

# Installation Instructions

Original Instructions



**Allen-Bradley**

by ROCKWELL AUTOMATION

## POINT I/O 24V DC Expansion Power Supply

Catalog Numbers 1734-EP24DC, 1734-EP24DCK, Series B

Catalog numbers with the suffix 'K' are conformal coated and their specifications are the same as non-conformal coated catalogs.

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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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**ATTENTION:** Read this document and the documents listed in the Additional Resources section about installation, configuration and operation of this equipment before you install, configure, operate or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice. If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

**注意:** 在安装、配置、操作和维护本产品前，请阅读本文档以及“其他资源”部分列出的有关设备安装、配置和操作的相应文档。除了所有适用规范、法律和标准的相关要求之外，用户还必须熟悉安装和接线说明。

安装、调整、投运、使用、组装、拆卸和维护等各项操作必须由经过适当训练的专业人员按照适用的操作规范实施。

如果未按照制造商指定的方式使用该设备，则可能会损害设备提供的保护。

**ATENCIÓN:** Antes de instalar, configurar, poner en funcionamiento o realizar el mantenimiento de este producto, lea este documento y los documentos listados en la sección Recursos adicionales acerca de la instalación, configuración y operación de este equipo. Los usuarios deben familiarizarse con las instrucciones de instalación y cableado y con los requisitos de todos los códigos, leyes y estándares vigentes. El personal debidamente capacitado debe realizar las actividades relacionadas a la instalación, ajustes, puesta en servicio, uso, ensamblaje, desensamblaje y mantenimiento de conformidad con el código de práctica aplicable. Si este equipo se usa de una manera no especificada por el fabricante, la protección provista por el equipo puede resultar afectada.

**ATENÇÃO:** Leia este e os demais documentos sobre instalação, configuração e operação do equipamento que estão na seção Recursos adicionais antes de instalar, configurar, operar ou manter este produto. Os usuários devem se familiarizar com as instruções de instalação e fiação além das especificações para todos os códigos, leis e normas aplicáveis.

É necessário que as atividades, incluindo instalação, ajustes, colocação em serviço, utilização, montagem, desmontagem e manutenção sejam realizadas por pessoal qualificado e especializado, de acordo com o código de prática aplicável.

Caso este equipamento seja utilizado de maneira não estabelecida pelo fabricante, a proteção fornecida pelo equipamento pode ficar prejudicada.

**ВНИМАНИЕ:** Перед тем как устанавливать, настраивать, эксплуатировать или обслуживать данное оборудование, прочитайте этот документ и документы, перечисленные в разделе «Дополнительные ресурсы». В этих документах изложены сведения об установке, настройке и эксплуатации данного оборудования. Пользователи обязаны ознакомиться с инструкциями по установке и прокладке соединений, а также с требованиями всех применимых норм, законов и стандартов.

Все действия, включая установку, наладку, ввод в эксплуатацию, использование, сборку, разборку и техническое обслуживание, должны выполняться обученным персоналом в соответствии с применимыми нормами и правилами.

Если оборудование используется не предусмотренным производителем образом, защита оборудования может быть нарушена.

**注意:** 本製品を設置、構成、稼働または保守する前に、本書および本機器の設置、設定、操作についての参考資料の該当箇所に記載されている文書に目を通してください。ユーザは、すべての該当する条例、法律、規格の要件に加えて、設置および配線の手順に習熟している必要があります。

設置調整、運転の開始、使用、組立て、解体、保守を含む諸作業は、該当する実施規則に従って訓練を受けた適切な作業員が実行する必要があります。

本機器が製造メーカーにより指定されていない方法で使用されている場合、機器により提供されている保護が損なわれる恐れがあります。

**ACHTUNG:** Lesen Sie dieses Dokument und die im Abschnitt „Weitere Informationen“ aufgeführten Dokumente, die Informationen zur 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 사용자들 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, yasal ve standartların gereksinimlerine ek olarak kurulum ve kablolama talimatlarını da öğrenmek zorundadır.

