx)	Not used						Ch1	Ch0	Channel state
Where:	0 = NO contact Off, NC contact On 1 = NO contact On, NC contact Off								

Interpret Status Indicators

See the following diagram and table for information on how to interpret the status indicators.



Indicator Status for Module

	Status	Description
Module status	Off	No power is applied to device.
	Green	Device is operating normally.
	Flashing green	Device needs commissioning due to missing, incomplete, or incorrect configuration.
	Flashing red	Recoverable fault is present.
	Red	Unrecoverable fault is present. Self-test failure is present (checksum failure, or ram test failure at power cycle). Firmware fatal error is present.
	Flashing red/green	Device is in self-test mode.
Network status	Off	Device is not online: • Device has not completed dup_MAC-id test. • Device is not powered – Check the module status indicator.
	Flashing green	Device is online but has no connections in the established state.
	Green	Device is online and has connections in the established state.
	Flashing red	One or more I/O connections are in timed-out state.
	Red	Critical link failure – Failed communication device. Device has detected an error that prevents it from communicating on the network.
	Flashing red/green	Communication faulted device – The device has detected a network access error and is in communication faulted state. Device has received and accepted an Identity Communication Faulted Request – Long protocol message.
I/O status	Off	All outputs are inactive.
	Yellow	One or more outputs is active and under control.

Specifications

Output Specifications

Attribute	Value
Number of outputs	2 form C isolated (normally open; normally closed), electromechanical relays
Output voltage range, load dependent Resistive	5…28.8V DC @ 2.0 A 48V DC @ 0.5 A 125V DC @ 0.25 A 125V AC @ 2.0 A 240V AC @ 2.0 A
Output current, at rated power Resistive	2 A @ 5…28.8V DC 0.5 A @ 48V DC 0.25 A @ 125V DC 2 A @ 125V AC 2 A @ 240V AC
Output current, at rated power Inductive	2.0 A steady state @ 5…28.8V DC, L/R = 7 ms 0.5 A steady state @ 48V DC, L/R = 7 ms 0.25 A steady state @ 125V DC, L/R = 7 ms 2.0 A steady state, 15 A make @ 125V AC, PF = cos θ = 0.4 2.0 A steady state, 15 A make @ 240V AC, PF = cos θ = 0.4
Output power, steady state, max Resistive	250 W for 125V AC 480 W for 240V AC 60 W for 28.8V DC 24 W for 48V DC 31 W for 125V DC
Output power, steady state, max Inductive	250VA for 125V AC 480VA for 240V AC 60VA for 28.8V DC 24VA for 48V DC 31VA for 125V DC
Off-state leakage, max	2.0 mA @ 240V AC bleed resistor through snubber circuit
Initial contact resistance	30 mΩ
Switching frequency, max	1 operation/3 s (0.3 Hz rated load)
Operate/release time, max	10 ms
Bounce time, mean	1.2 ms
Contact load, per point, min	5 µA
Output signal delay, max Off to On	10 ms (time from valid output on signal to relay energization by module)
Output signal delay, max On to Off	10 ms (time from valid output off signal to relay de-energization by module)
Expected life of electrical contacts, min	1,000,00 cycles resistive 10,000 cycles inductive
Fusing	Module outputs are not fused.(1)

(1) If fusing is required, you must supply external fusing.

General Specifications

Attribute	Value
Terminal base	1734-TB, 1734-TBS, 1734-TOP, or 1734-TOPS wiring base assembly
Terminal base screw torque	0.6 N•m (7 lb•in)
Indicators, logic side	2 green/red – module/network status 2 yellow – output status
Keyswitch position	7
POINTBus™ current, max	100 mA @ 5V DC
Power dissipation, max	0.5 W
Thermal dissipation, max	1.7 BTU/hr
Isolation voltage	250V (continuous), Reinforced insulation type Tested @ 2550V DC for 1 s, field-side to system, and between contacts sets
Field power bus Supply voltage, nom Voltage range, max Supply current, max	 None required 240V AC 2 A per channel, 4 A per module
Dimensions (HxWxD), approx.	56.0 x 12.0 x 75.5 mm (2.21 x 0.47 x 2.97 in.)
Weight, approx.	36.9 g (1.30 oz.)
Wiring category[1] [2]	1 – on signal ports
Wire size	Determined by installed terminal block
Pilot duty rating	15 A inrush AC
Enclosure type rating	None (open-style)
North American temp code	T5

(1) Use this conductor category information for planning conductor routing as described in Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.
(2) Use this conductor category information for planning conductor routing as described in the appropriate System Level Installation Manual.

