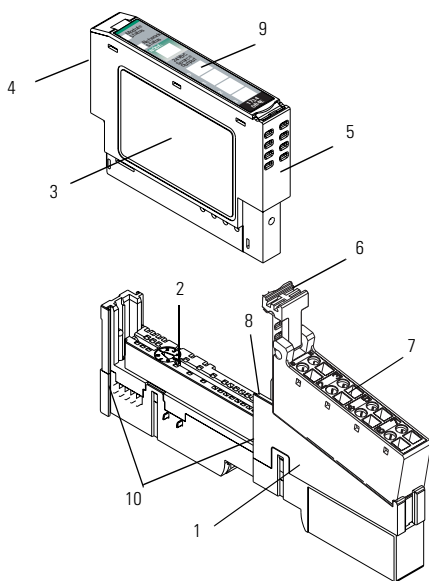




Installation Instructions

POINT I/O Protected Output Module

(Cat. No. 1734-OB2E and -OB4E Series B)



	Description		Description
1	Mounting Base ¹	6	RTB Removal Handle
2	Mechanical Keying (orange)	7	Removable Terminal Block (RTB) ¹
3	Module Wiring Diagram	8	DIN Rail Locking Screw (orange)
4	Module Locking Mechanism	9	Slide-in Writable Label
5	Insertable I/O Module	10	Interlocking Side Pieces

¹ Wiring Base Assembly consists of item 1) mounting base, 1734-MB and item 7) removable terminal block, 1734-RT or -RTS.

Installing 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. Then lift straight up to remove.

Installing 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.

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.

Installing 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.

Removing a Mounting Base

To remove a mounting base, you must remove any installed module, and 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 on the module lock on the top of the module.
4. Pull on the I/O module to remove from the base.
5. Use a small bladed screwdriver to rotate the orange base locking screw to a vertical position. This releases the locking mechanism.
6. Then lift straight up to remove.

European Communities (EC) Directive Compliance

If this product has the CE mark it is approved for installation within the European Union and EEA regions. It has been designed and tested to meet the following directives.

EMC Directive

This product is tested to meet the Council Directive 89/336/EC Electromagnetic Compatibility (EMC) by applying the following standards, in whole or in part, documented in a technical construction file:

- EN 50081-2 EMC — Generic Emission Standard, Part 2 — Industrial Environment
- EN 50082-2 EMC — Generic Immunity Standard, Part 2 — Industrial Environment

This product is intended for use in an industrial environment.

Low Voltage Directive

This product is tested to meet Council Directive 73/23/EEC Low Voltage, by applying the safety requirements of EN 61131-2 Programmable Controllers, Part 2 - Equipment Requirements and Tests. For specific information required by EN 61131-2, see the appropriate sections in this publication, as well as the Allen-Bradley publication Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Open style devices must be provided with environmental and safety protection by proper mounting in enclosures designed for specific application conditions. See NEMA Standards publication 250 and IEC publication 529, as applicable, for explanations of the degrees of protection provided by different types of enclosures.

Communicating 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 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 the 1734-OB2E Output Module

Message size: 1 Byte

	7	6	5	4	3	2	1	0	
Produces (scanner Rx)	Not used						Ch1	Ch0	Channel status
Where: 0 = no error, 1 = error									

Message size: 1 Byte

	7	6	5	4	3	2	1	0	
Consumes (scanner Tx)	Not used						Ch1	Ch0	Channel state
Where: 0 = Off, 1 = On									

Default Data Map for the 1734-OB4E Output Module

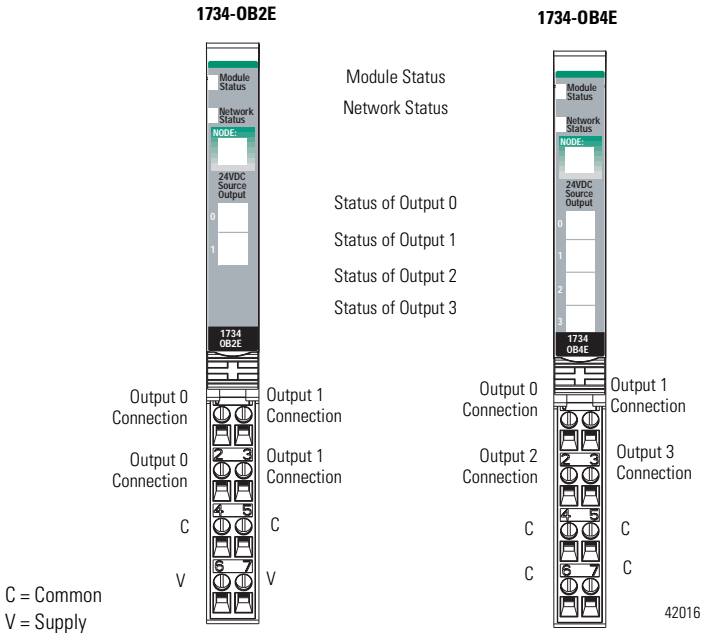
Message size: 1 Byte

	7	6	5	4	3	2	1	0	
Produces (scanner Rx)	Not used				Ch3	Ch2	Ch1	Ch0	Channel status
Where: 0 = no error, 1 = error									