Kurulum, ayarlama, hizmete alma, kulllanma, parçaları birleştirme, parçaları sökme ve bakım gibi aktiviteler sadece uygun eğitimli almış kişiler tarafından yürürlükteki uygulama yönetmeliklerine uygun şekilde yapılabilir.

Bu ekipman üretici tarafından belirlenmiş amacın dışında kullanılırsa, ekipman tarafından sağlanan koruma bozulabilir.

**注意事項:** 在安装、設定、操作或維護本產品前，請先閱讀此文件以及列於「其他資源」章節中有關安裝、設定與操作此設備的文件。使用者必須熟悉安裝和配線指示，並符合所有法規、法律和標準要求。

包括安裝、調整、交付使用、使用、組裝、拆卸和維護等動作都必須交由已經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 vhodné 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.

**OBŚ!** 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 onderhoudt. Gebruikers moeten zich vertrouwd maken met de installatie en de bedradinginstructies, 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.



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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.

## North American Hazardous Location Approval

The Following Information Applies When Operating This Equipment In Hazardous Locations.	Informations sur l'utilisation de cet équipement en environnements dangereux.
<p>Products marked "CL I, DIV 2, GP A, B, C, D" are suitable for use in Class I Division 2 Groups A, B, C, D, Hazardous Locations and nonhazardous locations only. Each product is supplied with markings on the rating nameplate indicating the hazardous location temperature code. When combining products within a system, the most adverse temperature code (lowest "T" number) may be used to help determine the overall temperature code of the system. Combinations of equipment in your system are subject to investigation by the local Authority Having Jurisdiction at the time of installation.</p>	<p>Les produits marqués "CL I, DIV 2, GP A, B, C, D" ne conviennent qu'à une utilisation en environnements de Classe I Division 2 Groupes A, B, C, D dangereux et non dangereux. Chaque produit est livré avec des marquages sur sa plaque d'identification qui indiquent le code de température pour les environnements dangereux. Lorsque plusieurs produits sont combinés dans un système, le code de température le plus défavorable (code de température le plus faible) peut être utilisé pour déterminer le code de température global du système. Les combinaisons d'équipements dans le système sont sujettes à inspection par les autorités locales qualifiées au moment de l'installation.</p>
<div style="display: flex; align-items: center;">  <div> <p><b>WARNING:</b> <b>Explosion Hazard -</b></p> <ul style="list-style-type: none"> <li>• Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous.</li> <li>• Do not disconnect connections to this equipment unless power has been removed or the area is known to be nonhazardous. Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product.</li> <li>• Substitution of components may impair suitability for Class I Division 2.</li> </ul> </div> </div>	<div style="display: flex; align-items: center;">  <div> <p><b>AVERTISSEMENT:</b> <b>Risque d'Explosion -</b></p> <ul style="list-style-type: none"> <li>• Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher l'équipement.</li> <li>• Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher les connecteurs. Fixer tous les connecteurs externes reliés à cet équipement à l'aide de vis, loquets coulissants, connecteurs filetés ou autres moyens fournis avec ce produit.</li> <li>• La substitution de composants peut rendre cet équipement inadapté à une utilisation en environnement de Classe I Division 2.</li> </ul> </div> </div>

## UK and European Hazardous Location Approval

The following applies to products marked  **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 EU Directive 2014/34/EU. See the UKEx and EU Declaration of Conformity at [rok.auto/certifications](http://rok.auto/certifications) for details.
- The type of protection is Ex ec 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 to 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.

**WARNING:**

- 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.

## 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.

## 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 to 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.

## Special Conditions for Safe Use

**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, publication [1770-4.1](#), for more information.
- Do not remove or replace an Adapter Module while power is applied. Interruption of the backplane can result in unintentional operation or machine motion.
- 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.
- If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Do not connect 120/240V AC power to this supply.
- Use the 1734-EP24DC and 1734-EP24DCK expansion power supply only with POINT I/O™ adapters, such as the 1734-ADN DeviceNet® adapter.
- To comply with the CE Low Voltage Directive (LVD), field power and all connected I/O must be powered from a source compliant with the following: Safety Extra Low Voltage (SELV) or Protected Extra Low Voltage (PELV).
- To comply with UL restrictions, field power and all connected devices must be powered from a single source compliant with the following: Class 2.



