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://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.

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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 consequences.
	SHOCK HAZARD: Labels may be on or inside the equipment (for example, drive or motor) to alert people that dangerous voltage may be present.
	BURN HAZARD: Labels may be on or inside the equipment (for example, drive or motor) to alert people that surfaces may reach dangerous temperatures.
IMPORTANT	Identifies information that is critical for successful application and understanding of the product.

Installation Instructions

Allen-Bradley

POINT I/O 24V DC 4-channel Discrete Input Module with Diagnostics

Catalog Number 1734-IB4D

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Environment and Enclosure

ATTENTION: This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in EN/IEC 60664-1), at altitudes up to 2000 m (6562 ft) without derating.

This equipment is not intended for use in residential environments and may not provide adequate protection to radio communication services in such environments.

This equipment is supplied as open-type equipment for indoor use. It must be mounted within an enclosure that is suitably designed for those specific environmental conditions that will be present and appropriately designed to prevent personal injury resulting from accessibility to live parts. The enclosure must have suitable flame-retardant properties to prevent or minimize the spread of flame, complying with a flame spread rating of 5VA or be approved for the application if nonmetallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain more information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.

In addition to this publication, see the following:

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

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.

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.

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.

Special Conditions for Safe Use

ATTENTION:

- This product is grounded through the DIN rail to chassis ground. Use zinc plated chromate-passivated steel DIN rail to assure proper grounding. The use of other DIN rail materials (for example, aluminum or plastic) that can corrode, oxidize, or are poor conductors, can result in improper or intermittent grounding. Secure DIN rail to mounting surface approximately every 200 mm (7.8 in.) and use end-anchors appropriately. Be sure to ground the DIN rail properly. Refer to Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1, for more information.
- Do not remove or replace an Adapter Module while power is applied. Interruption of the backplane can result in unintentional operation or machine motion.
- Do not discard the end cap. Use this end cap to cover the exposed interconnections on the last mounting base on the DIN rail. Failure to do so could result in equipment damage or injury from electric shock.
- If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Electrical Safety Considerations

ATTENTION: This equipment is certified for use only within the surrounding air temperature range of 0…55 °C (32…131 °F). The equipment must not be used outside of this range.

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

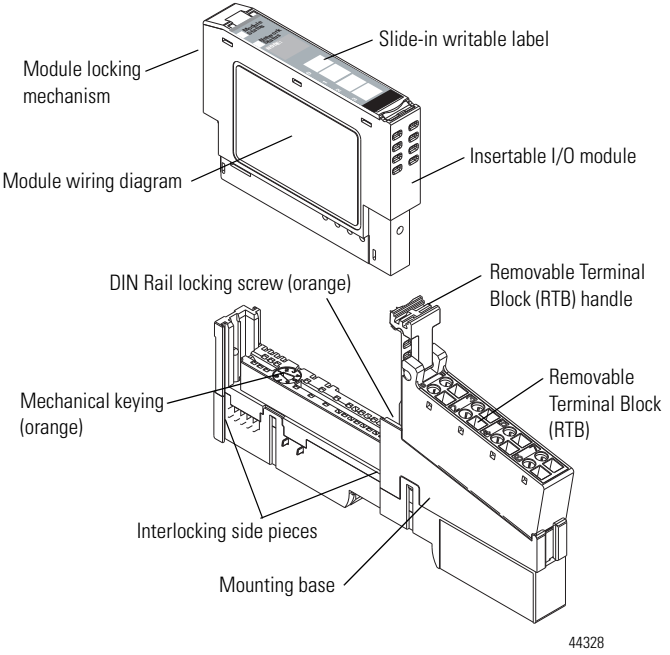
About the Module

This module is a 4-channel 24V DC input module with short circuit and open-wire diagnostics.

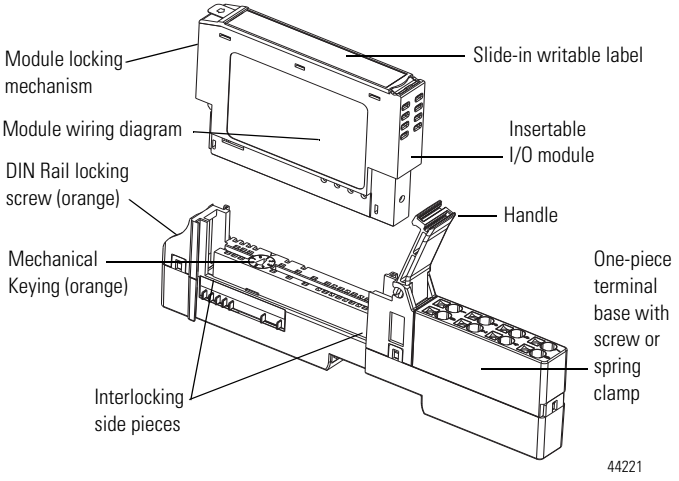
See the figures to familiarize yourself with major parts of the module, noting that the wiring base assembly is one of the following, with the module not being compatible with 1734-TB3, 1734-TB3S, 1734-TOP3, and 1734-TOP3S bases:

