POINT I/O Protected Output Module
Catalog Numbers 1734-OB2E, 1734-OB4E, 1734-OB8E, 1734-OB8EK, Series C
Catalog numbers with the suffix 'K' are conformal coated and their specifications are the same as non-conformal coated catalogs.

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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 available from your local Rockwell Automation sales office or online at http://www.rockwellautomation.com/literature/) describes some important differences between solid-state equipment and hard-wired electromechanical devices. Because of these differences, 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 that are 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.

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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 voltages 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.

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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 V0 or be approved for the application of nonmetallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain more information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.

In addition to this publication, see the following:
- Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1, for additional installation requirements.
- NEMA Standard 250 and EN/IEC 60529, as applicable, for explanations of the degrees of protection provided by enclosures.

ATTENTION: 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.
North American Hazardous Location Approval

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 wiring diagram indicating the hazardous location temperature code. When combining products, caution should 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.

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, interlocks, threaded connectors, or other means provided with the product in order to provide suitable mating surfaces for Class I, Division 2.

WARNING: When used in a Class I, Division 2, hazardous location, this equipment must be mounted in a suitable enclosure with proper wiring method that complies with the governing electrical codes.
European Hazardous Location Approval

The following applies to products marked 

- Are intended for use in potentially explosive atmospheres as defined by European Union Directive 2014/34/EU and has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of Category 3 equipment intended for use in Zone 2 potentially explosive atmospheres, given in Annex III to this Directive.
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-15 and EN 60079-0.
- Are Equipment Group II, Equipment Category 3, and comply with the Essential Health and Safety Requirements relating to the design and construction of such equipment given in Annex II to Directive 2014/34/EU. See the EC Declaration of Conformity at http://www.rockwellautomation.com/global/certification/overview.page for details.
- The type of protection is II 3G Ex nA IIC T4 Gc according to EN 60079-15.
- Are intended for use in areas in which explosive atmospheres caused by gases, vapors, mists, or air are unlikely to occur, or are likely to occur only infrequently and for short periods. Such locations correspond to Zone 2 classification according to ATEX directive 2014/34/EU.
- May have catalog numbers followed by a “K” to indicate a conformal coating option.
WARNING:

- This equipment is not resistant to sunlight or other sources of UV radiation.
- This equipment shall be mounted in an ATEX/IECEx Zone 2 certified enclosure with a minimum ingress protection rating of at least IP54 (in accordance with EN/IEC 60079-15) and used in an environment of not more than Pollution Degree 2 as defined in EN/IEC 60664-1) when applied in Zone 2 environments. The enclosure must be accessible only by the use of a tool.
- This equipment shall be used within its specified ratings defined by Rockwell Automation.
- Provision shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 140% of the peak rated voltage when applied in Zone 2 environments.
- The instructions in the user manual shall be observed.
- This equipment must be used only with ATEX certified Rockwell Automation backplanes.
- Earthing is accomplished through mounting of modules on rail.
- Devices shall be used in an environment of not more than Pollution Degree 2.

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 either 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.

ATTENTION:

• This equipment is certified for use only within the surrounding air temperature range of -20…+55 °C (-4…+131 °F). The equipment must not be used outside of this range.

• Use only a soft dry anti-static cloth to wipe down equipment. Do not use any cleaning agents.

At the end of its life, this equipment should be collected separately from any unsorted municipal waste.
POINT I/O™ Protected Output Module

Before You Begin

You can use these Series C POINT I/O™ Protected Output modules with DeviceNet and PROFIBUS adapters. If you are using RSLogix 5000® software, version 11 or higher, you can also use the Series C modules with ControlNet and Ethernet adapters.

Use this diagram to identify the external features of the module. The 1734-OB4E module is shown here.

POINT I/O™ Protected Output Module

<table>
<thead>
<tr>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module locking mechanism</td>
<td>Mounting base</td>
</tr>
<tr>
<td>Slide-in writable label</td>
<td>Interlocking clip present 1734-OB2E, 1734-OB4E, 1734-OB8E, Series C</td>
</tr>
<tr>
<td>Removable Terminal Block handle</td>
<td>Mechanical keying (orange)</td>
</tr>
<tr>
<td>Removable Terminal Block handle</td>
<td>DIN rail locking screws (orange)</td>
</tr>
<tr>
<td>Module wiring diagram</td>
<td></td>
</tr>
</tbody>
</table>

Note: The wiring base assembly comprises the mounting base, 1734-MB, and the Removable Terminal Block, 1734-RTB, or 1734-RTBS.
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 snaps 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. Then lift straight up to remove.

