



## ***Installation Instructions***

# **POINT I/O Input Modules**

Cat. No. 1734-IB2, 1734-IB4, 1734-IB8, Series C

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### Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. *Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls* (Publication SGI-1.1 available from your local Rockwell Automation sales office or online at <http://www.literature.rockwellautomation.com>) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

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 we use notes to make you aware of safety considerations.

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#### **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.

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#### **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
  - recognize the consequence
- 

#### **SHOCK HAZARD**



Labels may be located on or inside the equipment (e.g., drive or motor) to alert people that dangerous voltage may be present.

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#### **BURN HAZARD**



Labels may be located on or inside the equipment (e.g., drive or motor) to alert people that surfaces may be dangerous temperatures.

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#### **IMPORTANT**

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

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**ATTENTION****Environment and Enclosure**

This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC publication 60664-1), at altitudes up to 2000 meters without derating.

This equipment is considered Group 1, Class A industrial equipment according to IEC/CISPR Publication 11. Without appropriate precautions, there may be potential difficulties ensuring electromagnetic compatibility in other environments due to conducted as well as radiated disturbance.

This equipment is supplied as "open type" equipment. 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 interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain additional information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.

See NEMA Standards publication 250 and IEC publication 60529, as applicable, for explanations of the degrees of protection provided by different types of enclosure. Also, see the appropriate sections in this publication, as well as the Allen-Bradley publication 1770-4.1 (Industrial Automation Wiring and Grounding Guidelines), for additional installation requirements pertaining to this equipment.

**ATTENTION**

POINT I/O is grounded through the DIN rail to chassis ground. Use zinc plated, yellow chromated steel DIN rail to assure proper grounding. Using other DIN rail materials (e.g. aluminum, plastic, etc.) which can corrode, oxidize or are poor conductors can result in improper or intermittent platform grounding.

### WARNING



### EXPLOSION HAZARD

- Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous.
  - Do not disconnect connections to this equipment unless power has been removed or the area is known to be nonhazardous. Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product.
  - Substitution of components may impair suitability for Class I, Division 2.
  - If this product contains batteries, they must only be changed in an area known to be nonhazardous.
- 

### ATTENTION



### Preventing Electrostatic Discharge

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.
  - If available, use a static-safe workstation.
  - When not in use, store the equipment in appropriate static-safe packaging.
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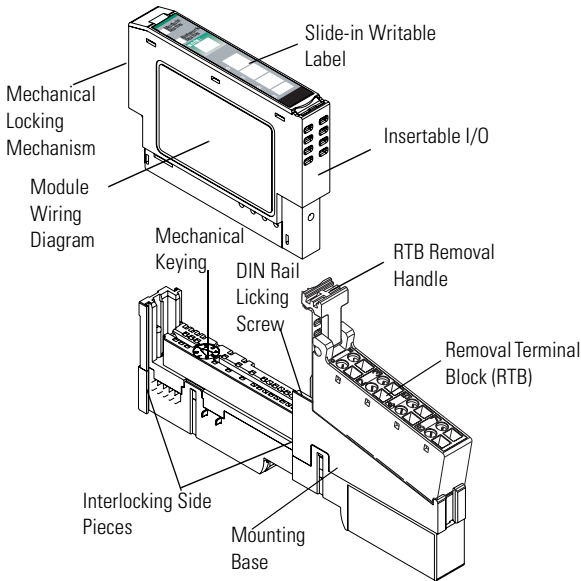
## Before You Begin

This Series C POINT I/O product can be used with DeviceNet and PROFIBUS adapters. It can be used with ControlNet and Ethernet adapters using RSLogix 5000 software, version 11 or higher.

Read this manual for information about how to install this 1734 POINT I/O Module.

## Identify the Components

Use the figure to identify the external features of the module.



## About the Module

The 1734 sink input modules are available in 2 input, 4 input, and 8 input. They install in mounting bases that mount on a DIN rail. All wiring is made to a removable terminal block mounted on the mounting base.