- 1734-TB POINT I/O™ two-piece terminal base, which includes the 1734-RTB removable terminal block
- 1734-TOP or 1734-TOPS POINT I/O one-piece terminal bass

POINT I/O Input Module with 1734-TB Base



POINT I/O Input Module with 1734-TOP or 1734-TOPS Base



Before You Begin

The module supports remove and insert under power, auto-address, and auto-baud in compliance with the POINTBus™ backplane. Each input is a sinking DC input with short circuit and open-wire detection. The sensor source voltage is derived from the user auxiliary power and used as I/O power.

Understand Short Circuit Detection

The sensor source voltage (SSV) for each input is protected against short circuits. For currents above 200 mA, a fault signal is issued and the input LED indicator is illuminated solid red. A thermally actuated smart-power device or PTC is used as the protection means. On a per-input basis, the circuit and produced data automatically reset and SSV energizes upon removal of the short circuit. An individual fault signal is issued for each shorted SSV condition.

The shorted input LED indicator illuminates red to denote short circuit fault status.

See the section on interpreting LED indicators for related information.

When the SSV is loaded to the maximum rated current of 50 mA, a voltage drop of as much as 2.5V DC can exist between the user auxiliary power and the SSV connection. For example, for a supply of 10V DC to a sensor with power derived from the SSV, a supply of 12.5V DC is needed at the auxiliary power connection.

Understand Open-wire Detection

Sensor source voltage (SSV) current for each input is monitored. Monitoring is accomplished in the SSV leg to accommodate the largest number of sensors possible. For currents below 0.5 mA, a fault signal is issued and the LED indicator of the input blinks red. On a per-input basis, the circuit and produced data automatically reset upon removal of the open-wire condition. See the information about interpreting LED indicators for related information.

By using a configuration tool, you can disable the open-wire diagnostics on an input-point basis to keep unused input indicators from turning red and signaling a fault when an input is not in use. Enabling or disabling input-point level open-wire diagnostics is implemented via the EDS file of the module, GSD file, or Logix profile and its firmware.

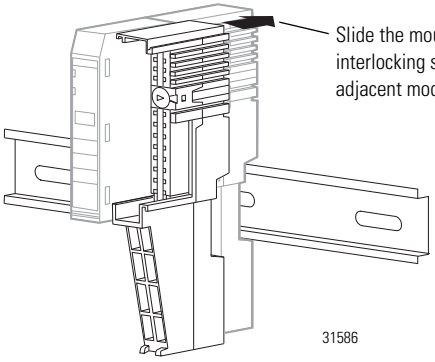
You can also disable all the open-wire diagnostics, using a single entry via the software user interface. The default configuration has all four input channels' open-wire indication enabled.

If a sensor with a dry contact output is used, wire one side of the contact to the SSV terminal for the corresponding input. Wire the other side of the contact to the input. Additionally, place a shunt resistor in parallel with the contact, at the sensor, to cause greater than 0.5 mA to be drawn through the SSV terminal at all times.

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, for example, adapter, power supply, or existing module.
2. Slide the mounting base down so that the interlocking side pieces engage the adjacent module or adapter.



