Installation Instructions

Original Instructions

Allen-Bradley
by ROCKWELL AUTOMATION

POINT I/O Dual-port EtherNet/IP Adapter

Catalog Numbers 1734-AENTR, 1734-AENTRK, series C

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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.

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

如果將設備用於非製造商指定的用途時，可能會造成設備所提供的保護功能受損。

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

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

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

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

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

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

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

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

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

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

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

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

Environment and Enclosure

ATTENTION: This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in 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 prevent personal injury resulting from accessibility to live parts. The enclosure must have suitable flame-retardant properties to prevent or minimize the spread of flame, complying with a flame spread rating of 5VA or be approved for the application if nonmetallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain more information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.

In addition to this publication, see the following:

- Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1, for additional installation requirements.
- NEMA Standard 250 and EN/IEC 60529, as applicable, for explanations of the degrees of protection provided by enclosures.

Preventing 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.

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.

UK and European Hazardous Location Approval

The following applies to products marked Ⓔx II 3 G:

- Are intended for use in potentially explosive atmospheres as defined by UKEX regulation 2016 No. 1107 and European Union Directive 2014/34/EU and has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of Category 3 equipment intended for use in Zone 2 potentially explosive atmospheres, given in Schedule 1 of UKEX and Annex II of this Directive.
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-7, and EN IEC 60079-0.
- Are Equipment Group II, Equipment Category 3, and comply with the Essential Health and Safety Requirements relating to the design and construction of such equipment given in Annex II to Directive 2014/34/EU. See the UKEx and EU Declaration of Conformity at rok.auto/certifications for details.
- The type of protection is Ex ec IIC T4 Gc according to EN IEC 60079-0:2018, EXPLOSIVE ATMOSPHERES - PART 0: EQUIPMENT - GENERAL REQUIREMENTS, Issue Date 07/2018, and CENELEC EN IEC 60079-7:2015+A1:2018, Explosive atmospheres. Equipment protection by increased safety "e".
- Comply with Standard EN IEC 60079-0:2018, EXPLOSIVE ATMOSPHERES - PART 0: EQUIPMENT - GENERAL REQUIREMENTS, Issue Date 07/2018, and CENELEC EN IEC 60079-7:2015+A1:2018 Explosive atmospheres. Equipment protection by increased safety "e", reference certificate number DEMKO 04 ATEX 0330347X and UL22UKEX2478X.
- 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.
- May have catalog numbers followed by a "K" to indicate a conformal coating option.

IEC Hazardous Location Approval

The following applies to products IECEx certification:

- 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 to IEC 60079-0.
- The type of protection is Ex eC IIC T4 Gc according to IEC 60079-0 and IEC 60079-7.
- Comply with Standards IEC 60079-0, Explosive atmospheres - Part 0: Equipment - General requirements, Edition 7, Revision Date 2017 and IEC 60079-7, 5.1 Edition revision date 2017, Explosive atmospheres - Part 7: Equipment protection by increased safety "e", reference IECEx certificate number IECEx UL 20.0072X.
- May have catalog numbers followed by a “K” to indicate a conformal coating option.

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.

WARNING: Special Conditions for Safe Use:

- This equipment is not resistant to sunlight or other sources of UV radiation.
- This equipment shall be mounted in an UKEX/ATEX/IECEx Zone 2 certified enclosure with a minimum ingress protection rating of at least IP54 (in accordance with EN/IEC 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.
- 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.
- This equipment must be used only with UKEX/ATEX/IECEx certified Rockwell Automation backplanes.
- Earthing is accomplished through mounting of modules on rail.
- Devices shall be used in an environment of not more than Pollution Degree 2.

WARNING: Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product.

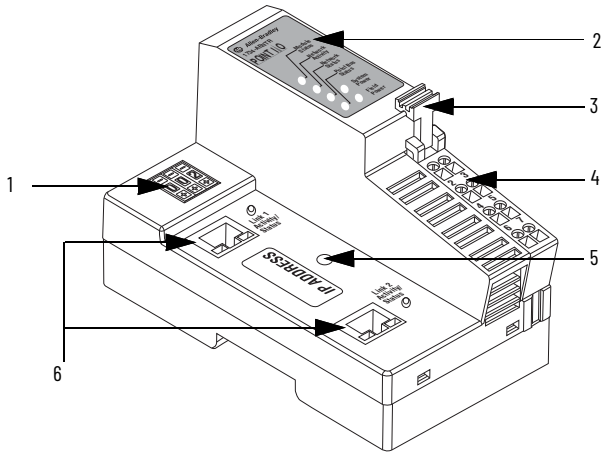
WARNING: Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous.