Message size: 1 Byte

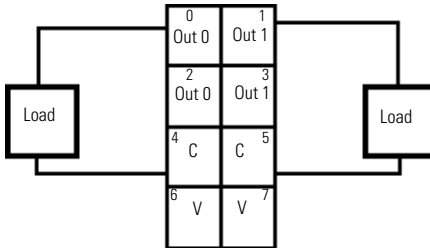
	7	6	5	4	3	2	1	0	
Consumes (scanner Tx)	Not used				Ch3	Ch2	Ch1	Ch0	Channel state
Where: 0 = Off, 1 = On									

Wiring the Protected Output Modules



dc Output Module Cat. No. 1734-OB2 and -OB4E

1734-OB2E



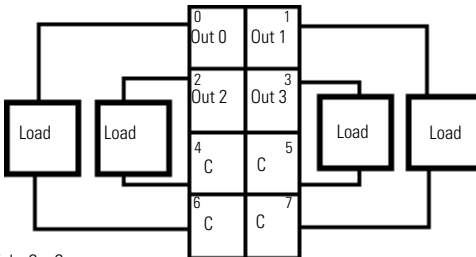
42014

V = 12/24V dc, C = Common
Field power is supplied from internal power bus

	Output Terminal	Common Terminal	Power
Channel 0	0, 2	4	6
Channel 1	1, 3	5	7

Module power is supplied from the internal power bus.

1734-OB4E



42015

V = 12/24V dc, C = Common
Field power is supplied from internal power bus

	Output Terminal	Common Terminal	Power
Channel 0	0	6	
Channel 1	1	7	
Channel 2	2	4	
Channel 3	3	5	

Module power is supplied from internal power bus.

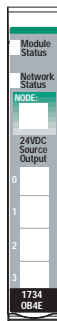
Troubleshooting with the Indicators

1734-OB2E



Module Status
 Network Status
 24VDC Source Output
 0
 1
 2
 3
 1734 OB2E

1734-OB4E




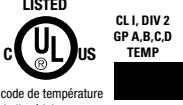


Indication	Probable Cause
Module Status	
Off	No power applied to device
Green	Device operating normally
Flashing Green	Device needs commissioning due to configuration missing, incomplete or incorrect.
Flashing Red	Recoverable fault.
Red	Unrecoverable fault may require device replacement
Flashing Red/Green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

Indication	Probable Cause
Network Status	
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.

Indication	Probable Cause
I/O Status	
Off	All outputs inactive
Yellow	One or more output is active and under control
Flashing Red	Open circuit detected. No load. (Off-State only)
Red	Short circuit detected. No load (On-State only)

Safety Approvals

C-UL and UL Hazardous Location Approval	Approbation d'utilisation dans des environnements dangereux par la C-UL/UL
<p>C-UL and UL certifies products for general use as well as for use in hazardous locations. Actual C-UL and UL certification is indicated by the product label as shown below, and not by statements in any user documentation.</p> <p>Example of the C-UL and UL certification product label:</p> 	<p>La C-UL/UL certifie des produits pour une utilisation générale aussi bien que pour une utilisation en environnements dangereux. La certification C-UL/UL en vigueur est indiquée par l'étiquette produit et non par des indications dans la documentation utilisateur.</p> <p>Exemple d'étiquette de certification d'un produit par la C-UL/UL :</p> 
<p>To comply with C-UL and UL certification for use in hazardous locations, the following information becomes a part of the product literature for this C-UL and UL-certified industrial control product.</p> <ul style="list-style-type: none"> This equipment is suitable for use in Class I, Division 2, Groups A, B, C, D, or non-hazardous locations only. The products having the appropriate C-UL and UL markings (that is, Class I, Division 2, Groups A, B, C, D) are certified for use in other equipment where the suitability of combination (that is, application or use) is determined by the C-UL and UL or the local inspection office having jurisdiction 	<p>Pour satisfaire à la certification C-UL/UL en environnements dangereux, les informations suivantes font partie intégrante de la documentation des produits de commande industrielle certifiés.</p> <ul style="list-style-type: none"> Cet équipement ne convient qu'à une utilisation en environnements de Classe I, Division 2, Groupes A, B, C, D ou non dangereux. Les produits portant le marquage C-UL/UL approprié (c'est-à-dire Classe I, Division 2, Groupes A, B, C, D) sont certifiés pour une utilisation avec d'autres équipements, les combinaisons d'applications et d'utilisations étant déterminées par la C-UL/UL ou le bureau local d'inspection qualifié.
<p>Important: Due to the modular nature of a programmable control system, the product with the highest temperature rating determines the overall temperature code rating of a programmable control system in a Class I, Division 2, location. The temperature code rating is marked on the product label as shown. Operating temperature range is 0° - 55°C.</p>	<p>Important: De par la nature modulaire des systèmes de commande programmables, le produit ayant le code de température le plus élevé détermine le code de température global du système dans un environnement de Classe I, Division 2. Le code de température est indiqué sur l'étiquette produit.</p>
<p>Temperature code rating:</p>  <p>Look for temperature code rating here.</p>	<p>Code de température :</p>  <p>Le code de température est indiqué ici.</p>
<p>The following warnings apply to products having C-UL and UL certification for use in hazardous locations.</p>	<p>Les avertissements suivants s'appliquent aux produits ayant la certification C-UL/UL pour une utilisation en environnements dangereux.</p>
<p>WARNING: Explosion Hazard</p> <ul style="list-style-type: none"> Substitution of components may impair suitability for Class I, Division 2. Do not replace components unless power has been switched off or the area is known to be non-hazardous. Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous. Do not disconnect connectors unless power has been switched off or the area is known to be non-hazardous. Secure any user-supplied connectors that mate to external circuits on this equipment by using screws, sliding latches, threaded connectors, or other means such that any connection can withstand a 15 Newton (3.4 lb.) separating force applied for a minimum of one minute. 	<p>AVERTISSEMENT : Risque d'explosion</p> <ul style="list-style-type: none"> La substitution de composants peut rendre ce matériel inadapté à une utilisation en environnements de Classe I, Division 2. Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de remplacer des composants. Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher l'équipement. Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher les connecteurs. Fixer tous les connecteurs fournis par l'utilisateur pour se brancher aux circuits externes de cet équipement à l'aide de vis, loquets coulissants, connecteurs filetés ou autres, de sorte que les connexions résistent à une force de séparation de 15 Newtons (1,5 kg - 3,4 lb.) appliquée pendant au moins une minute. S'assurer que l'environnement est classé non dangereux avant de changer les piles.
<p>C-UL and UL logo is a registered trademark of the Underwriters Laboratories.</p>	<p>Les sigles C-UL et UL sont des marques déposées de la Underwriters Laboratories.</p>

