



FLEX Ex I/O to 1719 Ex I/O, 1718 Ex I/O

Bulletins 1797, 1719, 1718



Allen-Bradley

by ROCKWELL AUTOMATION

Migration Guide

Original Instructions

Important User Information

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.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

Reproduction of the contents of this manual, in whole or in part, without written permission of Rockwell Automation, Inc., is prohibited.

Throughout this manual, when necessary, we use notes to make you aware of safety considerations.



WARNING: Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.



ATTENTION: Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence.

IMPORTANT Identifies information that is critical for successful application and understanding of the product.

These labels may also be on or inside the equipment to provide specific precautions.



SHOCK HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.



BURN HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.



ARC FLASH HAZARD: Labels may be on or inside the equipment, for example, a motor control center, to alert people to potential Arc Flash. Arc Flash will cause severe injury or death. Wear proper Personal Protective Equipment (PPE). Follow ALL Regulatory requirements for safe work practices and for Personal Protective Equipment (PPE).

The following icon may appear in the text of this document.



Identifies information that is useful and can help to make a process easier to do or easier to understand.

	Preface	5
	About This Publication	5
	Audience	5
	Required Software	5
	Migration Solutions	5
	Additional Resources	6
	 Chapter 1	
Overview	Product Lifecycle Status Website	7
	1719 Ex I/O and 1718 Ex I/O	8
	1719 Ex I/O or 1718 Ex I/O Advantages	9
	Comparison Between the Class/Division and Zone System	10
	Hazardous Area Designation	10
	Class Designation	11
	Division/Zone Designations	11
	Mounting and Installation Requirements	11
	Network Considerations	12
	ControlNet Network Overview	12
	EtherNet/IP Network Overview	12
	Other Considerations	13
	 Chapter 2	
Upgrade ControlLogix Controller	Upgrade to a ControlLogix 5570 or ControlLogix 5580 Controller	15
	 Chapter 3	
Migrate your FLEX Ex I/O	Migrate FLEX Ex I/O to 1719 Ex I/O or 1718 Ex I/O	17
	 Appendix A	
Wiring Diagram Comparisons	Replace FLEX Ex I/O with 1719 Ex I/O or 1718 Ex I/O	19
	1797-IBN16 to 171x-IBN8/171x-IBN8B	20
	1797-OB4D to 171x-OB2/171x-OB2L	21
	1797-IE8/1797-IE8NF/1797-IE8H to 171x-IF4HB	22
	1797-IE8/1797-IE8NF/1797-IE8H to 171x-CF4H Configured as Analog Input	23
	1797-OE8/1797-OE8H to 171x-CF4H Configured as Analog Output	24
	1797-IRT8 to 171x-IR4B	25
	1797-IRT8 to 171x-IT4B	26
	1797-IJ2 to 171x-IJ	27

Notes:

About This Publication

This document serves as a guide for migrating your existing FLEX Ex™ I/O platform to 1719 Ex I/O and 1718 Ex I/O platforms.

The term “171x” used throughout this publication specifically refers to the 1719 Ex I/O and 1718 Ex I/O platforms.

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.

Audience

This document is intended for users of I/O modules in a Logix control system. You must create a Studio 5000 Logix Designer® application project for the Logix controller that owns the 1719 Ex I/O and 1718 Ex I/O modules.

IMPORTANT The Studio 5000 Logix Designer application is the rebranding of RSLogix 5000® software and is the current product to program Logix 5000™ controllers for discrete, process, batch, motion, safety, and drive-based solutions

Required Software

The 1719-AENTR Add-on Profile must be used with one of the following:

- Studio 5000 Logix Designer application version 24 or later
- RSLinx® software version 3.74 or later

The following ControlLogix® controllers are compatible with Studio 5000 Logix Designer application:

Controllers	Catalog Number	Studio 5000 Logix Designer Application
ControlLogix	5570 (1756-L7x), 5580 (1756-L8x), or newer	Version 24 or later
Older ControlLogix controllers	5560 (1756-L6x)	Not supported

Migration Solutions

To mitigate the risk of maintaining legacy equipment, you need to work with a supplier that has the product, service, and industry knowledge to partner with you on an upgrade strategy that helps you maximize your competitive advantage. Rockwell Automation and its partners work with you to outline a plan that fits your application needs and long-term goals.

With your goals in mind, Rockwell Automation has developed a migration strategy that supports your migration from FLEX Ex I/O to 1719 Ex I/O or 1718 Ex I/O.

To understand your options better, contact your local authorized Allen-Bradley distributor or Rockwell Automation sales office, or visit: rok.auto/lifecycle.

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
FLEX Ex I/O to 1719 Ex I/O Migration Profile, publication MIGRAT-PP030	Provides an overview of migrating from FLEX Ex I/O to 1719 Ex I/O and information on how to migrate specific modules.
1718 Ex I/O PartnerNetwork Enclosure Solutions from Pepperl+Fuchs, publication 1718-PP002A-EN-P	Enclosure solutions for installing 1718 Ex I/O systems in hazardous locations.
PartnerNetwork: Enclosure Solutions from Pepperl+Fuchs, publication 1719-PP002A-EN-P	Enclosure solutions for installing 1719 Ex I/O systems in hazardous locations.
1718 Ex I/O Technical Data, publication 1718-TD001	Provides information and specifications to help you select 1718 Ex I/O modules for your application.
1718 Ex I/O User Manual, publication 1718-UM001	Provides information on how to install, configure, use, and troubleshoot 1718 Ex I/O modules.
1719 Ex I/O Technical Data, publication 1719-TD001	Provides information and specifications to help you select 1719 Ex I/O modules for your application.
1719 Ex I/O User Manual, publication 1719-UM001	Provides information on how to install, configure, use, and troubleshoot 1719 Ex I/O modules.
FLEX Ex Analog Modules User Manual, publication 1797-UM002	Provides information on how to install, configure, use, and troubleshoot FLEX Ex analog modules.
FLEX Ex HART Analog Modules User Manual, publication 1797-UM005	Provides information on how to install, configure, use, and troubleshoot FLEX Ex HART analog modules.
FLEX Ex Thermocouple/RTD/mV Input Module User Manual, publication 1797-UM003	Provides information on how to install, configure, use, and troubleshoot FLEX Ex Thermocouple/RTD/mV Input Module.
ControlNet to EtherNet/IP Migration Reference Manual, publication CNET-RM001	Provides information to migrate from an existing ControlNet network to an EtherNet/IP network.
ControlLogix System User Manual, publication 1756-UM001	Provides information on how to install, configure, use, and troubleshoot ControlLogix controllers.
EtherNet/IP Network Devices User Manual, ENET-UM006	Describes how to configure and use EtherNet/IP devices to communicate on the EtherNet/IP network.
Ethernet Reference Manual, ENET-RM002	Describes basic Ethernet concepts, infrastructure components, and infrastructure features.
System Security Design Guidelines Reference Manual, SECURE-RM001	Provides guidance on how to conduct security assessments, implement Rockwell Automation products in a secure system, harden the control system, manage user access, and dispose of equipment.
UL Standards Listing for Industrial Control Products, publication CMPNTS-SR002	Assists original equipment manufacturers (OEMs) with construction of panels, to help ensure that they conform to the requirements of Underwriters Laboratories.
American Standards, Configurations, and Ratings: Introduction to Motor Circuit Design, publication IC-AT001	Provides an overview of American motor circuit design based on methods that are outlined in the NEC.
Industrial Components Preventive Maintenance, Enclosures, and Contact Ratings Specifications, publication IC-TD002	Provides a quick reference tool for Allen-Bradley industrial automation controls and assemblies.
Safety Guidelines for the Application, Installation, and Maintenance of Solid-state Control, publication SGI-1.1	Designed to harmonize with NEMA Standards Publication No. ICS 1.1-1987 and provides general guidelines for the application, installation, and maintenance of solid-state control in the form of individual devices or packaged assemblies incorporating solid-state components.
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.

You can view or download publications at [rok.auto/literature](#).