## Install the Mounting Base

To install the mounting base on the DIN rail, proceed as follows.

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

2. Slide the mounting base down allowing the interlocking side pieces to engage the adjacent module or adapter.
3. Press firmly to seat the mounting base on the DIN rail.

The mounting base will snap into place.

4. To remove the mounting base from the DIN rail, remove the module, and use a small bladed screwdriver to rotate the base locking screw to a vertical position.

This releases the locking mechanism.

5. Lift straight up to remove.

### Install the I/O Module

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

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#### 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.

- 
1. Using a bladed screwdriver, rotate the keyswitch (2) on the mounting base clockwise until the number required for the type of module being installed aligns with the notch in the base.
  2. Make certain the DIN rail locking screw is in the horizontal position.

You cannot insert the module if the locking mechanism is unlocked.

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

The module will lock into place.

## Install the Removable Terminal Block (RTB)

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

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

### WARNING



When you connect or disconnect the removable terminal block (RTB) with field side power applied, 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.

## Remove a Mounting Base

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

1. Unlatch the RTB handle on the I/O module.

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

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**WARNING**

When you connect or disconnect the removable terminal block (RTB) with field side power applied, 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.

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3. Press on the module lock on the top of the module.
4. Pull on the I/O module to remove from the base.

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**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.

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5. Repeat steps 1, 2, 3, and 4 for the module to the right.
6. Use a small bladed screwdriver to rotate the orange base locking screw to a vertical position.

This releases the locking mechanism.

7. Lift straight up to remove.



## Communicate with Your Module

I/O messages are sent to (consumed) and received from (produced) the POINT I/O modules. These messages are mapped into the processor's memory. This POINT I/O input module produces 1 byte of input data (scanner Rx). It does not consume I/O data (scanner Tx).

### Default Data Map for the 1734-IB2 Input Module

Message size: 1 Byte

	7	6	5	4	3	2	1	0
Produces (Rx)							I1	I0
Consumes (Tx)	No consumed data							

Where: I0 = channel 0, I1 = channel 1; 0 = off, 1 = on

### Default Data Map for the 1734-IB4 Input Module

Message size: 1 Byte

	7	6	5	4	3	2	1	0
Produces (Rx)					I3	I2	I1	I0
Consumes (Tx)	No consumed data							

Where: I0 = channel 0, I1 = channel 1, I2 = channel 2 and I3 = channel 3; 0 = off, 1 = on

### Default Data Map for the 1734-IB8 Input Module

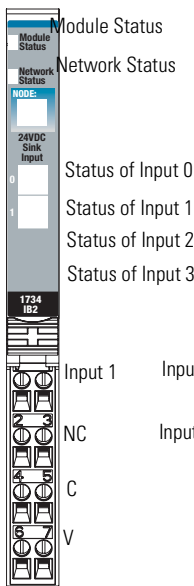
Message size: 1 Byte

	7	6	5	4	3	2	1	0
Produces (Rx)	I7	I6	I5	I4	I3	I2	I1	I0
Consumes (Tx)	No consumed data							

Where: I0 = channel 0, I1 = channel 1, I2 = channel 2 and I3 = channel 3; I4 = channel 4, I5 = channel 5, I6 = channel 6, I7 equals channel 7; 0 = off, 1 = on

## Wire the Input Modules

1734-IB2

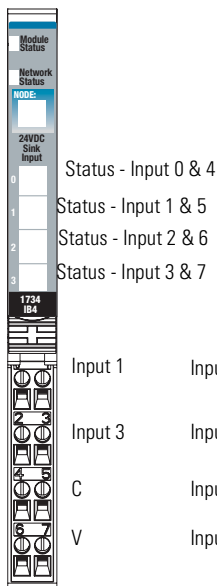


Input 0  
NC  
C  
V

Input 1  
NC  
C  
V

Input 2  
NC  
C  
V

1734-IB4

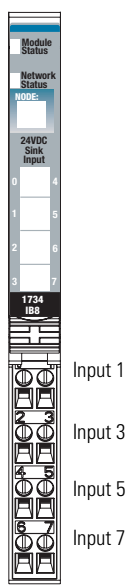


Input 0  
NC  
C  
V

Input 1  
NC  
C  
V

Input 2  
NC  
C  
V

1734-IB8



Input 0  
NC  
C  
V

Input 1  
NC  
C  
V

Input 2  
NC  
C  
V

Input = 0 and 1  
NC = No Connection (2 and 3)  
C = Common (4 and 5)