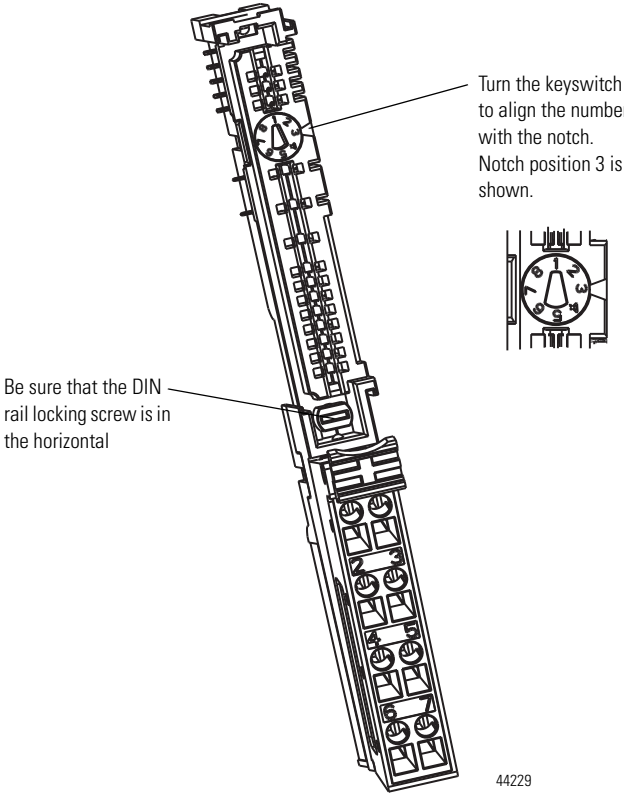
3. Press firmly to seat the mounting base on the DIN rail until the mounting base snaps into place.

Install the Module

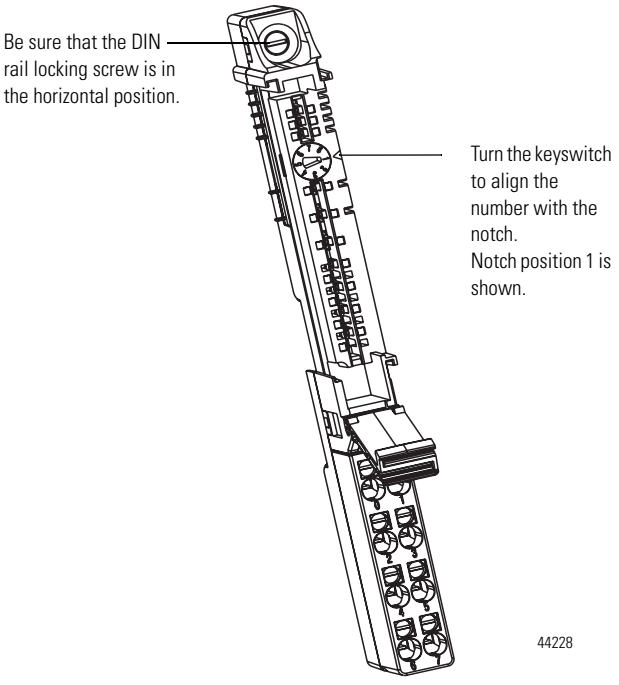
Install the module before or after base installation. Before installing the module into the mounting base be sure of this.

- The mounting base is correctly keyed.
- The mounting base locking screw is positioned horizontally referenced to the base.

1734-TB Base



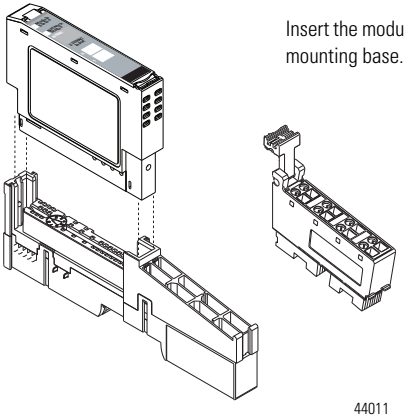
1734-TOP Base



To install the module, use this procedure:

1. Use a bladed screwdriver to rotate the keyswitch on the mounting base clockwise until the number required for the type of module being installed aligns with the notch in the base.
2. Be sure that the DIN rail locking screw is in the horizontal position, noting that 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, until the module locks into place.

4. Insert the end opposite the handle into the base unit, noting this end has a curved section that engages with the wiring base.
5. Rotate the terminal block into the wiring base until it locks itself in place.
6. Snap the RTB handle into place on the module, if an I/O module is installed



Install the Removable Terminal Block

Read this for information if a removable terminal block (RTB) is supplied with your wiring base assembly, noting that 1734-TOP and 1734-TOPS bases do not have an RTB.