About the Adapter

Read this publication for information about the series C, POINT I/O™ dual-port EtherNet/IP™ adapter, a communications adapter for POINT I/O modules.

This adapter is for the POINT I/O backplane that provides connectivity to an EtherNet/IP network with two RJ45 connectors for 2 port pass-through to support daisy-chain or ring, and the existing star and tree network topologies.

POINT I/O Dual-port EtherNet/IP Adapter, Series C



	Description		Description
1	Node address pen push thumbwheel	4	Removable Terminal Block (RTB)
2	Status indicators	5	DIN rail locking screw (orange)
3	RTB handle	6	Ethernet network RJ45 connectors

Before You Begin

To effectively use your adapter, note the following considerations.

Firmware Backward Compatibility

The 1734-AENTR and 1734-AENTRK Add-on Profiles are compatible with Studio 5000 Logix Designer® application.

The 1734-AENTR and 1734-AENTRK adapters accept I/O connections with compatible electronic keying for the 1734-AENT or 1734-AENTK. This allows the 1734-AENTR and 1734-AENTRK adapter to be used in a daisy-chain topology with the 1734-AENT or 1734-AENTK Add-on Profile used for the 1734-AENTR and 1734-AENTRK.

Add-on Profiles can be downloaded from rok.auto/pcdc.

Understand Messaging

Class 3 (Explicit Message) requests through the 1734-AENTR or 1734-AENTRK adapter to a specific POINT I/O module do not always receive a response from the I/O modules. In the case where the I/O module does not reply to the request, the adapter responds with an error code indicating a time-out.

Configure Autobaud

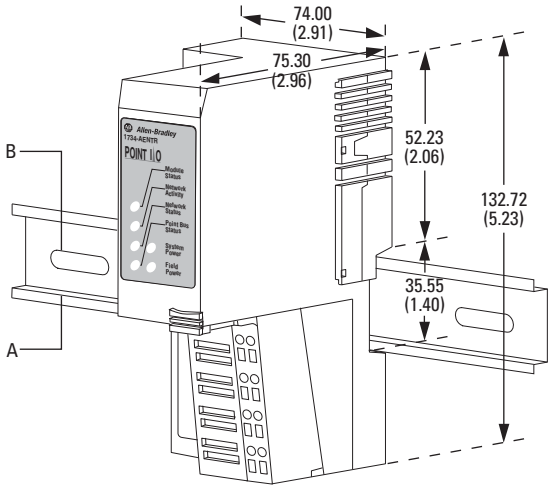
The adapter cannot reconfigure an I/O module that you previously configured to operate at a fixed baud rate. When you reuse a POINT I/O module from another POINT I/O system, configure the module to autobaud before using it with the adapter.

Install the Adapter

Follow this procedure to install the adapter on the DIN rail.

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

1. Position the adapter vertically above an IEC standard (35 x 7.5 x 1 mm) top-hat DIN rail at a slight angle (DIN rail: Allen-Bradley® part number 199-DR1; 46277-3; EN50022). Make sure that the DIN rail lock is in a horizontal position.



A = DIN rail
B = Secure DIN rail approximately every 200 mm (7.8 in.)

Dimensions are in mm (in.)

2. Press down firmly to install the adapter on a DIN rail, noting that the locking mechanism locks the adapter to the DIN rail.

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

ATTENTION: Allow 25.4 mm (1 in.) of space between adjacent equipment for adequate ventilation.

3. Set the node address on the node address pen push thumbwheel. See Set the Network Address for more information on setting the IP address.
4. Slide the safety end cap up to remove it, exposing the backplane and power interconnections.

ATTENTION: Do not discard the end cap. Use this end cap 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.

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.

Thumbwheel Settings

You can set the thumbwheels on the adapter to perform different functions. See the following table to view the valid thumbwheel settings and the corresponding function.

Setting	Function
001...254	Sets the network address.
801...864	Sets the chassis size (firmware revision 5.015 or later).
888	Restores default factory settings.

Set the Chassis Size

The I/O adapters for EtherNet/IP require configuration of their chassis size before you can make any I/O connections. The factory default setting for the chassis size is one slot, which represents the adapter by itself.