Overview

Product Lifecycle Status Website

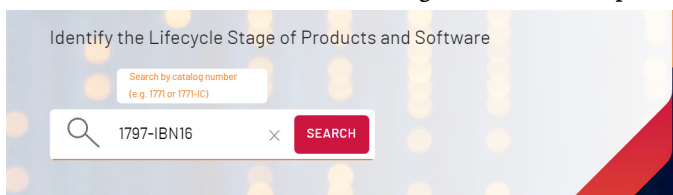
The Rockwell Automation Product Lifecycle Status website allows you to plan pro-actively and manage the transition from existing equipment to leading-edge products and technologies. Using the search tool, you can view up-to-date product lifecycle status and identify the most contemporary Rockwell Automation products.

The product lifecycle status may be Active, Active Mature, End of Life, or Discontinued.

- **Active:** Most current offering within a product category
- **Active Mature:** Product is fully supported, but a new product or family exists. Gain value by migrating.
- **End of Life:** actively execute migrations and last time buys. Product can be ordered until the discontinued date⁽¹⁾
- **Discontinued:** New product no longer manufactured or procured⁽²⁾. Repair/exchange services may be available

To view the lifecycle information for a product:

1. On your web browser, open the Rockwell Automation Lifecycle Services website: rok.auto/lifecycle
2. Navigate to Support -> Lifecycle Status.
3. In the Search field, enter the catalog number of the product.



4. Click Search.
The product lifecycle data displays.

Lifecycle status: ● Discontinued

Discontinued Date Dec 31, 2017	Replacement Category Engineering Replacement	Replacement Product 1718/1719 EX I/O
-----------------------------------	---	---

(1) Outages on specific items may occur before the discontinued date.
(2) Limited stock may be available in run-out mode, regionally.

1719 Ex I/O and 1718 Ex I/O

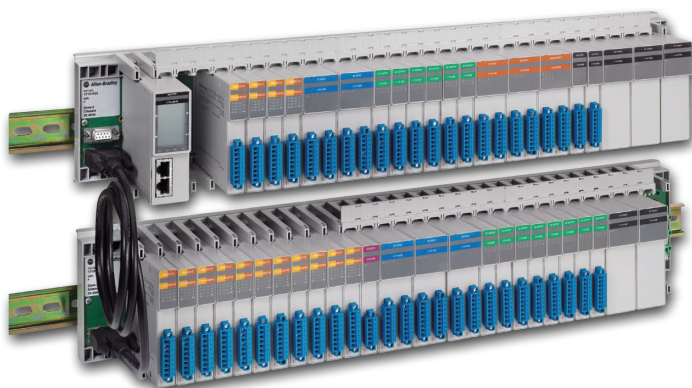
The 1719 Ex I/O and 1718 Ex I/O are intrinsically safe distributed I/O platforms that integrate devices in hazardous areas via EtherNet/IP™, while providing maximum space efficiency through a compact chassis-based design. Migrating your FLEX Ex I/O to 1719 Ex I/O or 1718 Ex I/O is an enhanced solution to improve your system performance and reliability.

To mitigate the risk of maintaining legacy equipment, you need to work with a supplier that has the product, service, and industry knowledge to partner with you on an upgrade strategy that helps you maximize your competitive advantage. Rockwell Automation and its partners work with you to outline a plan that fits your application needs and long-term goals.

To understand your options better, contact your local authorized Allen-Bradley distributor or Rockwell Automation sales office or visit: rok.auto/lifecycle.