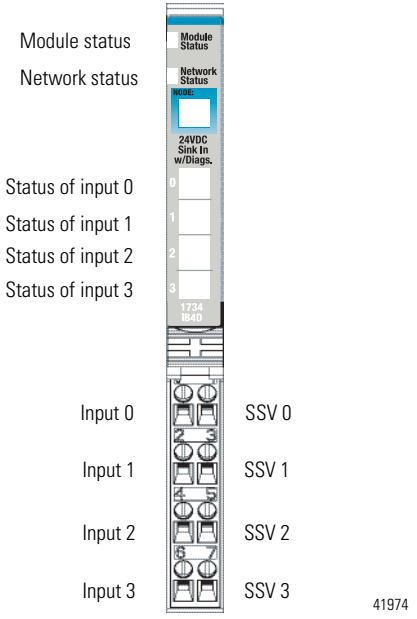
To insert the RTB, proceed as follows. Note that if you pull up on the RTB handle to remove the RTB, you can remove and replace the mounting base as necessary without removing any of the wirings.

1. Insert the end opposite the handle into the base unit, noting that 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 into place.
3. If an I/O module is installed, snap the RTB handle into place on the module.

Wire the Module

See the figure and tables for information about how to wire the module.

1734-IB4D

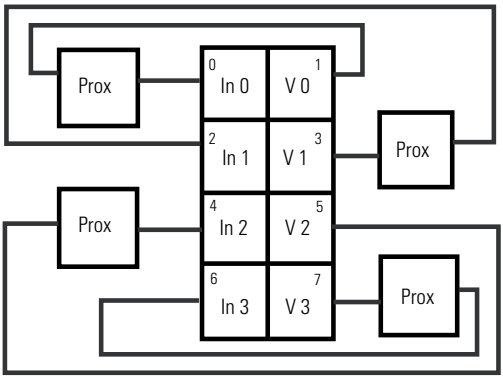


Note: Voltage and current are daisychained from either the adapter, 1734-FPD module, or 1734-EP24DC module.

Common connections for three-wire devices require an external wiring connection. A 1734-CTM module can provide the common connection.

Wiring

Sink Input



V=10/28.8V DC

If a common connection is required (three-wire devices), then a 1734-CTM common terminal module can be required.

POINT I/O Input Module

Channel	Terminal Number		
	I/O	Common	Voltage
0	0	External[1]	1
1	2		3
2	4		5
3	6		7

Connect common on three-wire proximity switches.
10/28.8V DC is supplied through the internal power bus.

(1) Common connections require an external connection, such as a 1734-CTM module.

Configure the Module

Read this section for information about how to 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 memory of the processor or scanner. This POINT I/O input module produces 1 byte or 2 bytes of input data based on which produced assembly is selected. The default setup is 2 bytes. It does not consume I/O data (scanner Tx).

Default Data Map – Produced Assembly Instance 101

Message Size: 2 Bytes								
	7	**6**	**5**	**4**	**3**	**2**	**1**	**0**
Produce 0 (Rx)	Fault 3	Fault 2	Fault 1	Fault 0	Input 3	Input 2	Input 1	Input 0
Produce 1 (Rx)	SC 3	SC 2	SC 1	SC 0	OW 3	OW 2	OW 1	OW 0
Consume (Tx)	No consumed data							

Data Map – Produced Assembly Instance 23

Message Size: 1 Byte								
	7	**6**	**5**	**4**	**3**	**2**	**1**	**0**
Produce 0 (Rx)	Fault 3	Fault 2	Fault 1	Fault 0	Input 3	Input 2	Input 1	Input 0
Consume (Tx)	No consumed data							
Where: Fault = open wire or short circuit								

Default Data Map – Configuration Assembly Instance 103

Message Size: 18 Bytes								
	7	**6**	**5**	**4**	**3**	**2**	**1**	**0**
Consume 0	Input 0 off to on filter byte 0							
Consume 1	Input 0 off to on filter byte 1							
Consume 2	Input 0 on to off filter byte 0							
Consume 3	Input 0 on to off filter byte 1							

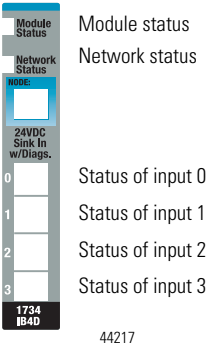
Default Data Map – Configuration Assembly Instance 103

Message Size: 18 Bytes								
	7	**6**	**5**	**4**	**3**	**2**	**1**	**0**
Consume 4	Input 1 off to on filter byte 0							
Consume 5	Input 1 off to on filter byte 1							
Consume 6	Input 1 on to off filter byte 0							
Consume 7	Input 1 on to off filter byte 1							
Consume 8	Input 2 off to on filter byte 0							
Consume 9	Input 2 off to on filter byte 1							
Consume 10	Input 2 on to off filter byte 0							
Consume 11	Input 2 on to off filter byte 1							
Consume 12	Input 3 off to on filter byte 0							
Consume 13	Input 3 off to on filter byte 1							
Consume 14	Input 3 on to off filter byte 0							
Consume 15	Input 3 on to off filter byte 1							
Consume 16	Autobaud Disable	–			Enable OW3	Enable OW2	Enable OW1	Enable OW0
Consume 17	Produced Assembly Instance							
Produce (Tx)	No produced data							
Where: OW = open wire								

Interpret the Indicators

See the figure and table that show how to interpret LED indicators.