Install the 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 that the mounting base locking screw is positioned horizontal referenced to the base.

1. Using a bladed screwdriver, 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. Verify that the DIN rail locking screw is in the horizontal position. You cannot insert the module if the locking mechanism is unlocked.

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

Install the Removable Terminal Block

A Removable Terminal Block (RTB) 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 wirings. 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 can cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.
WARNING: For 1734-RTBS and 1734-RTB3S, to latch and unlatch the wire, insert a bladed screwdriver (catalog number 1492-N90 – 3 mm diameter blade) into the opening at approximately 73° (blade surface is parallel with top surface of the opening) and push up gently.

WARNING: For 1734-TOPS and 1734-TOP3S, to latch and unlatch the wire, insert a bladed screwdriver (catalog number 1492-N90 – 3 mm diameter) into the opening at approximately 97° (blade surface is parallel with top surface of the opening) and press in (do not push up or down).
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.
3. Press the module lock on the top of the module.
4. Pull on the I/O module to remove from the base.
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 onto the memory of the processor.

The POINT I/O output module produces 1 Byte of input data (scanner Rx) (status). It consumes 1 Byte of I/O data (scanner Tx).

Default Data Map for 1734-OB2E

<table>
<thead>
<tr>
<th>P</th>
<th>B</th>
<th>A</th>
<th>D</th>
<th>C</th>
<th>I</th>
<th>X</th>
<th>S1</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Where: B = not used, I = on

Message size: 1 Byte

<table>
<thead>
<tr>
<th>P</th>
<th>B</th>
<th>A</th>
<th>D</th>
<th>C</th>
<th>I</th>
<th>X</th>
<th>S1</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Where: B = not used, I = off,
### Default Data Map for 1734-OB4E

<table>
<thead>
<tr>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- **Producers (scanner Rx)**: Not used
- **Consumers (scanner Tx)**: Ch3 Ch2 Ch1 Ch0 Channel state
- **Message size**: 1 Byte

Where: 0 = no error, 1 = error

### Default Data Map for 1734-OB8E, 1734-OB8EK

<table>
<thead>
<tr>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- **Producers (scanner Rx)**: Not used
- **Consumers (scanner Tx)**: Ch7 Ch6 Ch5 Ch4 Ch3 Ch2 Ch1 Ch0 Channel status
- **Message size**: 1 Byte

Where: 0 = no error, 1 = error

### Default Data Map for 1734-OB8E, 1734-OB8EK

<table>
<thead>
<tr>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- **Producers (scanner Rx)**: Not used
- **Consumers (scanner Tx)**: Ch7 Ch6 Ch5 Ch4 Ch3 Ch2 Ch1 Ch0 Channel state
- **Message size**: 1 Byte

Where: 0 = all, 1 = off
Wire the Module

POINT I/O Protected Output Module

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

![Diagram of POINT I/O Protected Output Module](image)

**NOTICE:**

- **C** = Common
- **V** = Supply

1734-OB2E, 1734-OB4E, 1734-OB8E, 1734-OB8EK

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[Rockwell Automation Publication 1734-IN056J-EN-E - January 2019](#)
Output Module 1734-OB2E

V = 12/24V DC, C = Common
Field power is supplied by the internal power bus.

<table>
<thead>
<tr>
<th>Channel</th>
<th>Output Terminal</th>
<th>Common Terminal</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel 0</td>
<td>0, 2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Channel 1</td>
<td>1, 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Module power is supplied by the internal power bus.

Output Module 1734-OB4E

V = 12/24V DC, C = Common
Field power is supplied by the internal power bus.

<table>
<thead>
<tr>
<th>Channel</th>
<th>Output Terminal</th>
<th>Common Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel 0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Channel 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel 2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Channel 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Module power is supplied by the internal power bus.
### Output Module 1734-OB8E, 1734-OB8EK

<table>
<thead>
<tr>
<th>Channel</th>
<th>Output Terminal</th>
<th>Common Terminal</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel 0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel 1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel 2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel 3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel 4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel 5</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel 6</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel 7</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ATTENTION:** Common MUST be daisy chained from either a 1734 adapter; 1734-FPD or 1734-EP24DC, or from a user-supplied auxiliary terminal block.