FLEX Ex I/O



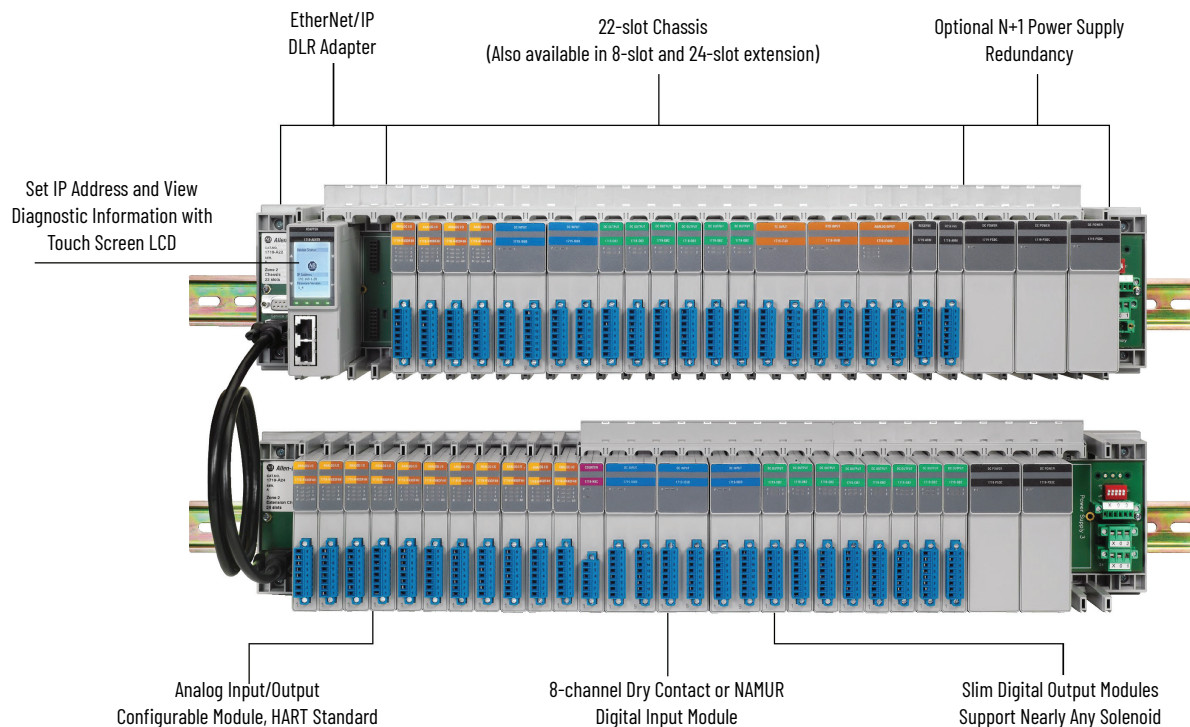
1719 Ex I/O



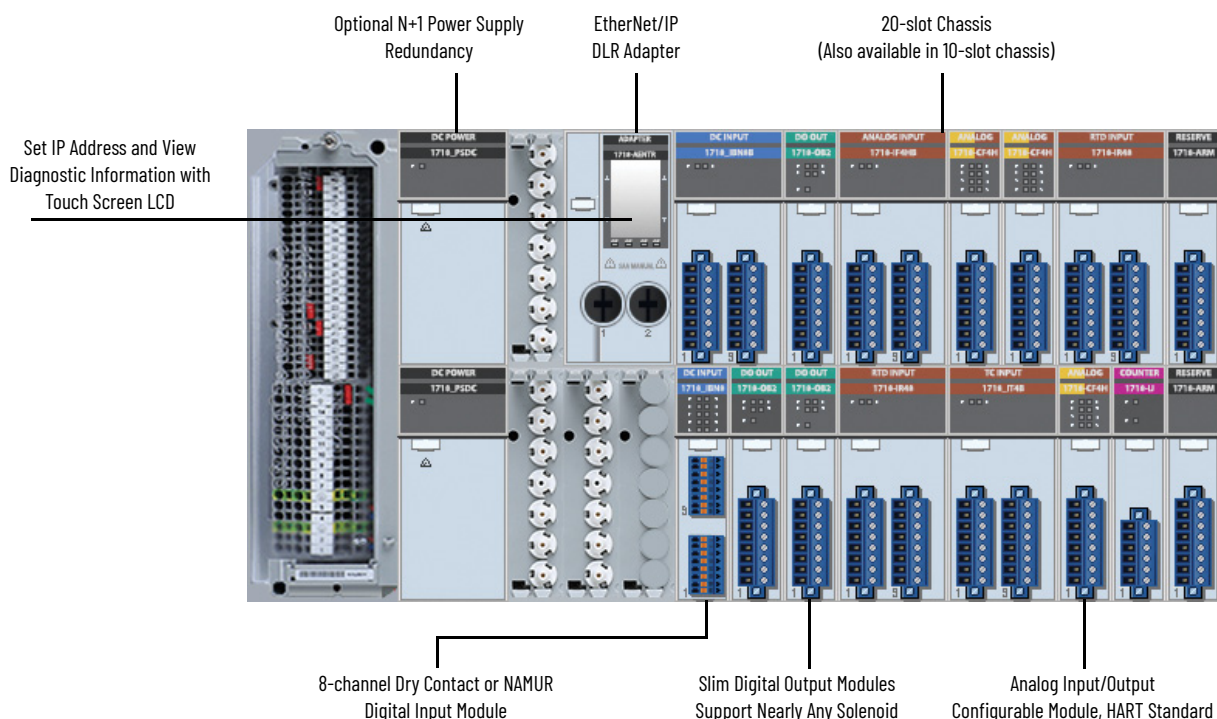
1718 Ex I/O

1719 Ex I/O or 1718 Ex I/O Advantages

- Reduce wiring, hardware footprint, and costs by mounting the intrinsically safe 1718 Ex I/O in areas up to Zone 1 (connecting directly to field devices in Zones 0, 1) and 1719 Ex I/O in areas up to Zone 2 or Class I, Div. 2 (connecting directly to field devices in Zones 0, 1 and Class I, Div. 1 areas).
- Shorten configuration time through integration with an Integrated Architecture® Builder system and support for Add-on Profile in Studio 5000 Logix Designer application version 24 or later
- Improve system reliability and minimize downtime with optional N+1 power supply redundancy
- Maintain uptime by replacing modules and making connections while system is in operation with Removal and Insertion Under Power (RIUP)
- Achieve maximum space efficiency with compact chassis-based design that enables power supplies to be contained on chassis
- Scale solution for larger applications:
 - 1719 Ex I/O — choice of eight- or 22-slot chassis, which can be further expanded to a 24-slot expansion chassis.



- 1718 Ex IO — choice of 10- or 20-slot chassis. The 20-slot chassis acts as a base chassis and can be further expanded with another 10- or 20-slot chassis.



Comparison Between the Class/Division and Zone System

The comparisons between these two systems are not easily accomplished. The Class/Division method is the dominant method that is used in North America with requirements set by NEC/CEC, see the Class/Division Hazardous Location White Paper, publication [800-wp003](#) for details. The Zone standard is predominantly used outside North America, see the Zone Hazardous Location White Paper, publication [800-wp004](#) for details. Both systems are valid and were developed independently from each other. They each have their own approach to area classification and each has its own advocates and approval organizations. No one system is better than the other as neither has been proven to be safer than the other. Each has its own merits. Which system is preferred depends on the user preference, how the areas are classified, and the wiring system used in the facility.

The hazardous location areas are defined by taking into account the different dangers that are presented by potentially explosive atmospheres. This enables protective measures to be taken that account for both cost and safety factors.

Hazardous Area Designation

A hazardous area is designated as any location in which a combustible material is or may be present in the atmosphere in sufficient concentration to produce an ignitable mixture.

Class Designation

Class identifies the type of hazardous atmosphere.

Class	Type
I	Gas or Vapor
II	Dust
III	Fiber or flying (no group designation)

Division/Zone Designations

Division/Zone identifies the likelihood of a hazardous atmosphere being present.

Scenario	Division Method	IEC Standard Zone Method
Ignitable mixture present continuously (long periods)	Division 1	Zone 0 (Zone 20-Dust)
Ignitable mixture present intermittently		Zone 1 (Zone 21-Dust)
Ignitable mixture is not normally present	Division 2	Zone 2 (Zone 22-Dust)

Mounting and Installation Requirements

FLEX Ex I/O

This equipment is considered Group 1, Class A industrial equipment according to IEC/CISPR Publication 11. See the FLEX Ex System Certification Reference Manual, publication [1797-6.5.6](#) and FLEX Ex I/O 24V DC 4 Non-Isolated Source Output Module Installation Instructions, publication [1797-IN006](#) for more information.

1719 Ex I/O

The device may only be installed and operated in Zone 2 or Class I, Div 2 if it has been mounted in a surrounding enclosure with degree of protection IP54 according to IEC/EN 60529. The surrounding enclosure must correspond to equipment protection level Gc.

For mounting in Zone 22 or Class II, Div 2 (dust hazardous area), special cabinet specifications must be met. The enclosure must be protected against falling dirt, circulating dust, and windblown dust. The enclosure must be test and certified in accordance with UL50E Type 3, 3S, X, 4, or 4X.

Rockwell Automation partners with Pepperl+Fuchs for enclosure solutions. For more details on the enclosures from our partner, see publication [1719-PP002](#).

See the 1719 Ex I/O User Manual, publication [1719-UM001](#) for more information on installation and mounting requirements.

1718 Ex I/O

May be installed and operated in Zone 1 only if they are installed in a surrounding enclosure that complies with a Gb equipment protection level. To meet zone 1 mounting requirements, you must use a certified enclosure.

Rockwell Automation partners with Pepperl+Fuchs for enclosure solutions. For more details on the enclosures from our partner, see publication [1718-PP002](#).

See the 1718 Ex I/O User Manual, publication [1718-UM001](#) for more information on installation and mounting requirements.

Before deciding on migrating your FLEX Ex I/O platform, it is imperative to evaluate the application needs.

Application Type	Recommendation	Recommended Replacement Product
Class I, Div. 1	Determine if ATEX Zone 1 rating is acceptable	1718 Ex I/O
	Determine if reclassification of area to Class I, Div. 2 is acceptable	1719 Ex I/O ⁽¹⁾

(1) 1719 Ex I/O can be installed in a purge enclosure or an explosion-proof enclosure to be used in Class I, Div 1 area.

Network Considerations

ControlNet Network Overview

The ControlNet® network provides high-speed transmission of time-critical I/O and interlocking data and messaging data. This data transfer capability enhances I/O performance and peer-to-peer communication in any system or application. The ControlNet network remains unaffected as devices are connected or disconnected from it. This data transfer capability delivers a dependable, synchronized, and coordinated real-time performance.

EtherNet/IP Network Overview

EtherNet/IP networks offer a comprehensive suite of messages and services for many automation applications. This open network standard uses standard Ethernet communication products to support real-time I/O messaging, information exchange, and general messaging. EtherNet/IP networks support CIP Safety™ applications. Such support makes the simultaneous transmission of safety and standard control data and diagnostics information over a common network possible. EtherNet/IP networks also support CIP Motion™ and CIP Security™. These features are not supported in ControlNet.

Other Considerations

To migrate your FLEX Ex I/O platform fully to 1719 Ex I/O or 1718 Ex I/O platforms, you must convert your existing ControlNet network to an EtherNet/IP network. For more information, see the ControlNet to EtherNet/IP Migration Guide, publication [CNET-RM001](#).

You must replace the references to FLEX Ex I/O with 1719 Ex I/O or 1718 Ex I/O by making changes in the code. This is the recommended solution to migrate from the FLEX Ex I/O platform to the 171x Ex I/O platform. If you do not want to update your application because of complexity and extra work, you can use the migration guides available at rok.auto/knowledgebase. Every conversion guide contains an Add-On Instruction that copies the I/O data from FLEX Ex I/O to 171x Ex I/O.



See Knowledgebase article "Migration guide from FLEX Ex I/O to 1719 Ex I/O or 1718 Ex I/O", Answer ID IN4375.

You may be asked to log in to your Rockwell Automation web account or create an account if you do not have one. You do not need a support contract to access the article

Notes:

Upgrade ControlLogix Controller

This chapter provides information about the recommended upgrade for your existing ControlLogix 5560 platform.

1719 Ex I/O and 1718 Ex I/O require ControlLogix firmware revision 24 or later. Older controllers such as those from ControlLogix 5560 (1756-L6x) are not compatible with this firmware revision and if installed, requires a controller upgrade to migrate from FLEX Ex I/O.

