Installation Instructions

Original Instructions

Allen-Bradley
by ROCKWELL AUTOMATION

POINT I/O PROFIBUS Adapter

Catalog Number 1734-APB

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
Added brief summary about the PROFIBUS adapter	1
Updated module dimensions	8
Updated Certifications	10
Added Additional Resources	10

Before You Begin

The POINT I/O™ PROFIBUS adapter supports up to 14 I/O modules depending on current draw. With the PROFIBUS adapter, use an expansion power supply 1734-EP24DC to add additional modules in 4...17 module increments, for a total of 63 I/O modules. Use multiple expansion power supplies with the PROFIBUS adapter to assemble a full system. Add up the current requirements of the modules that you want to use, and determine that they do not exceed the amperage limit of the PROFIBUS adapter.

IMPORTANT The PROFIBUS adapter is only compatible with POINT I/O modules Series B or later.

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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.

Rockwell Automation recognizes that some of the terms that are currently used in our industry and in this publication are not in alignment with the movement toward inclusive language in technology. We are proactively collaborating with industry peers to find alternatives to such terms and making changes to our products and content. Please excuse the use of such terms in our content while we implement these changes.

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 0664-1), 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 5V A 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.

ATTENTION: POINT I/O is grounded through the DIN rail to chassis ground. Use zinc-plated chromate-passivated steel DIN rail to assure proper grounding. Using other DIN rail materials (for example, aluminum or plastic) which can corrode, oxidize, or are poor conductors can result in improper or intermittent platform grounding.

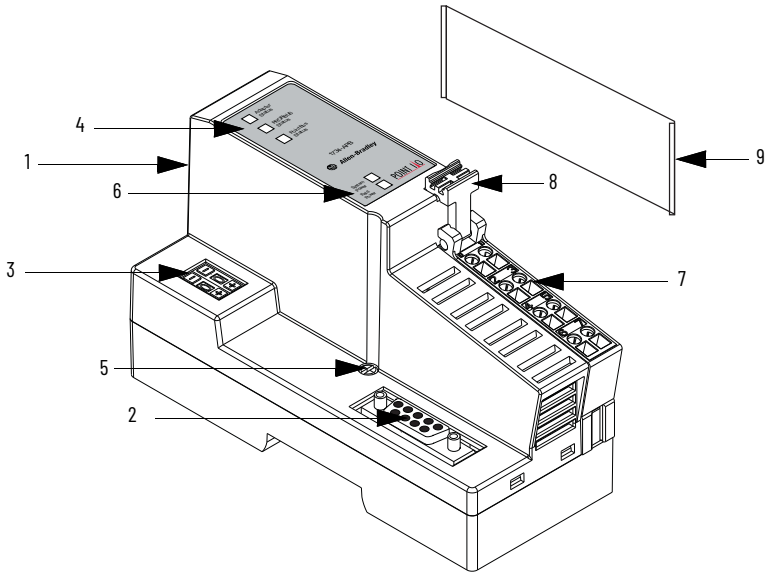
Prevent Electrostatic Discharge

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.
- 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.

ATTENTION: Read this document and the documents that are 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.

Figure 1 - POINT I/O PROFIBUS Adapter



	Description		Description
1	1734-APB PROFIBUS adapter	6	System Power and Field Power indicators
2	PROFIBUS connector	7	Removable terminal block (RTB)
3	Node address thumbwheel	8	RTB removal handle
4	Status indicators (Adapter, PROFIBUS, and POINTBus™)	9	Safety end cap
5	DIN rail locking screw (orange)		

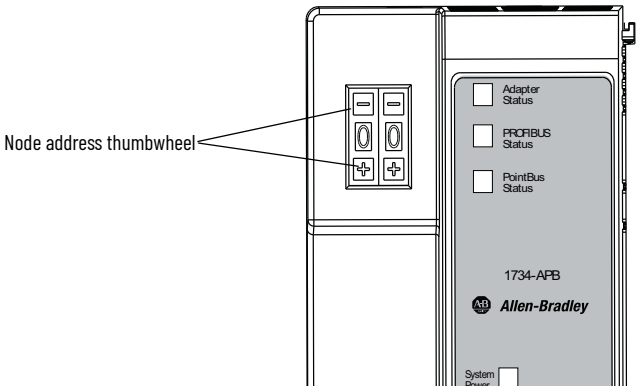
Install the PROFIBUS Adapter to a New System

To install the PROFIBUS adapter on the DIN rail (Allen-Bradley® part number 199-DR1; 46277-3; EN50022) before installing other base units, 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, 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 adapter vertically above the DIN rail.
2. Slide the mounting base down allowing the interlocking side pieces to engage the adjacent module or adapter.
3. Press down firmly to install the adapter on the DIN rail. The adapter 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.
4. Insert the PROFIBUS network plug and tighten the holding screws.
5. Set the node address on the 2-position node address thumbwheel. Valid settings are 01...99.
   Press either + or - buttons to change the number.