Environmental Specifications

Attribute	Value
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)
Temperature, nonoperating	IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold), IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat), IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock): -40...+85 °C (-40...+185 °F)
Relative humidity	IEC 60068-2-30 (Test Db, Unpackaged Damp Heat): 5...95% noncondensing
Vibration	IEC60068-2-6 (Test Fc, Operating): 5 g @ 10...500 Hz
Shock, operating	EC 60068-2-27 (Test Ea, Unpackaged Shock): 30 g
Shock, nonoperating	EC 60068-2-27 (Test Ea, Unpackaged Shock): 50 g
Emissions	CISPR 11 Group 1, Class A
ESD immunity	IEC6100-4-2: 8 kV air discharges
Radiated RF immunity	IEC 61000-4-3: 10V/m with 1 kHz sine-wave 80% AM from 80...6000 MHz

Environmental Specifications (Continued)

Attribute	Value
EFT/B immunity	IEC 61000-4-4: ±3 kV @ 5 kHz on signal ports
Surge transient immunity	IEC 61000-4-5: ±1 kV line-earth (DM) and ±2 kV line-earth (CM) on signal ports
Conducted RF immunity	IEC61000-4-6: 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz

Certifications

Certification (when product is marked)(1)	Value
c-UL-us	UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: EN 61326-1; Measurement/Control/Laboratory use, Industrial requirements EN 61000-6-2; Industrial Immunity EN 61000-6-4; Industrial Emissions EN 61131-2; Programmable Controllers (Clause 8, Zone A & B) UK Statutory Instrument 2016 No. 1101 and European Union 2014/35/EU LVD, compliant with: EN 61131-2; Programmable Controllers (Clause 11) UK Statutory Instrument 2012 No. 3032 and European Union 2011/65/EU RoHS, compliant with: EN IEC 63000; Technical documentation
RCM	Australian Radiocommunications Act, compliant with: AS/NZS CISPR11; Industrial Emissions.
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3
EAC	Russian Customs Union TR CU 020/2011 EMC Technical Regulation Russian Customs Union TR CU 004/2011 LV Technical Regulation
Morocco	Arrêté ministériel n° 6404-15 du 1 er muharram 1437 Arrêté ministériel n° 6404-15 du 29 ramadan 1436
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations

(1) See the Product Certification link at rok.auto/certifications for Declaration of Conformity, Certificates, and other certification details.

Additional Resources

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

Publication	Publication Number
POINT I/O Digital and Analog Modules and POINTBlock I/O Modules User Manual, publication 1734-UM001	Describes how to configure and operate POINT I/O digital, analog, and POINTBlock I/O modules.
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.

Notes:

Rockwell Automation Support

Use these resources to access support information.

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

Documentation Feedback

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.

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.

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, Fax: (1) 414.382.4444
EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2663 0600, Fax: (32) 2 663 0640
ASIA PACIFIC: Rockwell Automation SEA Pte Ltd, 2 Corporation Road, #04-05, Main Lobby, Corporation Place, Singapore 618494, Tel: (65) 6510 6608, FAX: (65) 6510 6699
UNITED KINGDOM: Rockwell Automation Ltd., Pitfield, Kiln Farm, Milton Keynes, MK11 3DR, United Kingdom, Tel: (44)(1908) 838-800, Fax: (44)(1908) 261-917

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Publication 1734-IN587C-EN-P - June 2023 | Supersedes Publication 1734-IN587B-EN-P-March 2002

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