You can view the lifecycle status of your ControlLogix product on the Rockwell Automation Product Lifecycle Status website:

www.rockwellautomation.com/global/solutions-services/capabilities/migration-solutions/product-search/overview.page.

Upgrade to a ControlLogix 5570 or ControlLogix 5580 Controller

[Table 1](#) lists the recommended ControlLogix controller to replace your existing ControlLogix 5560 controller.

Table 1 - ControlLogix Controller Replacement Recommendations

ControlLogix 5560 Controller	Recommended ControlLogix 5570 Controller Replacement	Recommended ControlLogix 5580 Controller Replacement
1756-L61	1756-L71	1756-L81E
1756-L62	1756-L72	1756-L82E
1756-L63	1756-L73	1756-L83E
1756-L63XT	1756-L73XT	1756-L83EXT
1756-L64	1756-L74	1756-L84E
1756-L65	1756-L75	1756-L85E

For technical specifications of the ControlLogix 5570 or ControlLogix 5580 controllers, see the ControlLogix and GuardLogix Controllers Technical Data, publication [1756-TD001](#).

For more information about the features and differences between the standard ControlLogix controllers, see the ControlLogix System User Manual, publication [1756-UM001](#) and ControlLogix 5580 and GuardLogix 5580 Controllers User Manual, publication [1756-UM543](#).

Notes:

Migrate your FLEX Ex I/O

This chapter provides information about the recommended migration guide for your existing FLEX Ex I/O module.

The FLEX Ex I/O platform is discontinued since December 31, 2017.

You can view the lifecycle status of your FLEX Ex I/O product on the Rockwell Automation Product Lifecycle Status website:

www.rockwellautomation.com/global/solutions-services/capabilities/migration-solutions/product-search/overview.page.

Migrate FLEX Ex I/O to 1719 Ex I/O or 1718 Ex I/O

Before migrating, take note of the following:

- The 171x-AENTR Add-on Profile must be used with Logix Designer application version 24 or later and RSLinx software version 3.74 or later.
- ControlLogix firmware revision 24 or later is required. Older controllers such as those from ControlLogix 5560 (1756-L6x) are not compatible with this firmware revision and if installed, requires a controller upgrade to migrate from FLEX Ex I/O.
- 1719 Ex I/O and 1718 Ex I/O are only available with EtherNet/IP while FLEX Ex I/O uses ControlNet. A 1756-EN2T(R) in the 1756 chassis is required to connect to the 171x-AENTR.
- The minimum requested packet interval (RPI) rate for 1719 Ex I/O and 1718 Ex I/O is 20 ms while the RPI for FLEX Ex I/O is 2 ms. Verify if this impacts your application. For more information see the Logix 5000 Controllers Design Considerations, publication [1756-RM094](#).
- All application references from your FLEX Ex I/O must be replaced by making changes in the code.

[Table 2](#) lists the migration guide for different modules. Each migration guide contains an Add-on Profile that copies the I/O data from your FLEX Ex I/O module to the replacement 1719 Ex I/O or 1718 Ex I/O module. You may be asked to log in to your Rockwell Automation web account or create an account if you do not have one. You do not need a support contract to access the article

Table 2 - Migration Guides

Catalog Number	Summary	Answer ID
1797-IBN16	Migrate 1797-IBN16 to 171x-IBN8 or 171x-IBN8B with data connection	IN4781
	Migrate 1797-IBN16 to 171x-IBN8 or 171x-IBN8B with rack-optimized connection	IN4784
1797-OB4D	Migrate 1797-OB4D to 171x-OB2 or 171x-OB2L with data connection	IN4787
	Migrate 1797-OB4D to 171x-OB2 or 171x-OB2L with rack-optimized connection	IN4790
1797-IE8	Migrate 1797-IE8 to 171x-IF4HB or 171x-CF4H	IN4793
1797-OE8	Migrate 1797-OE8 to 171x-CF4H	IN4796

Notes:

Wiring Diagram Comparisons

This appendix provides wiring diagram comparisons of the recommended replacement for your existing FLEX Ex I/O platform.

Wiring must be moved manually from FLEX Ex I/O modules to 1719 Ex I/O or 1718 Ex I/O modules.

Replace FLEX Ex I/O with 1719 Ex I/O or 1718 Ex I/O

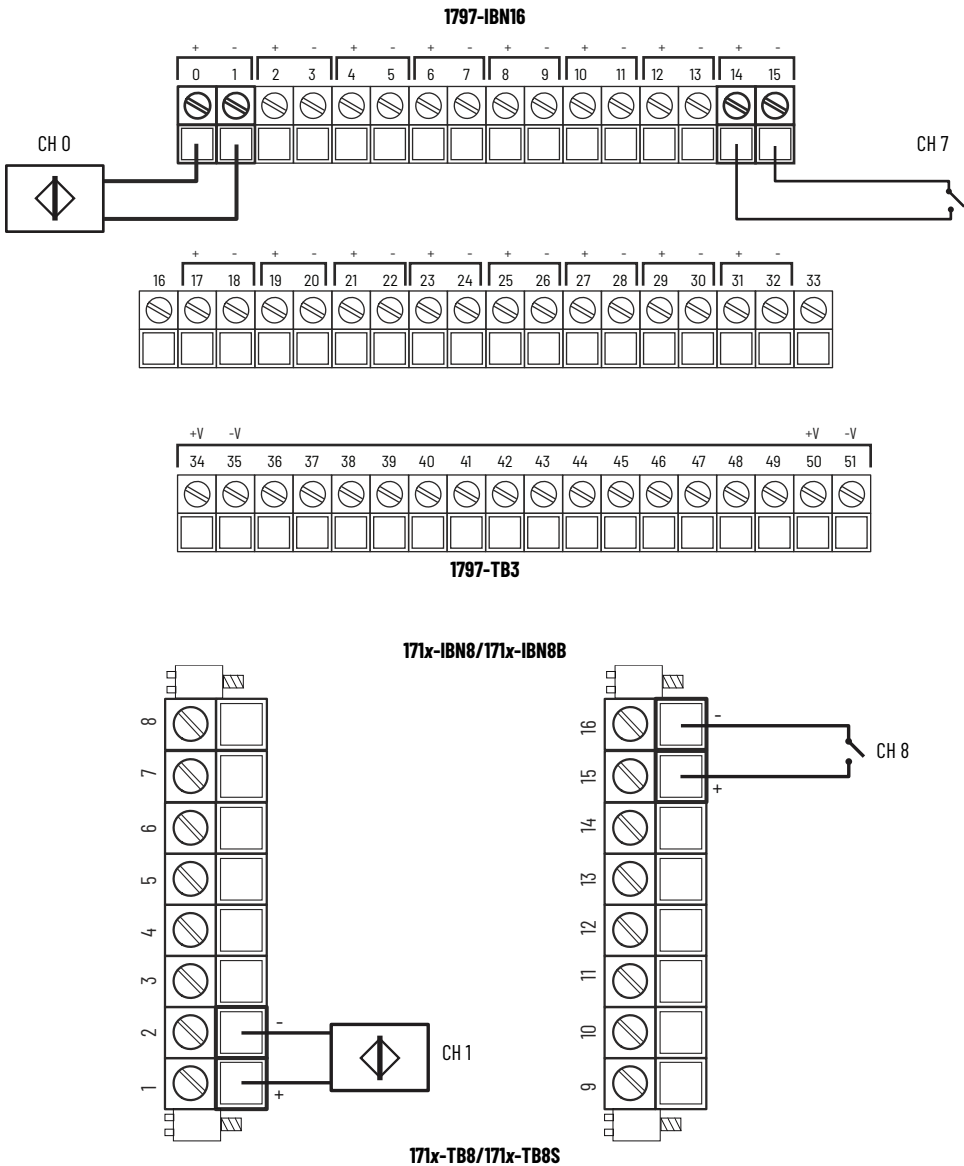
[Table 3](#) lists examples of how to migrate wiring from FLEX Ex I/O to 1719 Ex I/O or 1718 Ex I/O.