ATTENTION: Check the Product Compatibility and Download Center (PCDC) to verify the compatibility between your POINT I/O module and the POINT I/O adapter.

You must set the chassis size to a number equaling one slot for the adapter plus one slot for each I/O module present in the backplane of the adapter. For example, if your system consists of one adapter and four I/O modules, set the chassis size to 5.

See the POINT I/O and ArmorPOINT® I/O Dual-port EtherNet/IP Adapters User Manual, publication 1734-UM017 for instructions on how to set the chassis size.

Set the Network Address

The adapter ships with the pen push thumbwheel switches set to 999 and DHCP enabled. You can set the network Internet Protocol (IP) address in the following ways:

- Use the pen push thumbwheel switches on the adapter.
- Use a Dynamic Host Configuration Protocol (DHCP) server, such as Rockwell Automation® BootP/DHCP.
- Retrieve the IP address from nonvolatile memory.

The adapter reads the thumbwheel switches first to determine if the switches are set to a valid number. You set the node address using the 3-position pen push thumbwheel switch using a pen tip. Press the + or - buttons with a pen tip to change the number.

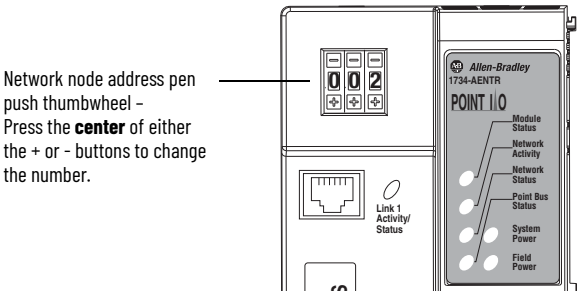
Press a pen tip into the center of the button cross, perpendicular to the button. You only need a small amount of force to press the button (approximately 2 N).

WARNING: When you change switch settings 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.

Valid settings range from 001...254. When you use the thumbwheel to assign an address and set it to 001, the adapter gateway address is set to 0.0.0.0. and the subnet mask is 255.255.255.0. When you use the thumbwheel to assign an address and set it between 002...254, the adapter gateway address is set to 192.168.1.1.

The adapter does not have a host name assigned, or use any Domain Name System when using the thumbwheel settings.

Network Address Thumbwheel



If you set the switches to an invalid number (for example, 000 or a value greater than 254 excluding 888), the adapter checks to see if you enabled DHCP.

DHCP State	Adapter Action
Enabled	Asks for an address from a DHCP server. The DHCP server also assigns other Transport Control Protocol (TCP) parameters.
Not enabled	Uses the IP address (along with other TCP configurable parameters) stored in nonvolatile memory.

See the POINT I/O and ArmorPOINT I/O Dual-port EtherNet/IP Adapters User Manual, publication 1734-UM017 for more information on configuration settings.

Replace the Adapter

Use these procedures to install a replacement adapter to an existing system.

1. Disconnect the Ethernet connectors from the adapter.

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.

2. Pull up on the RTB handle to remove the terminal block.

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.

3. Remove the adjacent module from its 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.

4. Use a small bladed screwdriver to rotate the DIN rail locking screw to a vertical position. This releases the locking mechanism.
5. Lift straight up to remove.

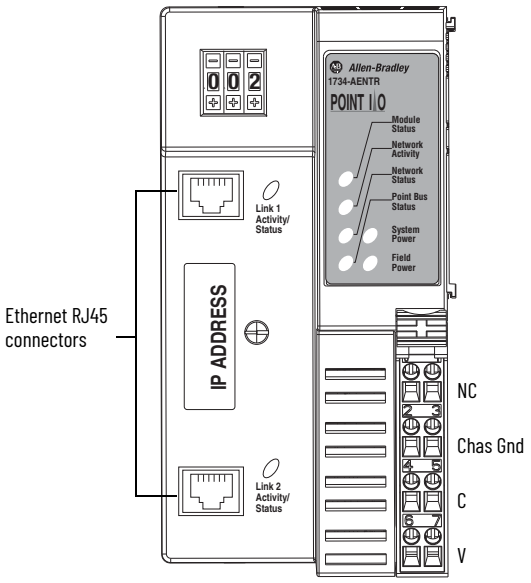
ATTENTION: Do not remove or replace an adapter while power is applied. Interruption of the backplane can result in unintentional operation or machine motion.