1734-IB4D



Interpret LED Indicators Module Status

Indication	Probable Cause	Recommended Action
Module Status		
Off	No power applied to device.	Apply power to device.
Green	Device operating normally.	None.
Flashing green	Device needs commissioning due to configuration missing, incomplete, or incorrect.	Configure device properly.
Flashing red	Recoverable fault.	1. Cycle power to device. 2. If condition persists, replace device.
Red	Unrecoverable fault may require device replacement.	Replace device.
Flashing red/green	Device is in self-test.	None.

Interpret LED Indicators Network Status

Indication	Probable Cause	Recommended Action
Network Status		
Off	Device is not online. – Device has not completed dup_MAC_id test. – Device not powered – check Module Status indicator	Apply power to device, wait for dup_MAC_id to complete, and correct, as needed.
Flashing green	Device is online but has no connections in the established state.	None – device is in Idle or Program mode.
Green	Device online and has connections in the established state.	None.
Flashing red	One or more I/O connections in timed-out state.	Check for I/O module failure, and correct, as needed.
Red	Critical link failure – failed communication device. Device detected error that prevents it communicating on the network.	Verify that adapter and terminal bases are properly installed, and reinstall, as needed.
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.	Verify that adapter is properly installed, and reinstall, as needed.

Interpret LED Indicators I/O Status

Indication	Probable Cause	Recommended Action
I/O Status		
Off	Input is in the off state.	None.
Yellow	Input is in the on state.	None.
Red	Short circuit detected.	Check I/O wiring or terminal base.
Flashing red	Open wire detected.	Check I/O wiring or terminal base.

Remove a Mounting Base

To remove a mounting base, you must first remove any installed module and the module that is installed in the base to the right.

1. For a module with a two-piece terminal base, use these steps; otherwise, use step 2.
   - Remove the removable terminal block (RTB), if wired.
   - Unlatch the RTB handle on the I/O module.
   - Pull on the RTB handle to remove the RTB.
2. Press the module lock on the top of the module.
3. Pull on the I/O module to remove from the base.
4. Repeat steps 1, 2, 3, and 4 for the module to the right.
5. Lift straight up to remove.

Specifications

POINT I/O 24V DC 4-channel Digital Diagnostics Input Module – 1734-IB4D

Attribute	Value
Module location	1734-TB, 1734-TBS, 1734-TOP, and 1734-TOPS bases
POINTBus current, max	50 mA @ 5V DC
Power dissipation, max	0.6 W @ 28.8V DC
Thermal dissipation, max	1.9 BTU/hr @ 28.8V DC
Isolation voltage	50V DC (continuous), Reinforced insulation type Tested at 1000V DC for 60 s, field-side to system
Field power bus Supply voltage, nom Voltage range	 24V DC 10…28.8V DC
Dimensions HxWxL, approx.	56 x 12 x 75.5 mm (2.2 x 0.47 x 2.97 in.)
Terminal base screw torque	0.8 Nm (7 lb-in)
Keyswitch position	1
Weight, approx.	36 g (1.27 oz)
Reverse polarity protection	Yes
On-state voltage (Von), min	11V DC
On-state voltage (Von), max	28.8V DC (Vmax)
On-state current (Ion), min	2.0 mA
On-state current (Ion), max	15.0 mA (Imax)
Off-state voltage (Voff), min	-3V DC
Off-state voltage (Voff), max	5V DC
Off-state current (Ioff), max	1.5 mA
Input filter	Each input independently settable in 1 µs intervals (rounded to nearest 333 µs). Default value is 1000 µs.
Off to on filter, min	0 µs
Off to on filter, max	65 535 µs
On to off filter, min	0 µs
Off to on filter, max	65 535 µs