Input = 0, 1, 2 and 3  
C = Common (4 and 5)

Input = 0, 1, 2, 3, 4, 5, 6 and 7  
Note: V and C are daisy-chained from either the adapter, 1734-FPD, 1734-EP24DC, or from a user-supplied auxiliary terminal block.

41974

### WARNING



When you connect or disconnect wiring while 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.

## Wiring for 1734-IB2

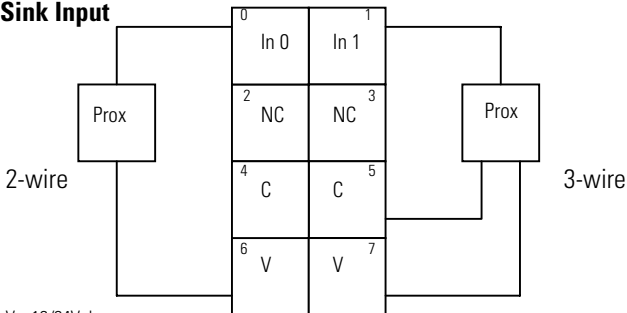
### WARNING



When you connect or disconnect wiring while 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.

### Sink Input



V = 12/24V dc  
C = Common

41966

Channel	Input	Common	Voltage
0	0	4	6
1	1	5	7

Connect common on 3-wire proximity switches.  
12/24V dc is supplied through the internal power bus.

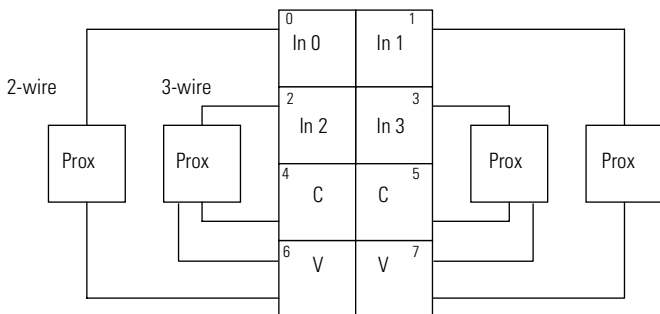
## Wiring for 1734-IB4

**WARNING**

When you connect or disconnect wiring while 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.

## Sink Input



V = 12/24V dc

C = Common

41967

Channel	Input	Common	Voltage
0	0	4	6
1	1	5	7
2	2	4	6
3	3	5	7

Connect common on 3-wire proximity switches.  
12/24V dc is supplied through the internal power bus.

## Wiring for 1734-IB8

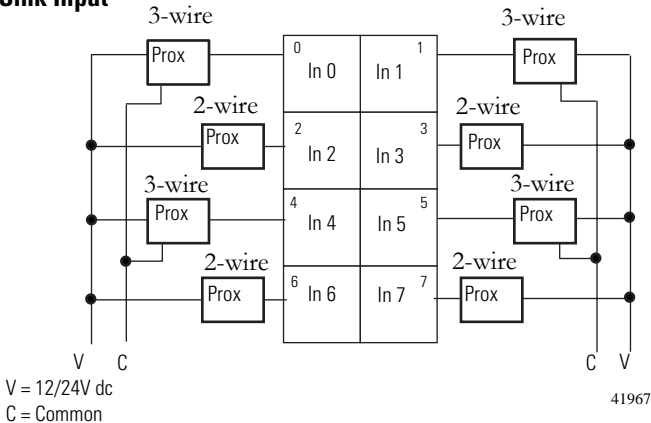
### WARNING



When you connect or disconnect wiring while 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.