Table 3 - Migrate Wiring FLEX Ex I/O to 1719 Ex I/O or 1718 Ex I/O

Wiring Diagrams	Page
1797-IBN16 to 171x-IBN8/171x-IBN8B	20
1797-OB4D to 171x-OB2/171x-OB2L	21
1797-IE8/1797-IE8NF/1797-IE8H to 171x-IF4HB	22
1797-IE8/1797-IE8NF/1797-IE8H to 171x-CF4H Configured as Analog Input	23
1797-OE8/1797-OE8H to 171x-CF4H Configured as Analog Output	24
1797-IRT8 to 171x-IR4B	25
1797-IRT8 to 171x-IT4B	26
1797-IJ2 to 171x-IJ	27

IMPORTANT The specification comparison tables in this section are only meant to highlight the main differences between the FLEX Ex I/O and recommended replacement 1719 Ex I/O or 1718 Ex I/O module. For a full list of specifications and detailed wiring instructions, see the installations instructions and technical data publications of the associated catalogs.

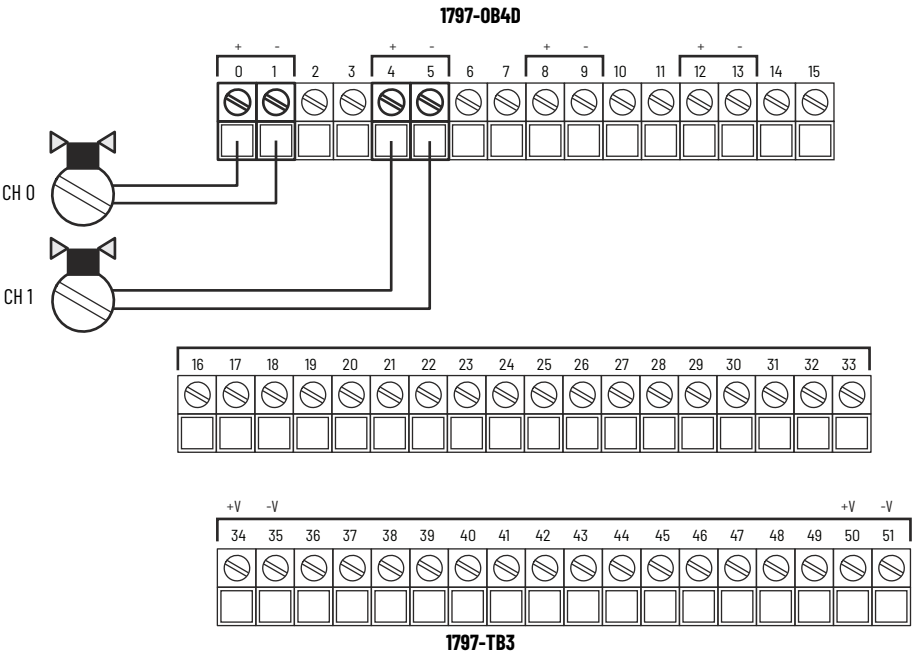
1797-IBN16 to 171x-IBN8/171x-IBN8B



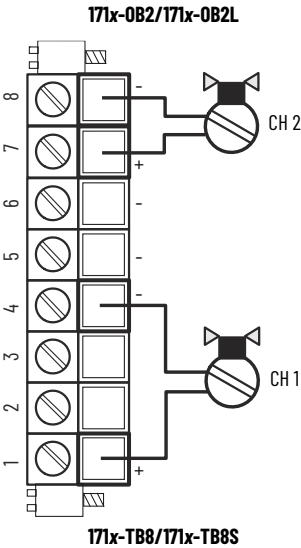
Main Differences Between 1797-IBN16 and 171x-IBN8/171x-IBN8B Modules

Attributes	1797-IBN16	171x-IBN8/171x-IBN8B
Channels	16 channels (0...15)	8 channels (1...8)
RPI, min	2 ms	20 ms
Supports special mode where input 15 is used as a simple counter	Yes	No
Operating temperature, max	70 °C (158 °F)	60 °C (140 °F)
Note: Entity parameters vary between the two platforms.		

1797-OB4D to 171x-OB2/171x-OB2L



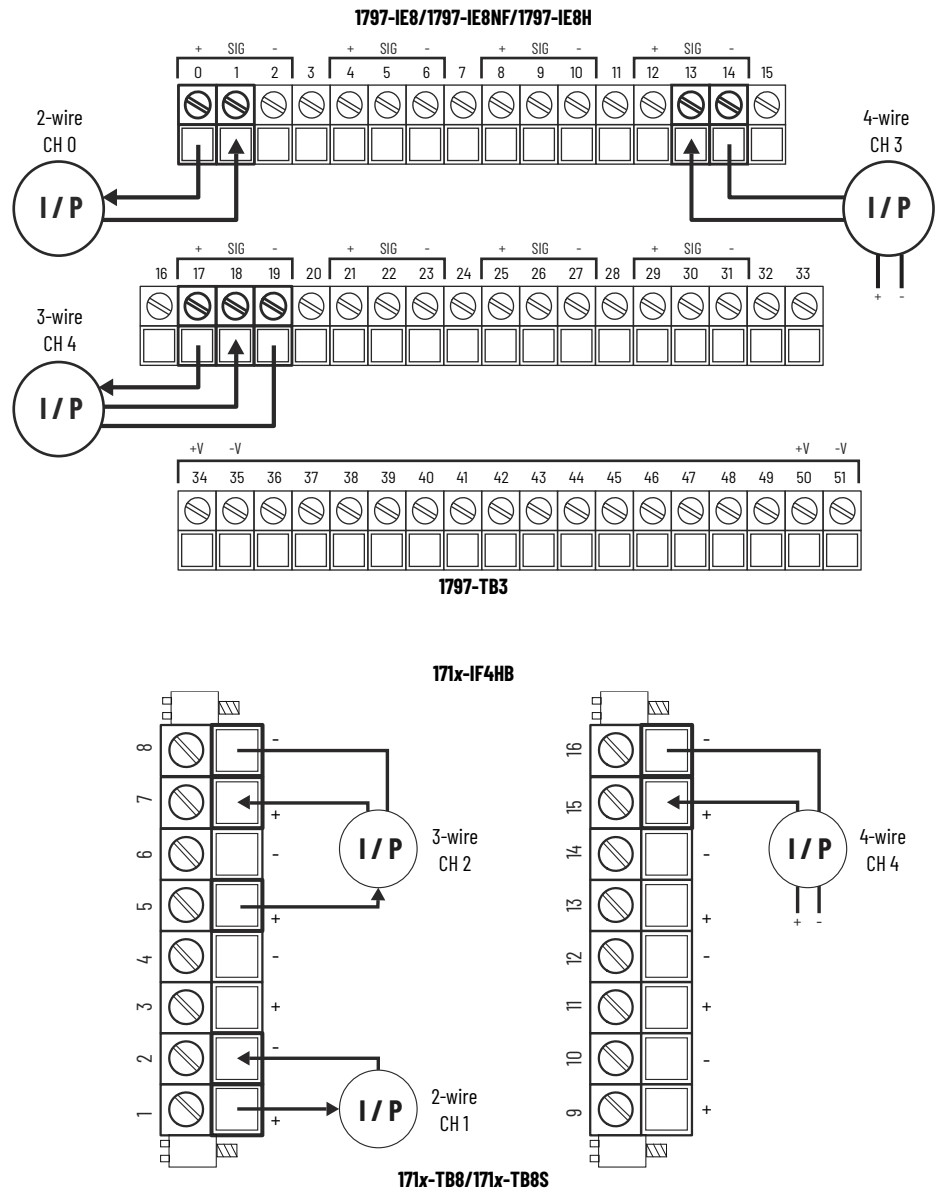
Terminals 4, 5, 6 and 8 are tied together internally.
Terminals 2 and 3 are not used.