Specifications - 1734-OB2E and -OB4E Protected Output Modules**Output Specifications**

Number of Outputs	1734-OB2E - 2 (1 group of 2) non-isolated, sourcing 1734-OB4E - 4 (1 group of 4) non-isolated, sourcing
ON-State Voltage Range	10V dc minimum 24V dc nominal 28.8V dc maximum
ON-State Voltage Drop	0.2V dc maximum
ON-State Current	1.0mA minimum per channel
OFF-State Voltage	28.8V dc maximum
OFF-State Leakage	0.5mA maximum
Output Signal Delay ¹ OFF to ON ON to OFF	0.1ms maximum 0.1ms maximum
Output Current Rating	Maximum 1.0A per output 2.0A maximum per module
Surge Current	2A for 10ms, repeatable every 3 seconds
Indicators (field side indication, logic driven)	1734-OB2E 2 yellow output status; 2 red output fault 2 green/red module/network status 1734-OB4E 4 yellow output status; 4 red output fault 2 green/red module/network status
Keyswitch Position	1

General Specifications

Module Location	1734-TB or -TBS wiring base assembly
Pointbus Current	75mA maximum @ 5V dc
Power Dissipation	1734-OB2E - 0.8W maximum @ 28.8V dc 1734-OB4E - 1.2W maximum @ 28.8V dc
Thermal Dissipation	1734-OB2E - 2.7 BTU/hr maximum @ 28.8V dc 1734-OB4E - 4.1 BTU/hr maximum @ 28.8V dc
Isolation Voltage	1250V rms/V ac
External dc Power Supply Voltage Voltage Range Supply Current	24V dc nominal 10 to 28.8V dc 1734-OB2E - 8mA 1734-OB4E - 16mA
Dimensions Inches (Millimeters)	2.21H x 0.47W x 2.97L (56.0H x 12.0W x 75.5L)

Environmental Conditions	
Operational Temperature	-20 to 55°C (-4 to 131°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5 to 95% noncondensing
Shock	Operating 12g peak acceleration, 11(±1)ms pulse width
	Non-operating 50g peak acceleration, 11(±1)ms pulse width
Vibration	Tested 2g @ 10-500Hz per IEC 68-2-6
Conductors Wire Size	14 AWG (2.5mm ²) - 22 AWG (0.25mm ²) solid or stranded wire rated at 75°C or greater
Category	3/64 inch (1.2mm) insulation maximum 2 ²
Terminal Base Screw Torque	7 pound-inches (0.6Nm)
Field Wiring Terminations	1734-OB2E 0 - Output 0 2 - Output 0 4 - Common 6 - Supply 1734-OB4E 0 - Output 0 2 - Output 2 4 - Common 6 - Common
	1 - Output 1 3 - Output 1 5 - Common 7 - Supply 1 - Output 1 3 - Output 3 5 - Common 7 - Common
Mass	1734-OB2E - 1.15 oz/32.60 grams 1734-OB4E - 1.17 oz/33.17 grams
Agency Certification (when product is marked)	C-UL Listed C-UL Class I, Division 2, Groups A, B, C and D certified UL Listed CE marked for all applicable directives. C-Tick marked for all applicable acts. DeviceNet compatible as certified by ODVA, Inc.

- 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 deenergization.
- 2 Use this conductor category information for planning conductor routing as described in publication 1770-4.1, "Industrial Automation Wiring and Grounding Guidelines."

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