The 24V DC power for the module is supplied by the external power bus and originates from the same adapter, 1734-FPD or 1734-EP24DC.

**ATTENTION:** Do not wire more than two conductors on any single terminal.
Wiring Example for 1734-OB8E, 1734-OB8EK

Note: The 1734-OB8E, 1734-OB8EK maximum load is 1 A maximum per channel, and 3 A total per module.
Interpret Status Indicators

See the following diagram and table for information on how to interpret the status indicators.
## Indicator Status for Modules

### Module Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>No power applied to device.</td>
</tr>
<tr>
<td>Green</td>
<td>Device operating normally.</td>
</tr>
<tr>
<td>Flashing green</td>
<td>Device needs commissioning due to missing, incomplete, or incorrect configuration.</td>
</tr>
<tr>
<td>Red</td>
<td>Recoverable fault — may require device replacement.</td>
</tr>
<tr>
<td>Flashing red</td>
<td>Device is in self-test mode.</td>
</tr>
</tbody>
</table>

### Network Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
</table>
| Off     | Device is not online:  
- Device has not completed dup_MAC-id test.  
- Device not powered — check Module Status indicator. |
| Flashing green | Device is online but has no connections in the established state. |
| Flashing red | All network connections are in timed-out state. |
| Red     | Critical link failed — failed communication with the device detected error that prevents it from communicating on the network. |
| Flashing red/green | Communication faulted state — the device has detected a network access error and is in communication faulted state. Device has received and accepted an Identity Communication Faulted Request — long protocol message. |

### I/O Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>All outputs inactive.</td>
</tr>
<tr>
<td>Yellow</td>
<td>One or more outputs are active and under control.</td>
</tr>
<tr>
<td>Flashing red</td>
<td>Open circuit detected. Off-state only.</td>
</tr>
<tr>
<td>Red</td>
<td>Short circuit detected.</td>
</tr>
</tbody>
</table>
## Specifications

**POINT I/O Protected Output Module – 1734-OB2E, 1734-OB4E, 1734-OB8E, 1734-OB8EK**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>1734-OB2E</th>
<th>1734-OB4E</th>
<th>1734-OB8E, 1734-OB8EK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of outputs, non-isolated, sourcing</td>
<td>2 (group of 2)</td>
<td>4 (group of 4)</td>
<td>8 (group of 8)</td>
</tr>
<tr>
<td>On-state voltage, min</td>
<td>10V DC</td>
<td>10V DC</td>
<td>10V DC</td>
</tr>
<tr>
<td>On-state voltage, min</td>
<td>24V DC</td>
<td>24V DC</td>
<td>24V DC</td>
</tr>
<tr>
<td>On-state voltage drop, max</td>
<td>0.2V DC</td>
<td>0.2V DC</td>
<td>0.2V DC</td>
</tr>
<tr>
<td>On-state current, min, per channel</td>
<td>1.0 mA</td>
<td>1.0 mA</td>
<td>1.0 mA</td>
</tr>
<tr>
<td>Off-state voltage, max</td>
<td>28.8V DC</td>
<td>28.8V DC</td>
<td>28.8V DC</td>
</tr>
<tr>
<td>Off-state leakage, max</td>
<td>0.5 mA</td>
<td>0.5 mA</td>
<td>0.5 mA</td>
</tr>
<tr>
<td>Output signal delay (1), max</td>
<td>0.1 ms</td>
<td>0.1 ms</td>
<td>0.1 ms</td>
</tr>
<tr>
<td>Output current rating</td>
<td>1.0 A per output, 2.0 A max per module</td>
<td>1.0 A per output, not to exceed 3.0 A max per module</td>
<td></td>
</tr>
<tr>
<td>Surge current</td>
<td>2.0 A for 10 ms, repeatable every 1 s</td>
<td>2.0 A for 10 ms, repeatable every 1 s</td>
<td></td>
</tr>
<tr>
<td>Indicators (field side indication, logic driven)</td>
<td>2 yellow – output status, 2 green/red – module/network status</td>
<td>4 yellow – output status, 2 green/red – module/network status</td>
<td></td>
</tr>
<tr>
<td>Keyswitch position</td>
<td>0 – Output 0, 1 – Output 1, 2 – Output 2, 3 – Output 3, 4 – Common, 5 – Common, 6 – Supply, 7 – Supply</td>
<td>0 – Output 0, 1 – Output 1, 2 – Output 2, 3 – Output 3, 4 – Common, 5 – Common, 6 – Output 6, 7 – Common</td>
<td></td>
</tr>
<tr>
<td>Field wiring terminations</td>
<td>0 – Output 0, 1 – Output 1, 2 – Output 2, 3 – Output 3, 4 – Common, 5 – Common, 6 – Supply, 7 – Supply</td>
<td>0 – Output 0, 1 – Output 1, 2 – Output 2, 3 – Output 3, 4 – Output 4, 5 – Output 5, 6 – Output 6, 7 – Output 7</td>
<td></td>
</tr>
</tbody>
</table>