Main Differences Between 1797-OB4D and 171x-OB2/171x-OB2L Modules

Attributes	1797-OB4D	171x-OB2/171x-OB2L
Channels	4 channels (0...3)	1 or 2 channels (1...2)
RPI, min	2 ms	20 ms
Output voltage, max	24V	23V - 171x-OB2 16.5V - 171x-OB2L
Operating temperature max	70 °C (158 °F)	60 °C (140 °F)
Note: Verify that the output voltage versus current capability curves between the two platforms are compatible with your end device. Entity parameters vary between the two platforms.		

1797-IE8/1797-IE8NF/1797-IE8H to 171x-IF4HB



Main Differences Between 1797-IE8/1797-IE8NF/1797-IE8H and 171x-IF4HB Modules

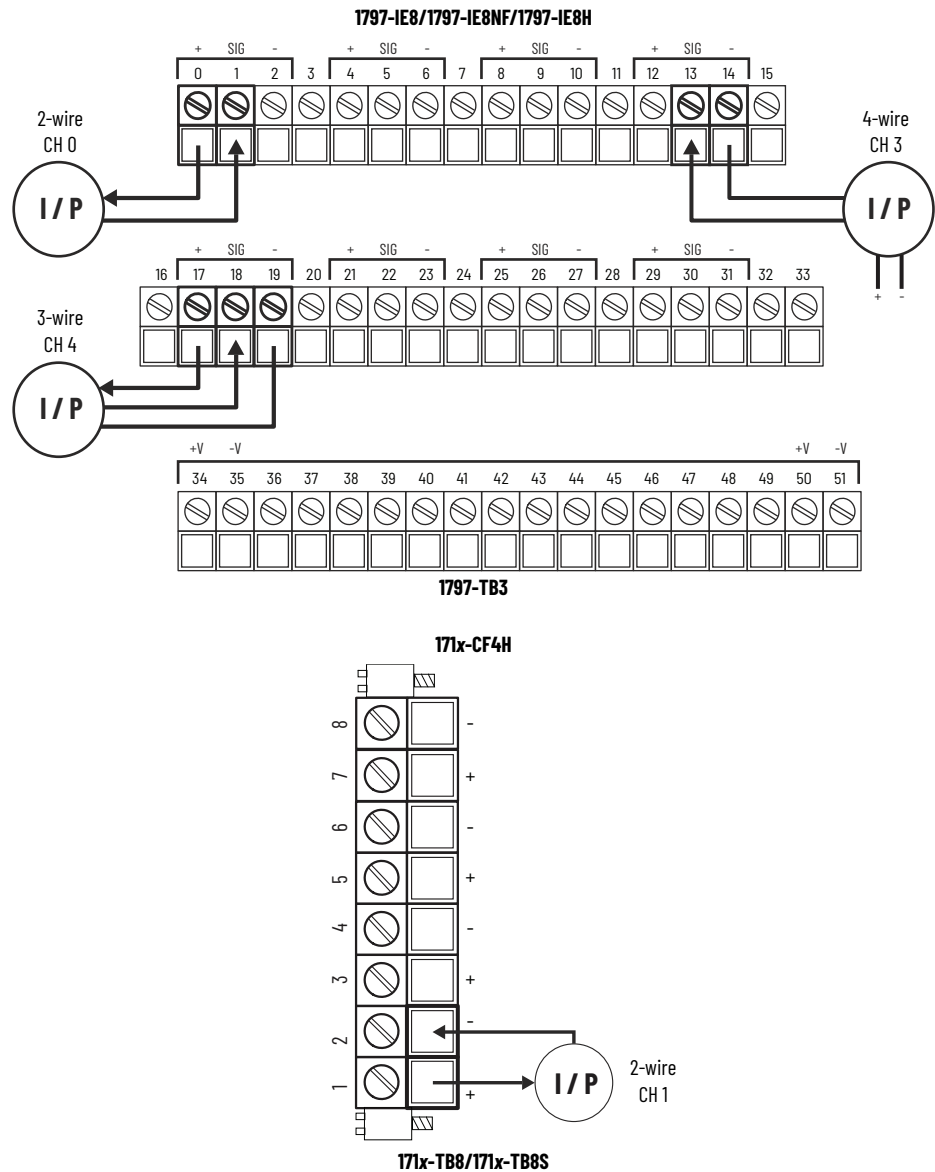
Attributes	1797-IE8/1797-IE8NF/1797-IE8H	171x-IF4HB
Channels	8 channels (0...7)	4 channels (1...4)
RPI, min	2 ms	100 ms
Resolution	16-bit	12-bit
Devices supported Without HART: With HART:	2-wire, 3-wire, and 4-wire 2-wire, 3-wire, and 4-wire	2-wire, 3-wire, and 4-wire 2-wire only
Channel data (returns)	INT	REAL
Operating temperature, max	70 °C (158 °F)	60 °C (140 °F)

Note:
Verify that all HART values and commands that are required for your application are supported by the two platforms.
Channel data can be scaled differently between the two platforms.
Entity parameters vary between the two platforms.

1797-IE8/1797-IE8NF/1797-IE8H to 171x-CF4H Configured as Analog Input



The 171x-CF4H can be configured as an Analog Input module only or an Analog Output module only. The module can be further configured for standard analog devices only or standard analog devices and HART devices.



Main Differences Between 1797-IE8/1797-IE8NF/1797-IE8H and 171x-CF4H Modules

Attributes	1797-IE8/1797-IE8NF/ 1797-IE8H	171x-CF4H
Channels	8 channels (0...7)	4 channels (1...4)
RPI, min	2 ms	100 ms
Resolution	16-bit	12-bit
Devices supported Without HART: With HART:	2-wire, 3-wire, and 4-wire 2-wire, 3-wire, and 4-wire	2-wire only 2-wire only
Channel data	INT	REAL
Operating temperature, max	70 °C (158 °F)	60 °C (140 °F)

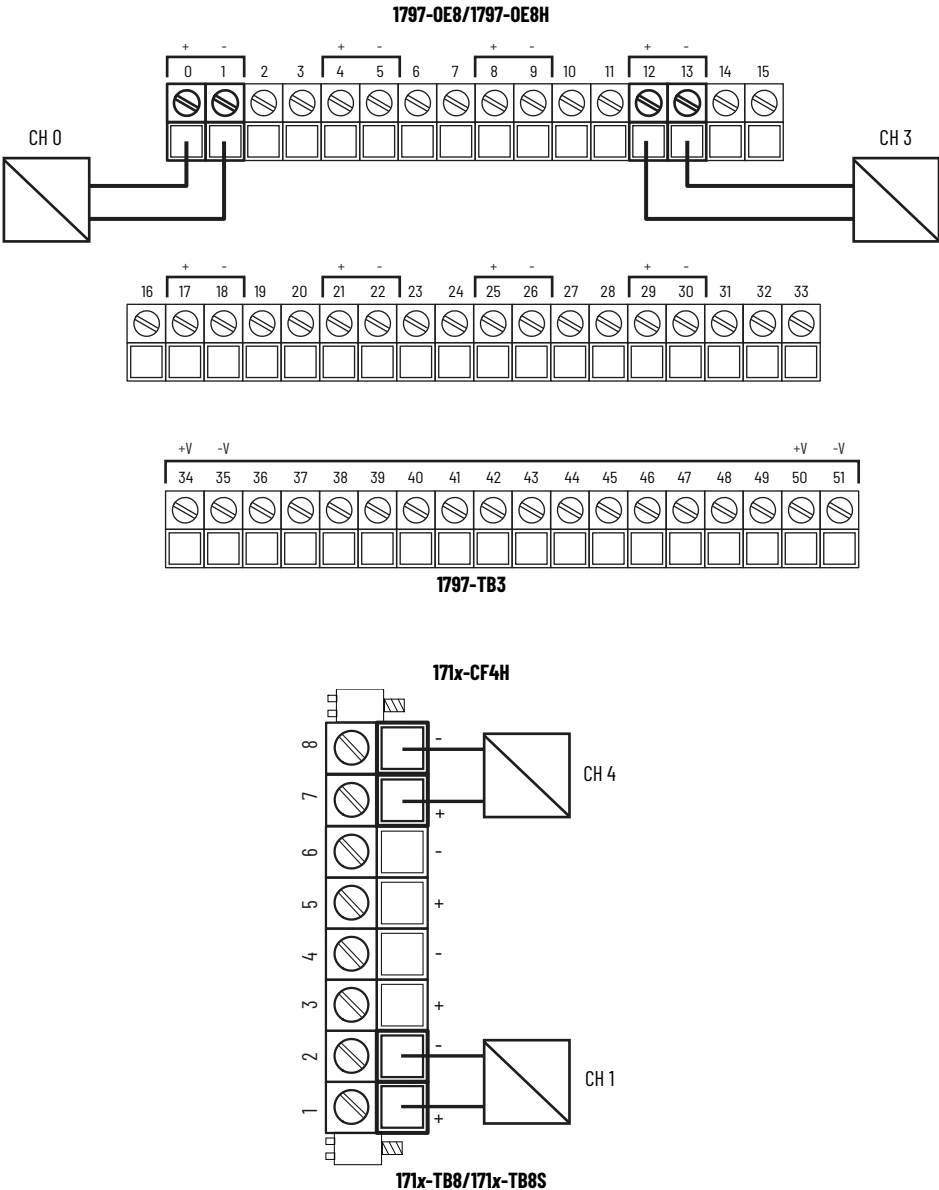
Note:

Channel data can be scaled differently between the two platforms.

Entity parameters vary between the two platforms.

1797-0E8/1797-0E8H to 171x-CF4H Configured as Analog Output

 The 171x-CF4H can be configured as an Analog Input module only or an Analog Output module only. The module can be further configured for standard analog devices only or standard analog devices and HART devices.

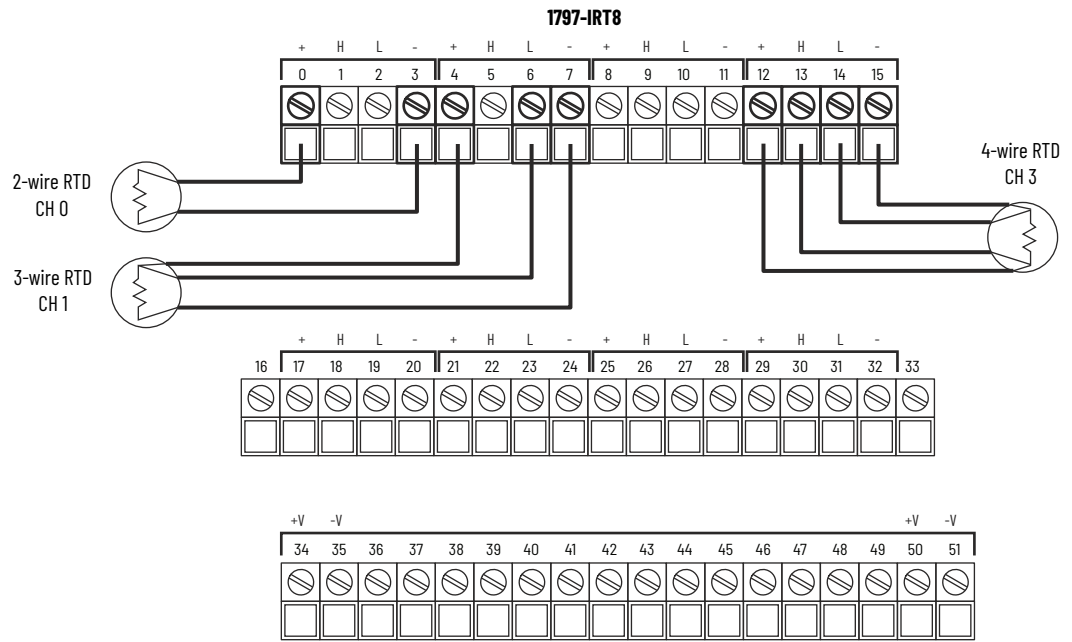


Main Differences Between 1797-0E8/1797-0E8H and 171x-CF4H Modules

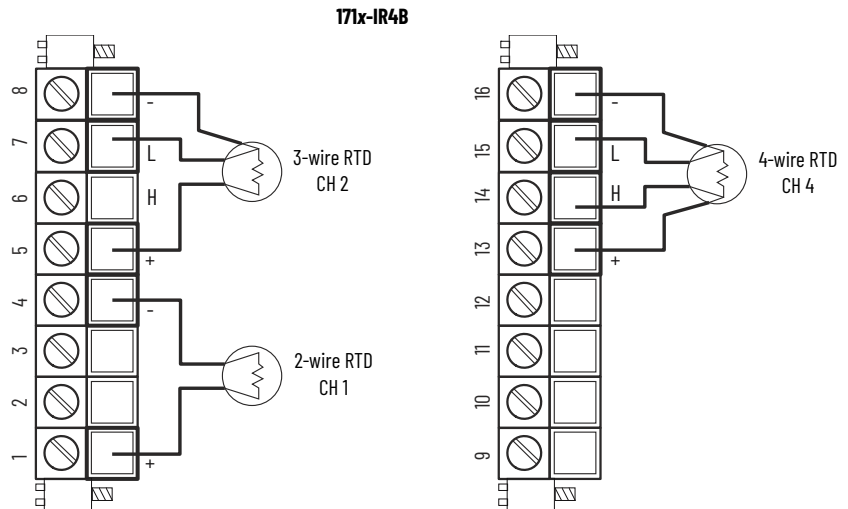
Features	1797-0E8/1797-0E8H	171x-CF4H
Channels	8 channels (0...7)	4 channels (1...4)
RPI, min	2 ms	100 ms
Channel data (return/receive)	INT	REAL
Operating temperature, max	70 °C (158 °F)	60 °C (140 °F)

Note:
Channel data can be scaled differently between the two platforms.
Entity parameters vary between the two platforms.

1797-IRT8 to 171x-IR4B



1797-TB3



171x-TB8/171x-TB8S

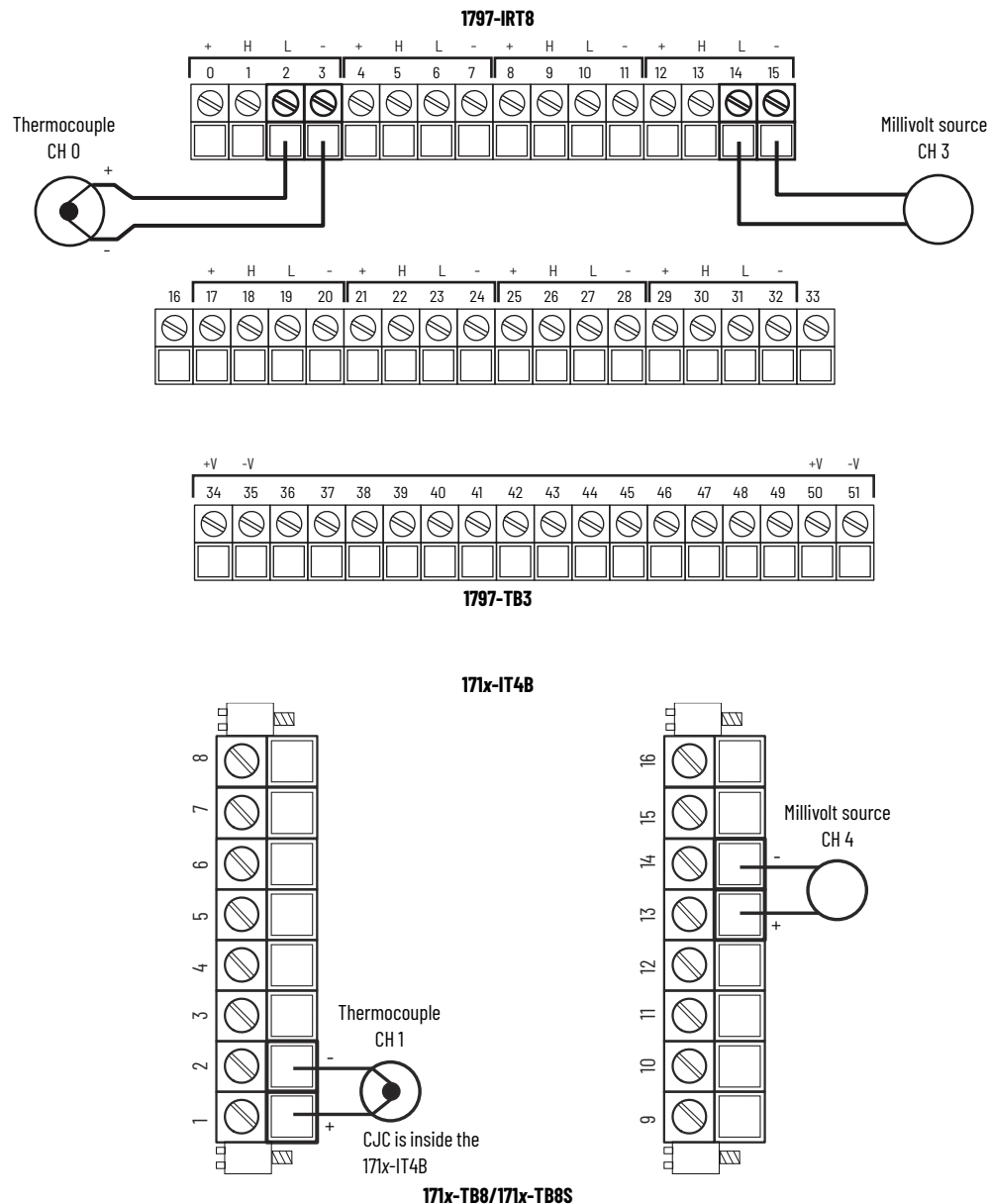
Main Differences Between 1797-IRT8 and 171x-IR4B Modules