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): 0 °C < Ta < 55 °C (32 °F < Ta < 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
Shock operating Nonoperating	IEC 60068-2-27 (Test Ea, unpackaged shock) 30 g peak acceleration 50 g peak acceleration
Vibration	IEC 60068-2-6 (Test Fc, Operating): 5 g @ 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 1 kHz sine-wave 80% AM from 80…2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 10V/m with 1 kHz sine-wave 80% AM from 2000…2700 MHz
EFT/B Immunity	IEC 61000-4-4: ±4 kV at 5 kHz on signal ports
Surge transient immunity	IEC 61000-4-5: ±1 kV line-line (DM) and ±2 kV line-earth (CM) on signal ports
Conducted RF immunity	IEC 61000-4-6: 10V rms with 1 kHz sine-wave 80% AM from 150 kHz…80 MHz
Emissions	IEC 61000-6-4
Enclosure type rating	None (open-style)
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 max
Wire category	1 – on signal ports[1]

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

Certifications

Certification (When Product Is Marked)[1]	Value
CE	European Union 2014/30/EU EMC Directive, compliant with: EN 61000-6-4; Industrial Emissions EN 61131-2; Programmable Controllers (Clause 8, Zone A & B) EN 61326-1; Measurement/Control/Laboratory use, Industrial requirements European Union 2011/65/EU RoHS, compliant with: EN 50581; Technical documentation
RCM	Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3
EAC	Russian Customs Union TR CU 020/2011 EMC Technical Regulation

(1) See the Product Certification link at http://www.rockwellautomation.com/global/certification/overview.page for Declarations of Conformity, Certificates, and other certification details.

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At http://www.rockwellautomation.com/support/, 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://www.rockwellautomation.com/support/.

Installation Assistance

If you experience a problem 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 product up and running.

United States or Canada	1.440.646.3434
Outside United States or Canada	Use the Worldwide Locator at http://www.rockwellautomation.com/support/americas/phone_en.html, or contact your local Rockwell Automation representative.

New Product Satisfaction Return

Rockwell Automation 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, follow these procedures.

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

Documentation Feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete this form, publication RA-DU002, available at http://www.rockwellautomation.com/literature/.

Rockwell Automation maintains current product environmental information on its website at http://www.rockwellautomation.com/rockwellautomation/about-us/sustainability-ethics/product-environmental-compliance.page.

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Specifications

POINT I/O 24V DC 4-channel Digital Diagnostics Input Module – 1734-IB4D

Attribute	Value
Module location	1734-TB, 1734-TBS, 1734-TOP, and 1734-TOPS bases
POINTBus current, max	50 mA @ 5V DC
Power dissipation, max	0.6 W @ 28.8V DC
Thermal dissipation, max	1.9 BTU/hr @ 28.8V DC
Isolation voltage	50V DC (continuous), Reinforced insulation type Tested at 1000V DC for 60 s, field-side to system
Field power bus Supply voltage, nom Voltage range	 24V DC 10…28.8V DC
Dimensions HxWxL, approx.	56 x 12 x 75.5 mm (2.2 x 0.47 x 2.97 in.)
Terminal base screw torque	0.8 Nm (7 lb-in)
Keyswitch position	1
Weight, approx.	36 g (1.27 oz)
Reverse polarity protection	Yes
On-state voltage (Von), min	11V DC
On-state voltage (Von), max	28.8V DC (Vmax)
On-state current (Ion), min	2.0 mA
On-state current (Ion), max	15.0 mA (Imax)
Off-state voltage (Voff), min	-3V DC
Off-state voltage (Voff), max	5V DC
Off-state current (Ioff), max	1.5 mA
Input filter	Each input independently settable in 1 µs intervals (rounded to nearest 333 µs). Default value is 1000 µs.
Off to on filter, min	0 µs
Off to on filter, max	65 535 µs
On to off filter, min	0 µs
Off to on filter, max	65 535 µs

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): 0 °C < Ta < 55 °C (32 °F < Ta < 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
Shock operating Nonoperating	IEC 60068-2-27 (Test Ea, unpackaged shock) 30 g peak acceleration 50 g peak acceleration
Vibration	IEC 60068-2-6 (Test Fc, Operating): 5 g @ 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 1 kHz sine-wave 80% AM from 80…2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 10V/m with 1 kHz sine-wave 80% AM from 2000…2700 MHz
EFT/B Immunity	IEC 61000-4-4: ±4 kV at 5 kHz on signal ports
Surge transient immunity	IEC 61000-4-5: ±1 kV line-line (DM) and ±2 kV line-earth (CM) on signal ports
Conducted RF immunity	IEC 61000-4-6: 10V rms with 1 kHz sine-wave 80% AM from 150 kHz…80 MHz
Emissions	IEC 61000-6-4
Enclosure type rating	None (open-style)
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 max
Wire category	1 – on signal ports[1]