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

## Electrical Safety Considerations

**ATTENTION:**

- 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.

## About the Power Supply

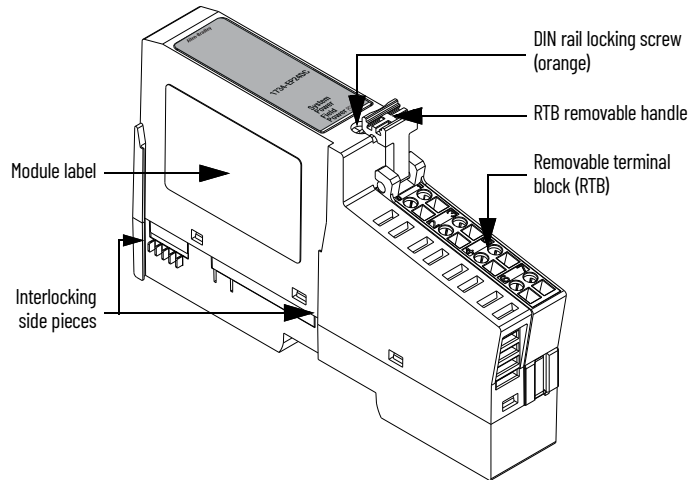
The POINT I/O expansion power supply passes 24V DC field power to the I/O modules to the right of it. The expansion power supply extends the backplane bus power for up to 17 I/O modules to the right of the supply and creates a new field voltage partition segment for driving field devices. The expansion power supply separates field power from I/O modules to the left of the unit, effectively providing functional and logical partitioning for the following.

- Separate field power between input and output modules.
- Separate field power to the analog and digital modules.
- Group modules to perform a specific task or function.

The dark-gray color of the expansion power supply allows for easy visual inspection and identification. See [Figure 1](#) to identify external power supply components.

Use multiple expansion power supplies with POINT I/O adapters to assemble a full system. With any POINT I/O adapter, use an expansion power supply to add additional modules in 4...17 module increments, for a total of 63 I/O modules.

**Figure 1 - POINT I/O 24V DC Expansion Power Supply**



## Install the Power Supply

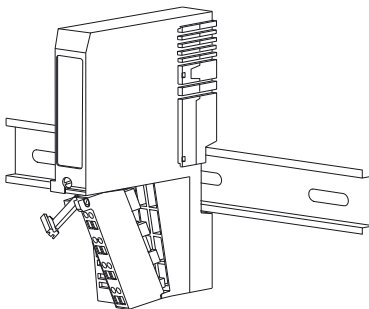
To install the expansion power supply on the DIN rail, proceed as follows.

1. Position the power supply vertically above the DIN rail.
2. Engage the interlocking side pieces with the unit on the left.
3. Press down firmly to install the power supply on the DIN rail. The locking mechanism locks the module to the DIN rail.

## Remove the Power Supply

To remove an expansion power supply, proceed as follows.

1. Pull up on the RTB removal handle to remove the terminal block.



2. Remove the module to the right of the 1734-EP24DC or 1734-EP24DCK module from its base unit.
3. Use a small-bladed screwdriver to rotate the DIN rail locking screw to a vertical position. This releases the locking mechanism.
4. Lift straight up to remove.

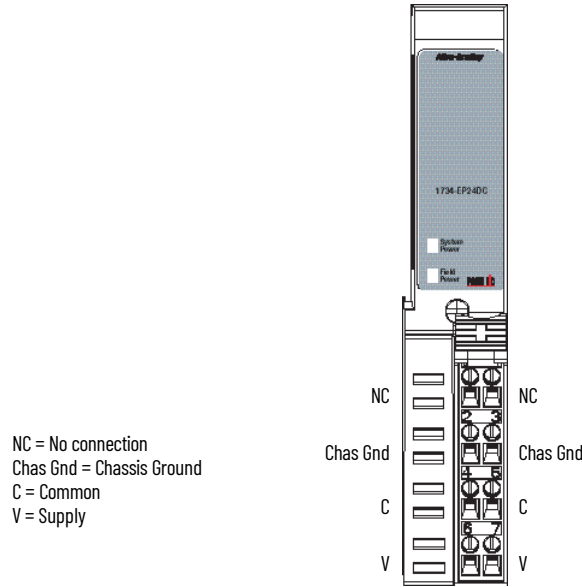
## Replace the Power Supply

To install a replacement expansion power supply, proceed as follows.