6. Slide the safety end cap up to remove. This exposes the backplane and power interconnections.

ATTENTION: Do not discard the end cap. 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.

GSD File Requirements

Current functionality of PROFIBUS adapters requires GSD files. These files are easy to install and are available in Product Compatibility and Download Center at rok.auto/pcdc.

Install a Replacement PROFIBUS Adapter to an Existing System

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 horizontally referenced to the base.

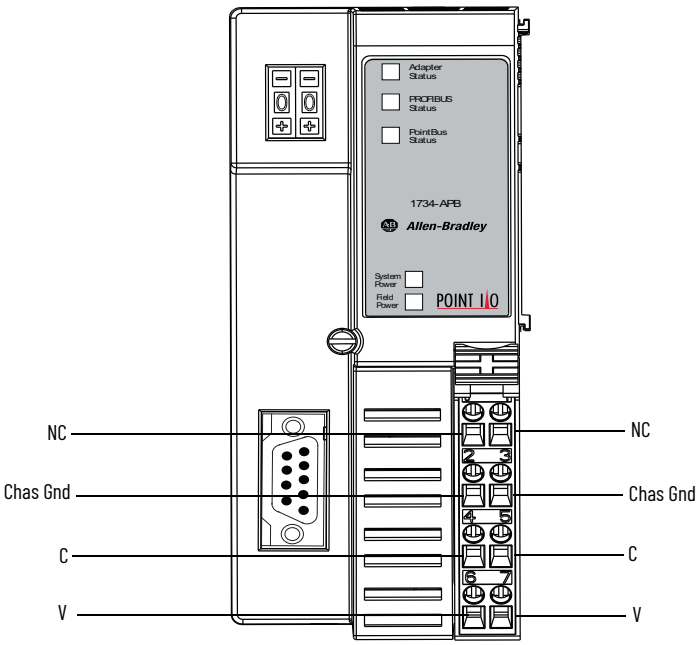
WARNING: When you insert or remove the adapter while backplane power is On, an electric arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding. Repeated electrical arcing causes excessive wear to contacts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

1. Remove the existing adapter from the DIN rail as follows:
   a. Pull up on the RTB removal handle (8) to remove the RTB (7).
   b. Loosen the screws holding the PROFIBUS network plug and pull up to remove it.
   c. Remove the adjacent module from its base.
   d. Use a small-bladed screwdriver to rotate the DIN rail locking screw (5) to a vertical position. This releases the locking mechanism.
   e. Lift the adapter straight up to remove it.
2. Slide the safety end cap up to remove it. This exposes the backplane and power connections.
3. Make sure that the DIN rail locking screw is in the horizontal position.
4. Position the replacement adapter (1) vertically above the DIN rail. Slide the adapter down, allowing the interlocking side pieces to engage with the adjacent module.
5. Press firmly to install the adapter (1) on the DIN rail. The adapter locking mechanism snaps into place.
6. Set the node address on the node address thumbwheel.
7. Insert the PROFIBUS network plug and tighten the holding screws.
8. Insert the end opposite the RTB removal handle into the base unit. This end has a curved section that engages with the wiring base.
9. Rotate the terminal block into the wiring base until it locks itself in place.
10. Replace the adjacent module in its base.

Wire the PROFIBUS Adapter

To wire the module, see Figure 2, Figure 3, and Figure 4.