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

Certifications

Certification (When Product Is Marked)[1]	Value
CE	European Union 2014/30/EU EMC Directive, compliant with: EN 61000-6-4; Industrial Emissions EN 61131-2; Programmable Controllers (Clause 8, Zone A & B) EN 61326-1; Measurement/Control/Laboratory use, Industrial requirements European Union 2011/65/EU RoHS, compliant with: EN 50581; Technical documentation
RCM	Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3
EAC	Russian Customs Union TR CU 020/2011 EMC Technical Regulation

(1) See the Product Certification link at http://www.rockwellautomation.com/global/certification/overview.page for Declarations of Conformity, Certificates, and other certification details.

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At http://www.rockwellautomation.com/support/, 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://www.rockwellautomation.com/support/.

Installation Assistance

If you experience a problem 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 product up and running.

United States or Canada	1.440.646.3434
Outside United States or Canada	Use the Worldwide Locator at http://www.rockwellautomation.com/support/americas/phone_en.html, or contact your local Rockwell Automation representative.

New Product Satisfaction Return

Rockwell Automation 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, follow these procedures.

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

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Installation Instructions

Allen-Bradley

POINT I/O 24V DC 4-channel Discrete Input Module with Diagnostics

Catalog Number 1734-IB4D

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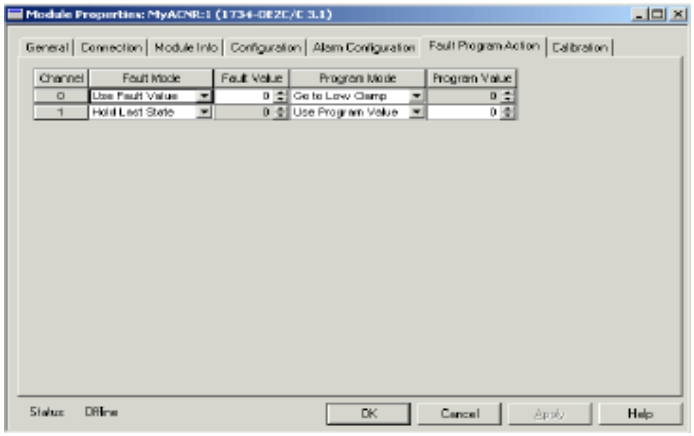
You see a Fault/Program Action dialog.



2. From the Fault/Program Action dialog, complete items, referring to the table.

For This Value	Select	Comments
Fault Mode	Hold Last State Go to Low Clamp Go to High Clamp Use Program Value	Default is Go to Low Clamp.
Fault Value	-32768…32767	Default is 0.
Program Mode	Hold Last State Go to Low Clamp Go to High Clamp Use Program Value	Default is Go to Low Clamp.
Program Value	-32768…32767	Default is 0.

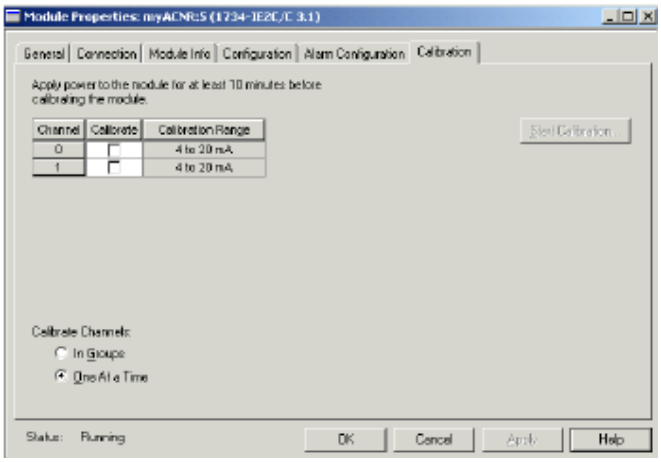
3. From the bottom of the dialog, perform one of the following:
   - Click another tab at the top of the dialog.
     or
   - Click OK to save changes and close the dialog.
     or
   - Click Cancel to return to default values.
     or
   - Click Apply to save changes you made on any of the dialogs and continue to display the dialog, noting that you enable the Apply button when you make changes to any of the dialogs

Work with the Calibration Dialog

To complete entries on this dialog, proceed as follows. Perform calibration in Hard Run or Remote mode. For information about the tools and steps for calibration, refer to the Calibrating Your Analog Module section of this manual.