(1) Off–on delay is time from a valid output "on" signal to output energization. On–off delay is time from a valid output "off" signal to output de-energization.
## General Specifications

<table>
<thead>
<tr>
<th>Attribute</th>
<th>1734-OB2E</th>
<th>1734-OB4E</th>
<th>1734-OB8E, 1734-OB8KE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal base screw torque</td>
<td>0.8 N•m (7 lb-in.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Module location</td>
<td>1734-TB or 1734-TBS wiring base assembly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power dissipation (P = 24 VDC, max)</td>
<td>2 W</td>
<td>1 W</td>
<td>0.8 W</td>
</tr>
<tr>
<td>Thermal dissipation (P = 24 VDC, max)</td>
<td>1.2 BTU/hr</td>
<td>0.1 BTU/hr</td>
<td>0.8 BTU/hr</td>
</tr>
<tr>
<td>Isolation voltage</td>
<td>50 V (continuous), reinforced insulation type</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tested @ 2500 V DC for 60 s, field-side to system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External DC power supply voltage, nom</td>
<td>24 V DC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External DC power supply current</td>
<td>8 mA</td>
<td>16 mA</td>
<td>32 mA</td>
</tr>
<tr>
<td>Dimensions, HxWxD</td>
<td>56.0 x 12.0 x 75.5 mm (2.21 x 0.47 x 2.97 in.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions, HxWxD</td>
<td>56.8 x 52.6 x 75.5 mm (2.21 x 2.08 x 2.97 in.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wiring category (1)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wire size</td>
<td>Determined by installed terminal block</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight, approx.</td>
<td>28.6 g (1.02 oz)</td>
<td>55.17 g (1.95 oz)</td>
<td>85.6 g (3.05 oz)</td>
</tr>
<tr>
<td>Enclosure type rating</td>
<td>NEMA 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North American temp code</td>
<td>A6</td>
<td></td>
<td>F4</td>
</tr>
</tbody>
</table>

(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, for more information.
Environmental Specifications