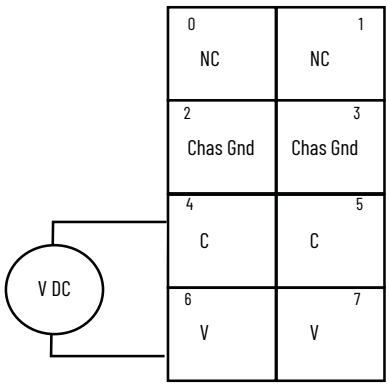
Figure 2 - Wire the PROFIBUS Adapter



NC = No connection
Chas Gnd = Chassis ground
C = Common
V = Supply

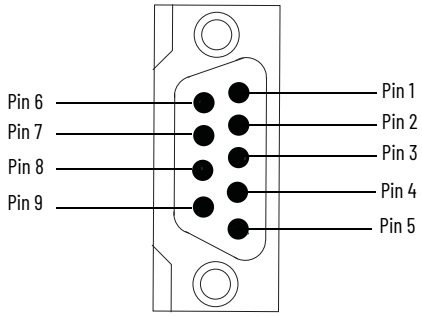
Figure 3 - Wiring Diagram

NC = No connection
Chas Gnd = Chassis ground
C = Common
V = Supply (12/24V DC)
This V DC supply is connected to the internal power bus.
Do not connect 120/240V AC power to this supply.



Terminal Number	Name	Remarks
0	No connection	Reserved
1	No connection	
2	Chassis ground	–
3	Chassis ground	–
4	Common	–
5	Common	–
6	Voltage input	Apply 12/24V DC. Connects to the internal power bus.
7	Voltage input	–

Figure 4 - PROFIBUS Connection Plug Wiring



Pin Number	Name	Description
Housing	Shield	Connected to chassis ground
1	Not connected	–
2	Not connected	–
3	Rx/Tx data+	Positive Rx/Tx dataline
4	RTS	Request to send
5	Data ground	Isolated ground
6	+5V bus	Isolated +5V from RS-485 side
7	Not connected	–
8	Rx/Tx data-	Negative Rx/Tx Dataline
9	Not connected	–

Troubleshooting with Status Indicators

Figure 5 - PROFIBUS Adapter Status Indicators

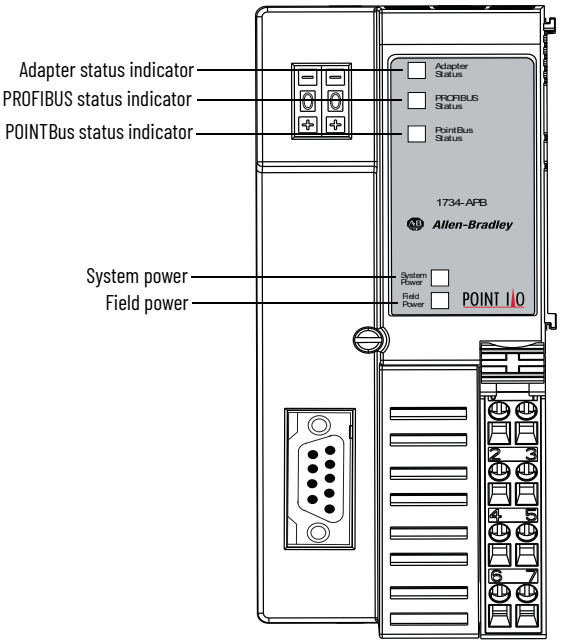


Table 1 - Interpret Status Indicators

Indicator	Status	Description
System Power	Off	The system power is not applied.
	Steady green	The system power (5V) is present.
Field Power	Off	The field power is not applied.
	Steady green	The field power (24V) is applied.
Adapter Status	Off	One of the following conditions is present: • No power is supplied. • Hardware check in progress. • Initialization in progress.
	Steady green	The device is operating normally.
	Steady red	Hardware check fault is present.
PROFIBUS Status	Off	One of the following conditions is present: • No power is supplied. • Bus is offline.
	Steady green	Bus is online (data exchange).
	Flashing green	The adapter has received a CLEAR command from the master.
	Steady red	One of the following conditions is present: • Error in PROFIBUS initialization. • No modules are installed in the backplane.
	Flashing red	If flashing at 1 Hz, one of the following conditions is present: • Check_Configuration telegram is rejected. • Maximum number of POINT I/O modules in the master configuration overridden. If flashing at 2 Hz, one of the following conditions is present: • SetPrm telegram is rejected. • The first byte of the user parameter data is not equal to zero. • Maximum number of user parameter bytes overridden.
POINTBus Status	Off	One of the following conditions is present: • No power supplied. • Hardware check in progress. • Initialization in progress.
	Steady green	The device is operating normally.
	Flashing red	If flashing at 1 Hz, one of the following conditions is present: • An incorrect POINT I/O module is installed. • POINT I/O module is removed from the backplane.
	Steady red	Critical link failure (BUS_OFF)