1. Remove the module to the right of the power supply from its base unit.
2. Position the power supply vertically above the DIN rail.
3. Slide the power supply down allowing the interlocking side pieces to engage the adjacent modules (both left and right sides).
4. Press firmly to seat the power supply on the DIN rail. The power supply locking mechanism snaps into place.
5. Reinsert the module into the base next to the expansion power supply.

## Wire the Power Supply

1734-EP24DC and 1734-EP24DCK



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



**ATTENTION:** Use the 1734-EP24DC and 1734-EP24DCK expansion power supply only with adapter class products.

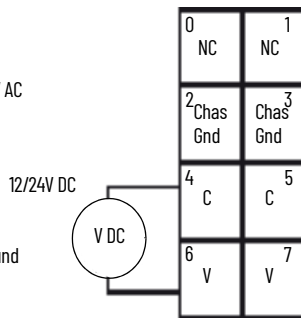


**ATTENTION:** Use the 1734-EP24DC and 1734-EP24DCK expansion power supply only with POINT I/O adapters, such as the 1734-ADN DeviceNet adapter.

## 12/24V DC Wiring

Do not connect 120/240V AC power to this supply.

NC = No connection  
 Chas Gnd = Chassis Ground  
 C = Common  
 V = 12/24V DC

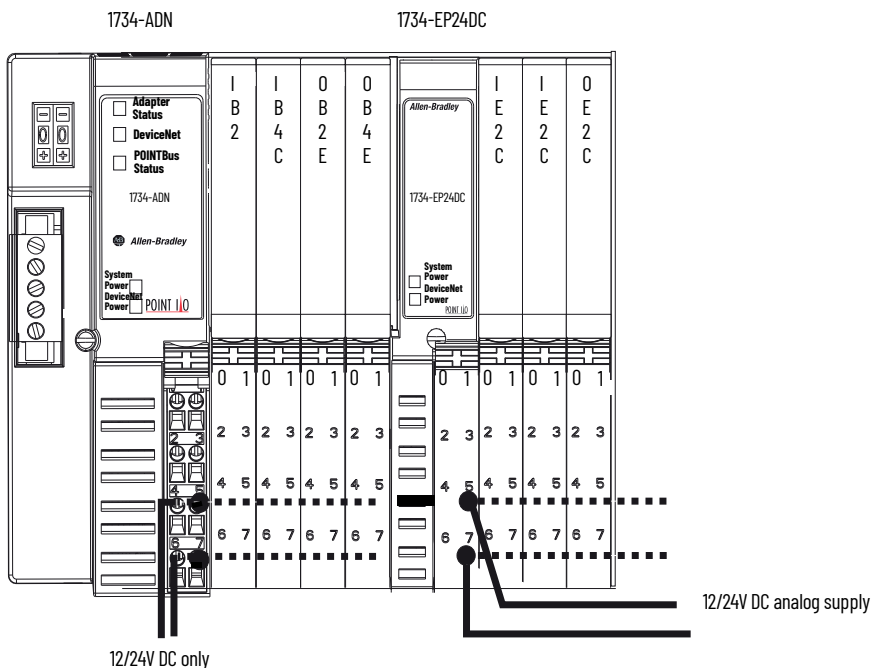


This supply will be connected to the internal field power bus.