### Sink Input



Channel	Input	Channel	Input
0	0	4	4
1	1	5	5
2	2	6	6
3	3	7	7

Daisychain common and power connections from 1734 adapter, 1734-FPD, 1734-EP24DC, or from user-supplied external auxiliary terminal block.

**Note:** When connecting more than 1 wire in a termination point, make sure that both wires are the same gauge and type.

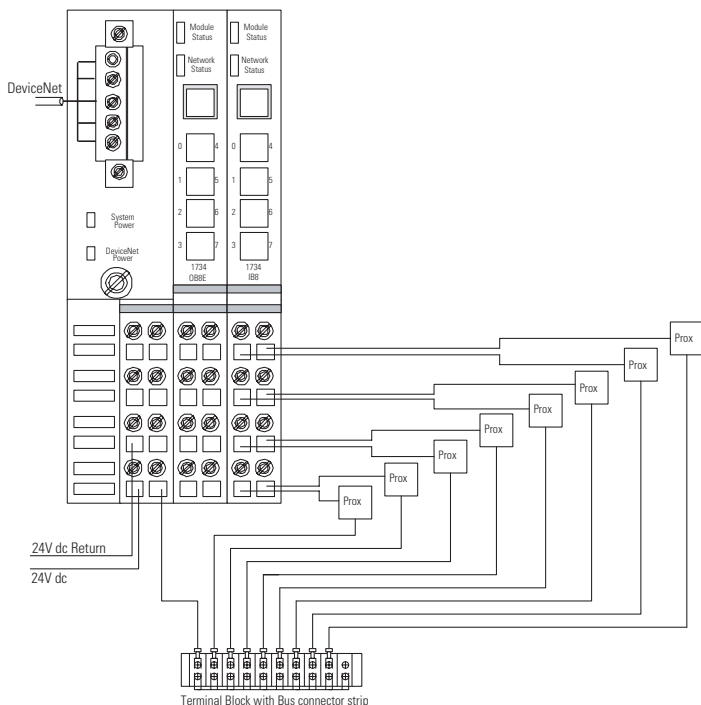
Example of Wiring for 1734-IB8 Using 2-Wire Proximity Switches

**WARNING**



When you connect or disconnect wiring while 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.



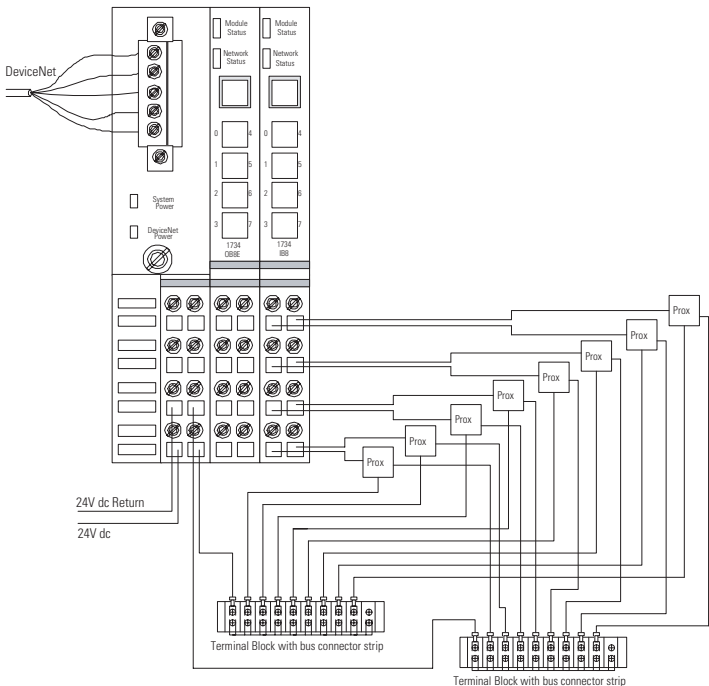
## Example of Wiring for 1734-IB8 Using 3-Wire Proximity Switches

### WARNING



When you connect or disconnect wiring while 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.