6. Slide the safety end cap up to remove it, which exposes the backplane and power connections.
7. Position the replacement adapter vertically above the DIN rail, making certain the DIN rail lock is in the horizontal position.
8. Slide the adapter down, allowing the interlocking side pieces to engage the adjacent module.
9. Press firmly to seat the adapter on the DIN rail, noting that the adapter locking mechanism will snap into place.
10. Set the node address on the Node Address pen push thumbwheel using a pen tip.

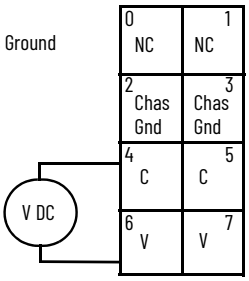
Press a pen tip into the center of the button cross, perpendicular to the button. You only need a small amount of force to press the button (approximately 2 N).

11. Insert the end of the terminal block opposite the handle into the base unit, noting that this end has a curved section that engages with the wiring base.
12. Rotate the terminal block into the wiring base until it locks itself into place.
13. Replace the adjacent module in its base.
14. Reconnect the Ethernet cables to the adapter.
15. Set the IP address for this module.
16. Configure the adapter chassis size.

Wire the Adapter



NC = No Connection
Chas GND = Chassis Ground
C = Common
V = Supply



IMPORTANT Do not connect 120/240V AC power to this supply. This DC supply is connected to the internal power bus.

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.

WARNING: If you connect or disconnect wiring while the field-side power is on, an electric arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

WARNING: Do not wire more than two conductors on any single terminal.

WARNING: To comply with the CE Low Voltage Directive (LVD), this equipment must be powered from a Safety Extra Low Voltage (SELV) or Protected Extra Low Voltage (PELV) compliant source.

Interpret Status Indicators

See Figure 1 and Table 1 for information on how to interpret the status indicators.

Figure 1 - POINT I/O Dual-port EtherNet/IP Adapter, Series C

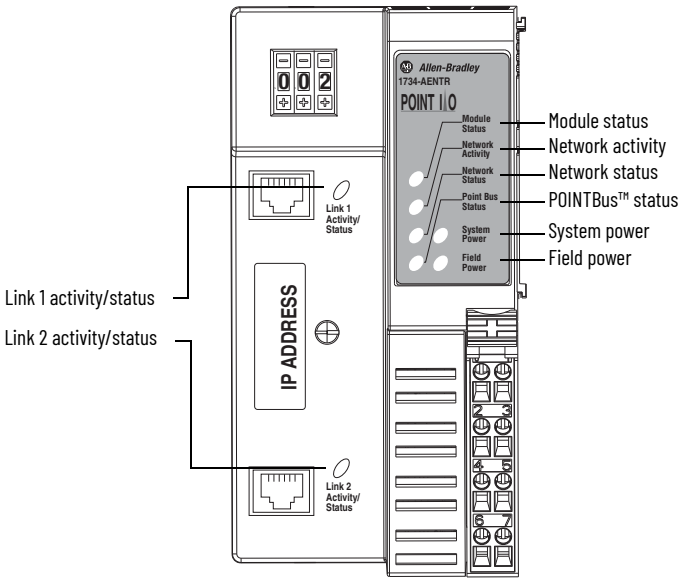


Table 1 - Indicator Status for Modules

Indicator	Status	Description
Module status	Off	No power is applied to the device.
	Flashing green	The device needs commissioning due to missing, incomplete, or incorrect configuration.
	Steady green	The device is operating normally.
	Flashing red	A recoverable fault. Complete firmware update, verify address switches.
	Steady red	Unrecoverable fault — May require device replacement.
	Flashing red/green	Module self-test
Network activity	Off	No link established with Port 1 or Port 2.
	Flashing green	Transmit or receive activity present on Port 1 and/or Port 2 @ 100 Mb. Transmit or receive activity present on Port 1 and/or Port 2. One port @ 100 Mb and the other port @ 10 Mb.
	Solid green	Link established with Port 1 and/or Port 2 @ 100 Mb. Link established with Port 1 and Port 2. One port @ 100 Mb and the other port @ 10 Mb.
	Solid yellow	Link established with Port 1 and/or Port 2 @ 10 Mb.
	Flashing yellow	Transmit or receive activity present on Port 1 and/or Port 2 @ 10 Mb.