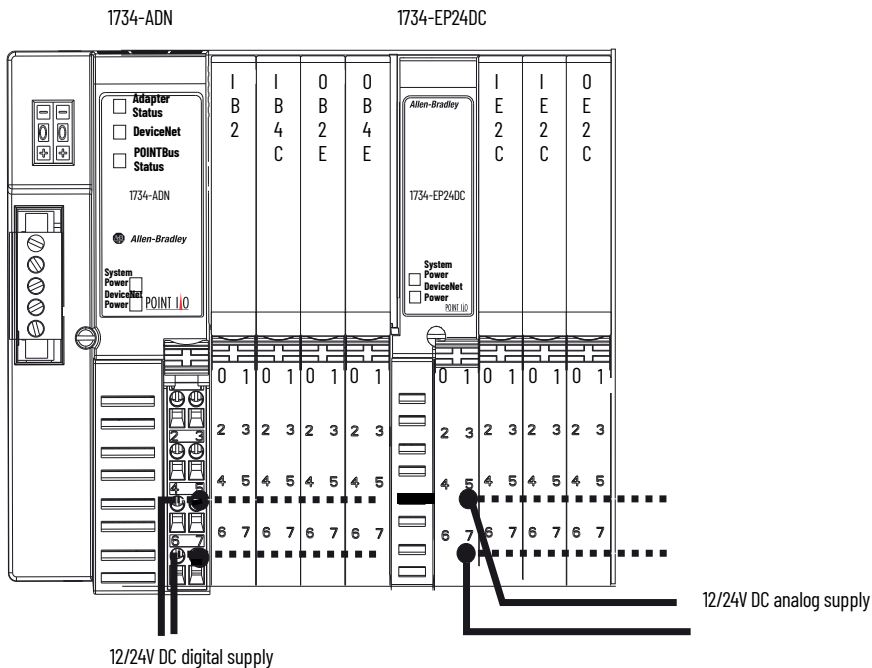
Connect	Terminal	Terminals (for continuing power)
+V DC	6	7
-V DC	4	5
Chas Gnd	2	3

12/24V DC becomes the internal field power bus for modules to the right.

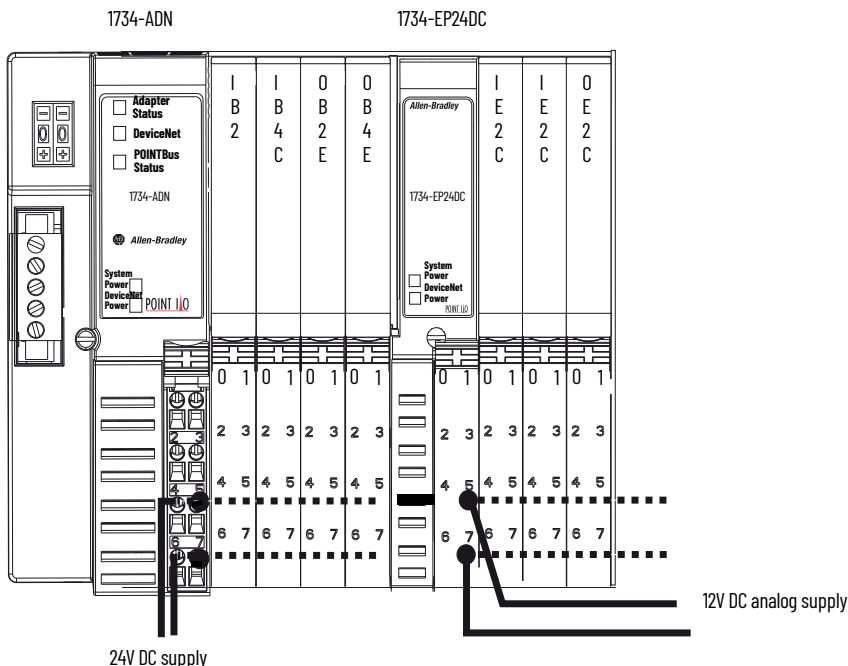
**Example of Continuing Power**



**Example of Functional Partitioning**



Example of Logical Partitioning



Specifications

POINT I/O 24V DC Expansion Power Supply - 1734-EP24DC, 1734-EP24DCK

Attribute	Value
I/O module capacity	4...17 modules, depending on current rating of each module
Input voltage rating	24V DC nominal 10...28.8V DC range
Field side power requirements	24V DC (+20% = 28.8V DC max) @ 400 mA max
Inrush current, max	6 A for 10 ms
Indicators	1 green field power status indicator 1 green 5V system power indicator
POINTBus™ output current	Horizontal mounting - 1 A @ 10...19.2V input; 1.3 A @ 19.2...28.8V input Vertical mounting - 1 A @ 10...28.8V input
Input overvoltage protection	Reverse polarity protected
Interruption	Output voltage will stay within specifications when input drops out for 10 ms @ 10V with maximum load
Module location	Between I/O modules in 1734 system Breaks field power bus
Limitations	Use with POINT I/O Adapters only
Dimensions (H x W x D), approx	76.2 x 25.4 x 133.4 mm (3.0 x 1.0 x 5.25 in)
Weight, approx	120 g (4.3 oz)
Terminal base screw torque	0.6 N•m (7 lb•in)