## Troubleshoot with the Indicators

### 1734-IB2



Module Status

Network Status

Status of Input 0

Status of Input 1

Status of Input 2

Status of Input 3

### 1734-IB4



Module Status

Network Status

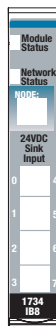
Status of Input 0 &amp; 4

Status of Input 1 &amp; 5

Status of Input 2 &amp; 6

Status of Input 3 &amp; 7

### 1734-IB8





Indication	Probable Cause
<b>Module Status</b>	
Off	No power applied to device
Green	Device operating normally
Flashing Green	Device needs commissioning due to configuration missing, incomplete or incorrect.
Flashing Red	Recoverable fault.
Red	Unrecoverable fault may require device replacement
Flashing Red/Green	Device is in self-test



<b>Indication</b>	<b>Probable Cause</b>
<b>Network Status</b>	
Off	Device is not on line - Device has not completed dup_MAC_id test. - Device not powered - check module status indicator
Flashing Green	Device is on line but has no connections in the established state.
Green	Device on-line and has connections in the established state.
Flashing Red	One or more I/O connections in timed-out state
Red	Critical link failure - failed communication device. Device detected error that prevents it communicating on the network.
Flashing Red/Green	Communication faulted device - the device has detected a network access error and is in communication faulted state. Device has received and accepted an Identify Communication Faulted Request - long protocol message.
<b>Indication</b>	
<b>Probable Cause</b>	
<b>I/O Status</b>	
Off	Input is in the off state
Yellow	Input is in the on state

## Safety Approvals

### North American Hazardous Location Approval

<b>The following information applies when operating this equipment in hazardous locations:</b>	<b>Informations sur l'utilisation de cet équipement en environnements dangereux:</b>
<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 style="background-color: black; color: white; padding: 5px; margin-right: 10px;"><b>WARNING</b></div> <div style="text-align: center;">  </div> </div> <p style="text-align: center;"><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> <li>• If this product contains batteries, they must only be changed in an area known to be nonhazardous.</li> </ul>	<div style="display: flex; align-items: center;"> <div style="background-color: black; color: white; padding: 5px; margin-right: 10px;"><b>AVERTISSEMENT</b></div> <div style="text-align: center;">  </div> </div> <p style="text-align: center;"><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 1, Division 2.</li> <li>• S'assurer que l'environnement est classé non dangereux avant de changer les piles.</li> </ul>

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## European Hazardous Location Approval

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### European Zone 2 Certification (The following applies when the product bears the EEx Marking)

This equipment is intended for use in potentially explosive atmospheres as defined by European Union Directive 94/9/EC.

DEMKO certifies that this equipment 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 potentially explosive atmospheres, given in Annex II to this Directive. The examination and test results are recorded in confidential report No. 03NK30347.

Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 50021.

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### **IMPORTANT**

Observe the following additional Zone 2 certification requirements.

- This equipment is not resistant to sunlight or other sources of UV radiation.
  - The secondary of a current transformer shall not be open-circuited when applied in Class I, Zone 2 environments.
  - Equipment of lesser Enclosure Type Rating must be installed in an enclosure providing at least IP54 protection when applied in Class I, Zone 2 environments.
  - This equipment shall be used within its specified ratings defined by Allen-Bradley.
  - Provision shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 40% when applied in Class I, Zone 2 environments
-