1. From the General dialog, click Calibration.

You see the Calibration dialog for a current or voltage output module, depending on the module type.



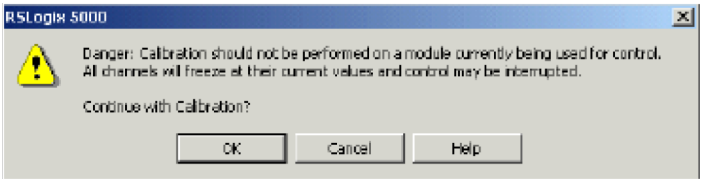
2. From the Calibration dialog, click one of these:

- In Groups
- One At a Time

3. From the Calibration dialog, check the Calibrate checkbox to specify which channel to calibrate.
4. From the Calibration dialog, click Start Calibration, which is active when:
   - the system is online, and
   - you selected at least one of the channels.

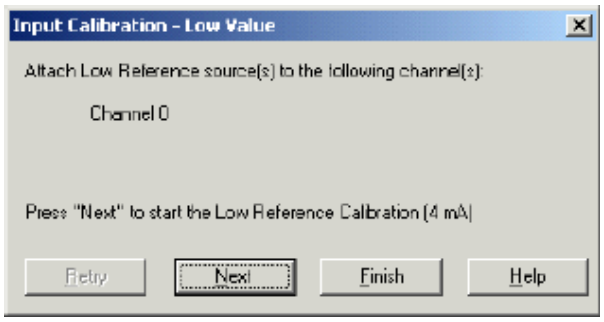
   Note that when you press the F1 button on your keyboard or click Help from the wizards and warning messages that appear during calibration you get detailed information about related procedures.

   You see a Danger dialog.



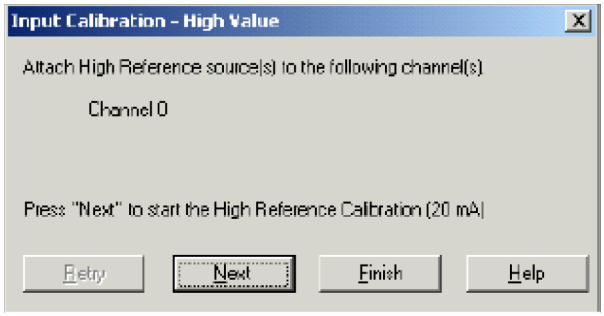
5. From the Danger dialog, for a module not currently used for control, click OK.

You see a Low Value dialog.

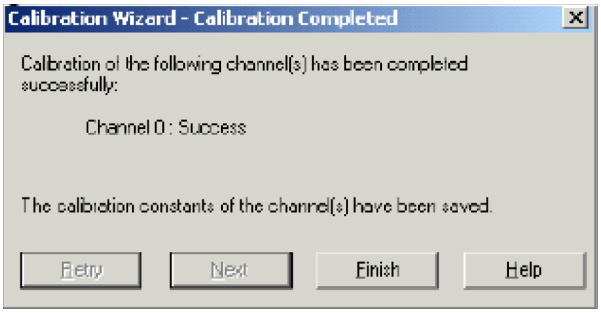


6. From the Low Value dialog, follow the instructions you see and click Next.

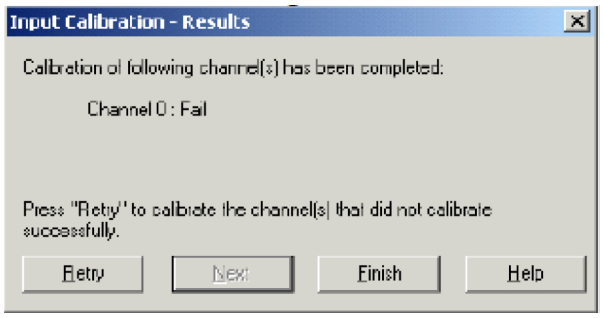
   You see the High Value dialog.



7. From the High Value dialog, follow the instructions you see and click Next to start calibration.
8. If calibration completes successfully, you see the Calibration Completed dialog.



If calibration fails, the Results dialog shows a failed calibration.



9. If calibration is successful, click Finish; otherwise, from the Results dialog, click Retry to calibrate the channel that did not calibrate successfully and repeat the process until calibration is successful.
10. Repeat calibration for each channel, if applicable.