Attribute	1797-IRT8	171x-IR4B
Channels	8 channels (0...7)	4 channels (1...4)
RPI, min	2 ms	100 ms
Input type	RTD, mV, and Thermocouple inputs	RTD inputs
Supports Ni120, Ni200, and 10Cu RTDs	Yes	No
Channel data (returns)	INT	REAL
Operating temperature, max	70 °C (158 °F)	60 °C (140 °F)

Note:

Channel data can be scaled differently between the two platforms.
Entity parameters vary between the two platforms.

1797-IRT8 to 171x-IT4B

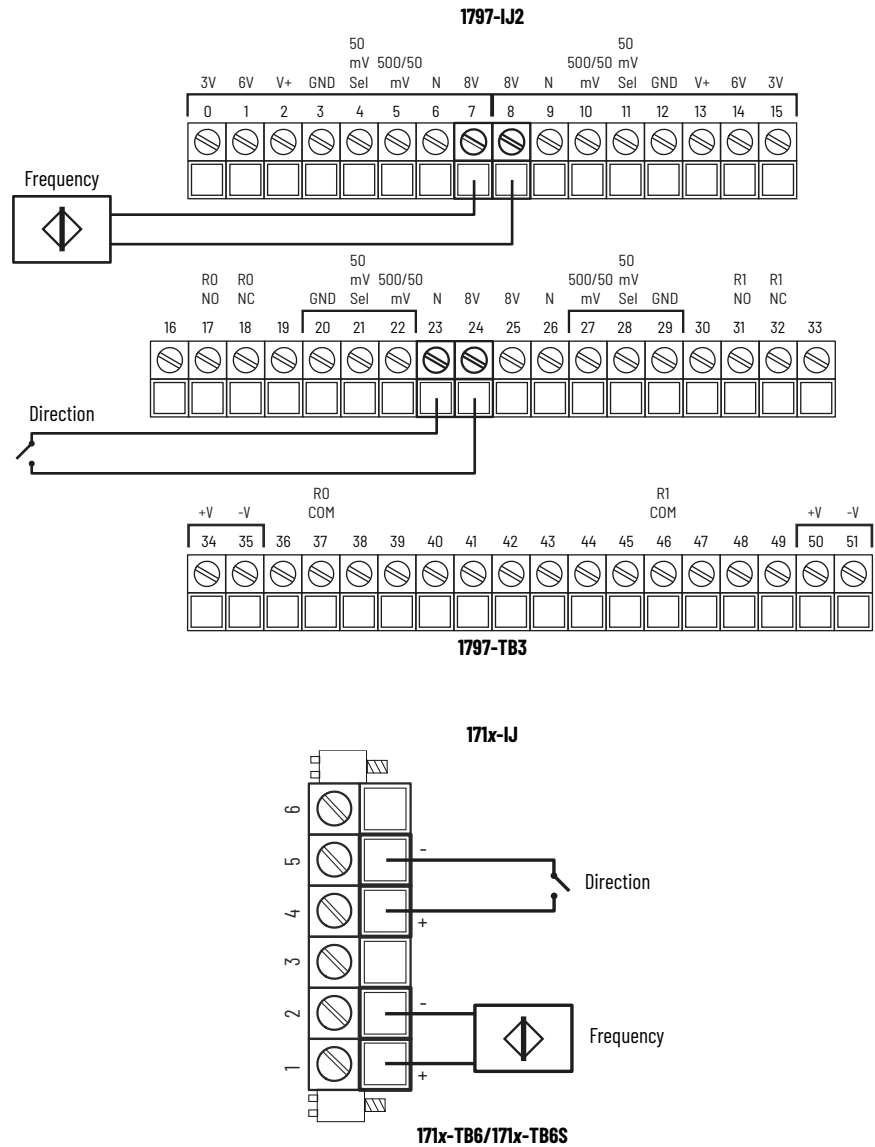


Main Differences Between 1797-IRT8 and 171x-IT4B Modules

Attributes	1797-IRT8	171x-IT4B
Channels	8 channels (0...7)	4 channels (1...4)
RPI, min	2 ms	100 ms
Input type	RTD, mV, and Thermocouple	mV, Thermocouple
Signal input voltage range	-40...+100 mV	-65...+75 mV
CJC temperature	Return the local CJC temperature	Cannot return the CJC temperature
Channel data (returns)	INT	REAL
Operating temperature max	70 °C (158 °F)	60 °C (140 °F)

Note:
Channel data can be scaled differently between the two platforms.
Entity parameters vary between the two platforms.

1797-IJ2 to 171x-IJ



Main Differences Between 1797-IJ2 and 171x-IJ Modules

Attributes	1797-IJ2	171x-IJ
Channels	2 channels	1 channel
RPI, min	2 ms	20 ms
Built-in relay output	2	0
Input operating frequency, max	32 kHz	15 kHz
Supports 50 mV/500 mV Magnetic pickups and 3V/6V AC Vortex devices	Yes	No
Supports acceleration calculation	Yes	No
Operating temperature, max	70 °C (158 °F)	60 °C (140 °F)
Note: Entity parameters vary between the two platforms.		

Notes:

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, and product notification updates.	rok.auto/support
Knowledgebase	Access Knowledgebase articles.	rok.auto/knowledgebase
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
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.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

Allen-Bradley, ControlLogix, expanding human possibility, FactoryTalk, FLEX Ex, Integrated Architecture, Logix 5000, Rockwell Automation, RSLogix, RSLogix 5000, Studio 5000 Logix Designer, and TechConnect are trademarks of Rockwell Automation, Inc.

CIP Motion, CIP Safety, CIP Security, ControlNet, and EtherNet/IP are trademarks of ODVA, Inc.

Trademarks not belonging to Rockwell Automation are property of their respective companies.

Rockwell Otomasyon Ticaret A.Ş. Kar Plaza İş Merkezi E Blok Kat:6 34752, İçerenköy, İstanbul, Tel: +90 (216) 5698400 EEE Yönetmeliğine Uygundur

Connect with us.    

rockwellautomation.com — expanding **human possibility**[®]

AMERICAS: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

ASIA PACIFIC: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846