## Specifications for 1734-IB2, 1734-IB4, and 1734-IB8 Input Modules

### General Specifications

Specification	Value
(IEC 3 24V dc Input Compliant)	
Module Location	1734-TB or 1734-TBS wiring base assembly
Inputs per Module	1734-IB2 - 2 (1 group of 2), sinking 1734-IB4 - 4 (1 group of 4), sinking 1734-IB8 - 8 (1 group of 8), sinking
ON-State Voltage	10V dc minimum 24V dc nominal 28.8V dc maximum
ON-State Current	2 mA minimum 4 mA nominal @ 24V dc 5 mA maximum
OFF-State Voltage	5V dc maximum
OFF-State Current	1.5 mA minimum
Input Impedance	4.7 K $\Omega$ maximum, 3.6 K $\Omega$ nominal
Pointbus Current	75 mA maximum @ 5V dc
Power Dissipation	1734-IB2 - 0.7 W maximum @ 28.8V dc 1734-IB4 - 1.0 W maximum @ 28.8V dc 1734-IB8 - 1.6 W maximum @ 28.8V dc
Thermal Dissipation	1734-IB2 - 2.4 BTU/hr maximum @ 28.8V dc 1734-IB4 - 3.4 BTU/hr maximum @ 28.8V dc 1734-IB8 - 5.5 BTU/hr maximum @ 28.8V dc
Isolation Voltage (continuous voltage withstanding rating)	50V Tested to withstand 2500V dc for 60 s
Field Power Bus Supply Voltage Voltage Range	24V dc nominal 10-28.8V dc
Input Filter Time <sup>1</sup> OFF to ON ON to OFF	0.5 ms hardware plus 0-63 ms (user selectable) 0.5 ms hardware plus 0-63 ms (user selectable)
Dimensions Metric) Imperial)	(56H x 12W x 75.5L mm) 2.2H x 0.47W x 2.97L in.
Terminal Base Screw Torque	7 pound-inches (0.8 Nm)

Mass	1734-IB2 - 1.09 oz/30.9 grams 1734-IB4 - 1.12 oz/31.8 grams 1734-IB8 - 1.14 oz/32.3 grams																								
Indicators	1 green/red network status indicator, logic side 1 green/red module status indicator, logic side 1734-IB2 - 2 yellow input status indicators, logic side 1734-IB4 - 4 yellow input status indicators, logic side 1734-IB8 - 8 yellow input status indicators, logic side																								
Keyswitch Position	1																								
Field Wiring Terminations	<p><b>1734-IB2</b></p> <table border="0"> <tr> <td>0 - Input 0</td> <td>1 - Input 1</td> </tr> <tr> <td>2 - No Connection</td> <td>3 - No Connection</td> </tr> <tr> <td>4 - Common</td> <td>5 - Common</td> </tr> <tr> <td>6 - User Supply</td> <td>7 - User Supply</td> </tr> </table> <p><b>1734-IB4</b></p> <table border="0"> <tr> <td>0 - Input 0</td> <td>1 - Input 1</td> </tr> <tr> <td>2 - Input 2</td> <td>3 - Input 3</td> </tr> <tr> <td>4 - Common</td> <td>5 - Common</td> </tr> <tr> <td>6 - User Supply</td> <td>7 - User Supply</td> </tr> </table> <p><b>1734-IB8</b></p> <table border="0"> <tr> <td>0 - Input 0</td> <td>1 - Input 1</td> </tr> <tr> <td>2 - Input 2</td> <td>3 - Input 3</td> </tr> <tr> <td>4 - Input 4</td> <td>5 - Input 5</td> </tr> <tr> <td>6 - Input 6</td> <td>7 - Input 7</td> </tr> </table>	0 - Input 0	1 - Input 1	2 - No Connection	3 - No Connection	4 - Common	5 - Common	6 - User Supply	7 - User Supply	0 - Input 0	1 - Input 1	2 - Input 2	3 - Input 3	4 - Common	5 - Common	6 - User Supply	7 - User Supply	0 - Input 0	1 - Input 1	2 - Input 2	3 - Input 3	4 - Input 4	5 - Input 5	6 - Input 6	7 - Input 7
0 - Input 0	1 - Input 1																								
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0 - Input 0	1 - Input 1																								
2 - Input 2	3 - Input 3																								
4 - Input 4	5 - Input 5																								
6 - Input 6	7 - Input 7																								
Conductors	Wire Size 14 AWG (2.5 mm <sup>2</sup> ) - 22 AWG (0.25 mm <sup>2</sup> ) solid or stranded copper wire rated at 75 °C or greater 3/64 inch (1.2mm) insulation maximum																								
	Category <sup>2</sup> 1																								
1	Input off-to-on filter time is the time from a valid input signal to recognition by the module. Input on-to-off time is the time from a valid input signal to recognition by the module.																								
2	Use this conductor category information for planning conductor routing. Refer to publication 1770-4.1, "Industrial Automation Wiring and Grounding Guidelines."																								