General Specifications

Attribute	Value
Power consumption, max	9.8 W @ 28.8V DC
Power dissipation, max	3.0 W @ 28.8V DC
Thermal dissipation, max	10.0 BTU/hr @ 28.8V DC
Field power bus supply voltage, nom	24V DC
Field power bus voltage range	10...28.8V DC
Field power bus supply current, max	10 A
Isolation voltage	50V continuous, tested to withstand 2600V DC for 60 s
Enclosure type rating	None (open-style)
North American temp code	T4A
UKEX/ATEX temp code	T4



**General Specifications (Continued)**

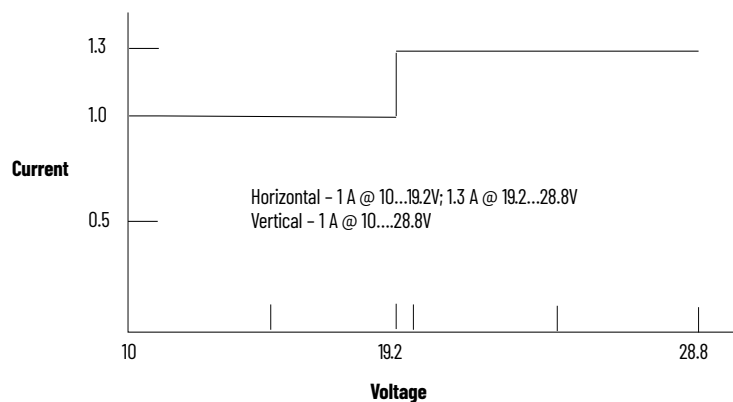
Attribute	Value
IECEX temp code	T4
Conductor size	0.324...2.08 mm <sup>2</sup> (22...14 AWG) solid or stranded copper wire rated @ 75 °C (167 °F) or greater 3/64 inch (1.2 mm) insulation maximum
Conductor category <sup>(1)</sup>	2 - on power ports

(1) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more information.


**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, storage	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)
Temperature, surrounding air, max.	55 °C (131 °F)
Relative humidity	IEC 60068-2-30 (Test Db, unpackaged nonoperating damp heat): 5...95% noncondensing
Vibration	IEC60068-2-6 (Test Fc, operating): 5 g @ 10...500 Hz
Shock, operating	IEC 60068-2-27 (Test Ea, unpackaged shock): 30 g
Shock, nonoperating	IEC 60068-2-27 (Test Ea, unpackaged shock): 50 g
Emissions	IEC 61000-6-4
ESD immunity	IEC 61000-4-2: 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: ±2 kV at 5 kHz on power ports ±2 kV at 5 kHz on signal ports
Surge transient immunity	IEC 61000-4-5: ±1 kV line-line (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 to 80 MHz

**Current Derating for Mounting**



**Certifications**

Certification (When Product Is Marked) <sup>(1)</sup>	Value
c-UL-us	UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class 1 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

(1) See the Product Certification link at [rok.auto/certifications](http://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](http://rok.auto/literature).

Resource	Description
POINT I/O Modules Selection Guide, publication <a href="#">1734-SG001</a>	Provides information on how to select POINT I/O adapters, terminal bases, I/O modules, and accessories.
Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a>	More information on proper wiring and grounding techniques.

**Notes:**

## Rockwell Automation Support

Use these resources to access support information.

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

## Documentation Feedback

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## Waste Electrical and Electronic Equipment (WEEE)



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

Rockwell Automation maintains current product environmental compliance information on its website at [rok.auto/pec](http://rok.auto/pec).

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