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature, operating</td>
<td>IEC 60068-2-1 (Test Ab, operating cold),</td>
</tr>
<tr>
<td></td>
<td>IEC 60068-2-2 (Test Ab, operating dry heat),</td>
</tr>
<tr>
<td></td>
<td>IEC 60068-2-14 (Test Nb, operating thermal shock):</td>
</tr>
<tr>
<td></td>
<td>-20...+55 °C (-4...+131 °F)</td>
</tr>
<tr>
<td>Temperature, nonoperating</td>
<td>IEC 60068-2-1 (Test Ab, unpackaged no-operating cold),</td>
</tr>
<tr>
<td></td>
<td>IEC 60068-2-2 (Test Ab, unpackaged no-operating dry heat),</td>
</tr>
<tr>
<td></td>
<td>IEC 60068-2-14 (Test Nb, unpackaged nonoperating thermal shock):</td>
</tr>
<tr>
<td></td>
<td>-40...+185 °C (-40...+365 °F)</td>
</tr>
<tr>
<td>Temperature, surrounding air,</td>
<td>max 55 °C (131 °F)</td>
</tr>
<tr>
<td>max</td>
<td></td>
</tr>
<tr>
<td>Relative humidity</td>
<td>IEC 60068-2-30 (Test Db, unpackaged damp heat):</td>
</tr>
<tr>
<td></td>
<td>5...95% noncondensing</td>
</tr>
<tr>
<td>Vibration</td>
<td>IEC 60068-2-6 (Test Fc, operating)</td>
</tr>
<tr>
<td></td>
<td>5 g @ 10...500 Hz</td>
</tr>
<tr>
<td>Shock, operating</td>
<td>IEC 60068-2-27 (Test Ea, unpackaged shock):</td>
</tr>
<tr>
<td></td>
<td>30 g</td>
</tr>
<tr>
<td>Shock, nonoperating</td>
<td>IEC 60068-2-27 (Test Ea, unpackaged shock):</td>
</tr>
<tr>
<td></td>
<td>50 g</td>
</tr>
<tr>
<td>EMI immunity</td>
<td>IEC 61000-4-2</td>
</tr>
<tr>
<td></td>
<td>All contact discharges</td>
</tr>
<tr>
<td></td>
<td>4 kV air discharges</td>
</tr>
<tr>
<td>Radiated RF immunity</td>
<td>IEC 61000-4-3</td>
</tr>
<tr>
<td></td>
<td>10V/m with 1 kHz sine-wave 80% AM from 800...2700 MHz</td>
</tr>
<tr>
<td></td>
<td>10V/m with 20 kHz pulse 100% AM (980 kHz)</td>
</tr>
<tr>
<td></td>
<td>10V/m with 20 kHz pulse 100% AM (5980 kHz)</td>
</tr>
<tr>
<td></td>
<td>10V/m with 1 kHz sine-wave 80% AM from 200...2700 MHz</td>
</tr>
<tr>
<td>EFT/B immunity</td>
<td>IEC 61000-4-4</td>
</tr>
<tr>
<td></td>
<td>±2 kV at 5 kHz power parts</td>
</tr>
<tr>
<td></td>
<td>±2 kV at 5 kHz signal parts</td>
</tr>
<tr>
<td>Surge transient immunity</td>
<td>IEC 61000-4-5</td>
</tr>
<tr>
<td></td>
<td>±1 kV line to line (EoE) and ±2 kV line to earth (EoE) signal parts</td>
</tr>
<tr>
<td>Conducted RF immunity</td>
<td>IEC 61000-4-6</td>
</tr>
<tr>
<td></td>
<td>±1 kV rms with 1 kHz sine-wave 80% AM from 150 kHz...80 kHz</td>
</tr>
</tbody>
</table>
## Certifications

<table>
<thead>
<tr>
<th>Certification (When Product Is Marked)(1)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>c-UL us</td>
<td>UL Listed Industrial Control Equipment, certified for U.S. and Canada. See UL File E65584.</td>
</tr>
</tbody>
</table>
| CE                                       | European Union 2014/30/EU EMC Directive, compliant with:  
- EN 61326-1; Measurement/Control/Laboratory use, Industrial requirements  
- EN 61000-6-2; Industrial Immunity  
- EN 61000-6-4; Industrial Emissions  
- EN 61131-2; Programmable Controllers (Clause 8, Zones A & B)  
- New Zealand NZS AS/NZS 60664.1, compliant with:  
- NZS AS/NZS 60364 - Electrical Installations, Zone A & B  
- NZS AS/NZS 60364 - Electrical Installations, Zone A & B  |
| RCM                                      | Australian Radiocommunications Act, compliant with:  
- AS/NZS CISPR 11; Industrial Emissions |
| Ex                                       | European Union 2014/34/EU ATEX Directive, compliant with:  
- EN 60079-0:2012 + A11:2013; General Requirements  
- EN 60079-15; Potentially Explosive Atmospheres, Protection “n”  
- II 3G Ex n A IIC T4 Gc  
- DEMKO04ATEX0330347X |
| 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 |

Notes:
Rockwell Automation Support

Use the following resources to access support information.

**Technical Support Center**
Brand new help articles, Rock to Wires, FAQs, Chat, User Forums, and Product Notification Updates.
[www.rockwellautomation.com/knowledgebase](http://www.rockwellautomation.com/knowledgebase)

**Local Technical Support Phone Numbers**
Locate the phone number for your country.
[www.rockwellautomation.com/global/support/get-support-now.page](http://www.rockwellautomation.com/global/support/get-support-now.page)

**Direct Dial Codes**
Dial the Direct Dial Code for your product to route your call directly to a technical support engineer.

**Literature Library**
Installation Instructions, Manuals, Brochures, and Technical Data.
[www.rockwellautomation.com/literature](http://www.rockwellautomation.com/literature)

**Product Compatibility and Download Center (PCDC)**
Get help determining how products interact, check features and capabilities, and find associated firmware.

**Documentation Feedback**
Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete the How Are We Doing? Form at [www.rockwellautomation.com/idc/groups/literature/documents/du/ra-du002_-en-e.pdf](http://www.rockwellautomation.com/idc/groups/literature/documents/du/ra-du002_-en-e.pdf).