## Environmental Specifications

Specification	Value
Operational Temperature	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 to 55 °C (-4 to 131 °F)
Storage Temperature	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 to 85 °C (-40 to 185 °F)

## 22 POINT I/O Input Modules

Relative Humidity	IEC 60068-2-30 (Test Db, Unpackaged Nonoperating Damp Heat): 5 to 95% noncondensing
Shock Operating Non-operating	IEC 60068-2-27 (Test Ea, Unpackaged Shock) 30g 50g
Vibration	IEC 60068-2-6, (Test Fc, Operating) 5g @ 10-500 Hz
ESD Immunity	IEC 61000-4-2: 6 kV contact discharges 8 kV air discharges
Radiated RF Immunity	IEC 61000-4-3: 10V/m with 200 Hz 50% Pulse 100%AM at 900 Mhz 10V/m with 1 kHz sine-wave 80%AM from 30 MHz to 2000 MHz 10V/m with 200 Hz 50% Pulse 100%AM at 1890 Mhz
EFT/B Immunity	IEC 61000-4-4: $\pm 4$ kV at 5 kHz on signal ports
Surge Transient Immunity	IEC 61000-4-5: $\pm 1$ kV line-line(DM) and $\pm 2$ kV line-earth(CM) on signal ports
Conducted RF Immunity	IEC 61000-4-6: 10Vrms with 1 kHz sine-wave 80%AM from 150 kHz to 80MHz
Emissions	CISPR 11: Group 1, Class A
Enclosure Type Rating	None (open-style)

## Certification Specifications

Certification	Value
Certifications: (when product is marked) <sup>1</sup>	<p><b>C-UL-US</b> - UL Listed Industrial Control Equipment, certified for US and Canada</p> <p><b>C-UL-US</b> - UL Listed for Class I, Division 2, Groups A, B, C and D Hazardous locations, certified for US and Canada</p> <p><b>EEx</b> - European Union 94/9/EEC ATEX Directive, compliant with: EN 50021; Potentially Explosive Atmospheres, Protection "n" (Zone 2)</p> <p><b>CE</b> - European Union 89/336/EEC EMC Directive, compliant with: EN 61000-6-4; Industrial Emissions EN 50082-2; Industrial Immunity EN 61326; Meas./Control/Lab., Industrial Requirements EN 61000-6-2; Industrial Immunity</p> <p><b>C-Tick</b> - Australian Radiocommunications Act compliant with AS/NZS CISPR 11, Industrial Emissions</p>

<sup>1</sup> See the Product Certification link at [www.ab.com](http://www.ab.com) for Declaration of Conformity, Certificates, and other certification details.

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## Rockwell Automation Support

Rockwell Automation provides technical information on the web to assist you in using its products. At <http://support.rockwellautomation.com>, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration and troubleshooting, we offer TechConnect Support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit <http://support.rockwellautomation.com>.

## Installation Assistance

If you experience a problem with a hardware module within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your module up and running:

United States	1.440.646.3223 Monday – Friday, 8am – 5pm EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

## New Product Satisfaction Return

Rockwell tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned:

United States	Contact your distributor. You must provide a Customer Support case number (see phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for return procedure.

[www.rockwellautomation.com](http://www.rockwellautomation.com)

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