Specifications

Communication Interface Specifications

Attribute	Value
Expansion I/O Capacity[1]	Up to 14 modules, depending on current draw. Add up the current requirements of the modules that you want to use, and determine that they do not exceed the amperage limit of the PROFIBUS adapter.
Module Location	Starter module - Left side of POINT I/O system

Catalog Number	POINTBus Current Requirements
1734-IB2	75 mA
1734-IB4	75 mA
1734-IV2	75 mA
1734-IV4	75 mA
1734-OB2E	75 mA
1734-OB4E	75 mA
1734-OW2	80 mA
1734-IE2C	75 mA
1734-OE2C	75 mA
1734-IE2V	75 mA
1734-OE2V	75 mA
1734-IA2	75 mA
1734-IM2	75 mA
1734-OA2	75 mA
1734-IJ2	160 mA
1734-IK2	160 mA
1734-IR2	220 mA
1734-IT2	175 mA
1734-VHSC5	180 mA
1734-VHSC24	180 mA

(1) The PROFIBUS adapter supports up to 14 modules with 75 mA current draw each. For larger configurations, add 1734-EP24DC modules for additional 14 modules or less based on current requirements to expand up to 63 modules, ensuring total current requirements are met.

Power Supply Specifications

Attribute	Value
Input voltage rating	24V DC nominal 10...28.8V DC range
Field side power requirements, max	24V DC (+20% = 28.8V DC) @ 400 mA
Inrush current, max	6 A for 10 ms
POINTBus output current, max	1 A @ 5V DC ±5% (4.75...5.25 V DC)
Input overvoltage protection	Reverse polarity protected
Interruption	The output voltage stays within specifications when input drops out for 10 ms at 10V with maximum load.

General Specifications

Attribute	Value
Indicators	3 red/green status indicators - Adapter Status, PROFIBUS Status, and POINTBus Status 2 green power supply status indicators - System Power (POINTBus 5V power) and Field Power (24V from field supply)
Power consumption, max	8.1 W @ 28.8V DC
Power dissipation, max	2.8 W @ 28.8V DC
Thermal dissipation, max	9.5 BTU/hr @ 28.8V DC
Isolation voltage	1250V rms/V AC
Field power bus, nominal voltage	24V DC
Field power bus, supply voltage range	10...28.8V DC
Field power bus, supply current, max	10 A
Terminal base screw torque	0.8 N•m (7 lb•in)
Dimensions (HxWxD), approx.	79.8 x 56.1 x 133.1 mm (3.14 x 2.21 x 5.24 in.)
Weight, approx.	255 g (9.0 oz.)
Wiring category[1]	2

General Specifications (Continued)

Attribute	Value
Wire size	0.25…2.5 mm^2 (22…14 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater 1.2 mm (3/64 in.) insulation maximum
Enclosure type rating	None (open-style)
Field wiring terminations	**PROFIBUS** **Pin Number** / **Name** 1 Not connected 2 Not connected 3 +RTx/Tx dataline 4 Request to send 5 Ground bus 6 +5V bus 7 Not connected 8 Negative RTx/Tx 9 Not connected Housing Earth ground **Power Supply** **Terminal Number** / **Name** 0 No connection 1 No connection 2 Chassis ground 3 Chassis ground 4 Common 5 Common 6 Supply 7 Supply

(1) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also see 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…+55 °C (-4 °F…+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: 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 30…1000 MHz 10V/m with 200 Hz 50% pulse 100% AM at 900 MHz
EFT/B immunity	IEC 61000-4-4: ±4 kV at 2.5 kHz on power ports ±4 kV at 2.5 kHz on communications ports
Surge transient immunity	IEC 61000-4-5: ±500V line-line(DM) and ±500V line-earth(CM) on DC power ports ±4 kV line-earth(CM) on shielded 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
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: EN 61000-6-4; Industrial Emissions
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436

(1) See the Product Certification link at rok.auto/certifications for Declaration 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 POINT I/O adapters and module specifications.
POINT I/O PROFIBUS Adapter Module User Manual, publication 1734-UM005	Provides information on how to install, configure, and troubleshoot your PROFIBUS adapter.
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

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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.

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Publication 1734-IN014D-EN-P - September 2025 | Supersedes Publication 1734-IN014C-EN-P - March 2002 PN-754790