Table 1 - Indicator Status for Modules (Continued)

Indicator	Status	Description
Network status	Off	The device is not online: • The device has not completed the dup_MAC_id test. • The device is not powered — Check the module status indicator.
	Flashing green	The device is online but has no CIP™ connections in the established state.
	Solid green	The device is online and has CIP connections in the established state.
	Flashing red	One or more CIP connections are in a timed-out state. Check for I/O module failure and controller operation. Note: This does not apply to POINT Guard I/O™ connection timeout.
	Solid red	Duplicate IP address is detected. Verify IP address setting and correct, as needed.
	Flashing red/green	Module self-test
POINTBus status	Off	The device is not online. - Device has not completed Dup_MAC_ID test. - Device not powered - check module status indicator.
	Flashing green	The device is online but has no connections in the established state. Firmware (NVS) update in progress.
	Solid green	An adapter is online with connections established.
	Flashing red	A recoverable fault has occurred: • At cycle power, the number of expected modules does not equal the number of modules present. • A module is missing. • Node fault (I/O connection timeout) occurred.
	Solid red	Unrecoverable fault occurred — The power to the POINTBus is off.
	Flashing red/green	The LED powerup test is in progress.
System power	Off	Not active. Adapter power is Off or there is a DC-DC converter problem.
	Solid green	System power is On. DC-DC converter output is active (5V).
Field power	Off	Not active. Adapter power is Off.
	Solid green	Power is On. 24V input is present.
Link 1 or Link 2 activity / status	Off	No link established.
	Solid green	Link established @ 100 Mbps.
	Flashing green	Transmit or receive activity present on indicated port @ 100 Mbps.
	Solid yellow	Link established @ 10 Mbps.
	Flashing yellow	Transmit or receive activity present on indicated port @ 10 Mbps.

Specifications

Attribute	Value
Expansion I/O capacity, max	• 63 modules • Up to 5 rack-optimization (for digital modules only) and/or enhanced rack-optimization (for digital, analog, and specialty modules) connections • 31 direct connections(1) • 1734-AENTR, 1734-AENTRK backplane current output = 0.8 A • Actual number of modules can vary • Add up current requirements of modules you want to use to make sure they do not exceed the amperage limit of 0.8 A for the 1734-AENTR or 1734-AENTRK adapter • Backplane current can be extended beyond 0.8 A by 1734-EP24DC or 1734-EPAC backplane extension power supplies • Add multiple 1734-EP24DC or 1734-EPAC power supplies to reach the 63 module max
POINTBus current requirements, max	• 50 mA (1734-IB4D) • 75 mA (1734-IB2, 1734-IB4, 1734-IB8, 1734-IV2, 1734-IV4, 1734-OB2, 1734-OB4, 1734-OB8, 1734-OB2E, 1734-OB2EP, 1734-OB4E, 1734-OB8E, 1734-OV2E, 1734-OV4E, 1734-232ASC, 1734-485ASC, 1734-ARM, 1734-IV8, 1734-OV8E, 1734-IE4C, 1734-IE8C, 1734-OE4C, 1734-IA4, 1734-IM4, 1734-OA4, 1734-IR2E, 1734-IE2C, 1734-OE2C, 1734-IE2V, 1734-OE2V, 1734-IA2, 1734-IM2, 1734-OA2) • 80 mA (1734-OW2) • 90 mA (1734-OW4, 1734-OW4K) • 100 mA (1734-OX2, 1734-8CFG, 1734-8CFGDLX, 1734-4IOL) • 110 mA (1734-SSI) • 160 mA (1734-IJ2, 1734-IK2) • 175 mA (1734-IT2I) • 180 mA (1734-VHSC5, 1734-VHSC24) • 220 mA (1734-IR2, 1734-IR2E)
Module location	Starter module - Left side of the POINT I/O system

(1) Maximum 31 direct connections for standard I/O or maximum 20 direct connections if any safety I/O module resides in the backplane.

General Specifications

Attribute	Value
Indicators	3 red/green status indicators on CPU: – Module status – Network status (Ports 1 and 2 combined) – POINTBus status 1 green/yellow status indicator on CPU: – Network activity (Ports 1 and 2 combined) 2 green/yellow status indicators on base: – Link 1 activity/status – Link 2 activity/status 2 green power supply status indicators on DC-DC Converter: – System power (5V DC to POINTBus Out) – Field power (24V DC from Field In)
Power consumption, max	10.4 W @ 28.8V DC
Power dissipation, max	6.3 W @ 28.8V DC
Input overvoltage protection	Reverse polarity protected
Thermal dissipation, max	21.5 BTU/hr @ 28.8V DC
Isolation voltage	50V (continuous), Reinforced Insulation Type, between all circuits Type tested @ 500V AC for 60 s
Field power supply	10…28.8V DC @ 10 A
Field power output	10…28.8V DC @ 9 A
Module input	10…28V DC @ 1000 mA
POINTBus output, max	5V DC @ 0.8 A
Dimensions (H x W x D), approx.	76.2 x 73.0 x 133.4 mm (3.0 x 2.87 x 5.25 in.)
Enclosure type rating	None (open-style)
Terminal base screw torque	0.8 N•m (7 lb•in)
Weight, approx.	0.28 kg (0.62 lb)
Wiring category(1)(2)	1 – on power port 1 – on communications ports
Wire Size	Power connections: 0.34…2.1 mm^2 (22…14 AWG) solid or stranded copper wire rated @ 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max or 90 °C (194 °F) for ControlLogix® controllers. Ethernet wiring: RJ45 connector according to IEC 60603-7, 2 or 4 pair Category 5e min cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702.
North American temp code	T4
UKEX/ATEX temp code	T4
IECEx temp code	T4

(1) Use this Conductor Category information for planning conductor routing. See the 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.

Power Supply

Attribute	Value
Input voltage rating	24V DC @ 10 A
Input voltage, range	10…28.8V DC
Field side power, max	24V DC @ 400 mA
Inrush current, max	6 A for 10 ms
Input overvoltage protection	Reverse polarity protected
POINTBus output current, max	5V DC @ 0.8 A
Interruption	Output voltage stays within specifications when input drops out for 10 ms @ 10V with maximum load

Ethernet Communication

Attribute	Value
Ethernet communication rate	10/100 Mbits/s, half or full-duplex
Ethernet ports	2, configured as Embedded Switch
Ethernet network topologies supported	Star, Tree, Daisy-chain/Linear, and Ring
Ethernet connectors	RJ45, Category 5
Ethernet cable	Category 5: Shielded or unshielded
Ethernet wire connections, max	See Wire Size

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	IEC60068-2-1 (Test Ab, Unpackaged Nonoperating Cold) IEC60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat) IEC60068-2-14 (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% non-condensing
Vibration	IEC 60068-2-6 (Test Fc, Operating): 5 g @ 10...500 Hz
Shock, operating	IEC60068-2-27 (Test Ea, Unpackaged Shock): 30 g
Shock, nonoperating	IEC60068-2-27 (Test Ea, Unpackaged Shock): 50 g
Emissions	IEC 61000-6-4
ESD immunity	IEC61000-4-2: 6 kV contact discharges 8 kV air discharges
Radiated RF immunity	IEC 61000-4-3: 10V/m with 1 kHz sine-wave 80% AM from 80...6000 MHz
EFT/B immunity	IEC 61000-4-4: ±4 kV @ 5 kHz on power ports ±3 kV @ 5 kHz on communications ports
Surge transient immunity	IEC 61000-4-5: ±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports ±2 kV line-earth (CM) on communications 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; Meas./Control/Lab., 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 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 CISPR 11; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: EN IEC 60079-0; General Requirements EN IEC 60079-7; Explosive Atmospheres, Protection "e" II 3 G Ex ec IIC T4 Gc DEMKO 04 ATEX 0330347X UL22UKEX2478X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3
IECEx	IECEx System, compliant with IEC 60079-0; General Requirements IEC 60079-7; Explosive Atmospheres, Protection "e" II 3 G Ex ec IIC T4 Gc IECEx UL 20.0072X
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products CCC: 2020122309111607
EtherNet/IP	ODVA conformance tested to EtherNet/IP specifications

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

Additional Resources

For more information on the products that are described in this publication, use these resources. You can view or download publications at rok.auto/literature.

Resource	Description
POINT I/O Modules Selection Guide, publication 1734-SG001	Provides information on how to select POINT I/O adapters, terminal bases, I/O modules, and accessories.
POINT I/O and ArmorPOINT I/O Dual-port EtherNet/IP Adapters User Manual, publication 1734-UM017	A detailed description of module functionality, configuration, installation procedure and information on how to use the POINT I/O and ArmorPOINT I/O Dual-port EtherNet/IP adapters.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	More information on proper wiring and grounding techniques.
Product Certifications website, rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.

Notes:

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.

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