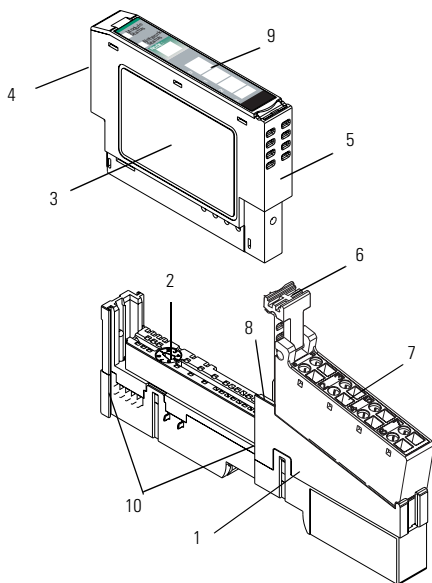




Installation Instructions

POINT I/O 2 Relay Output Module

(Cat. No. 1734-OW 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 For Noise Immunity, 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

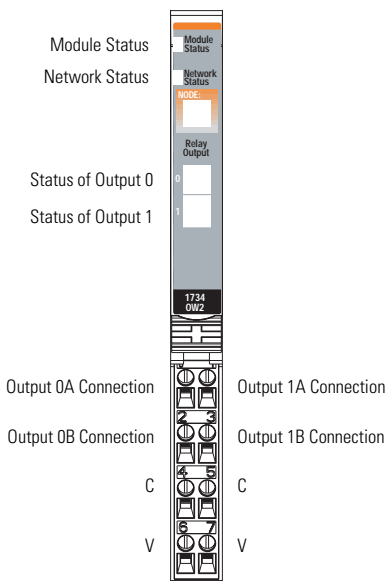
I/O messages are sent to (consumed) and received from (produced) the POINT I/O modules. These messages are mapped into the processor's memory. This POINT I/O output module does not produce input data (scanner Rx). It does consume 1 byte of I/O data (scanner Tx).

Default Data Map for the 1734-OW2 Input Module

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									

Wiring the Relay Output Module



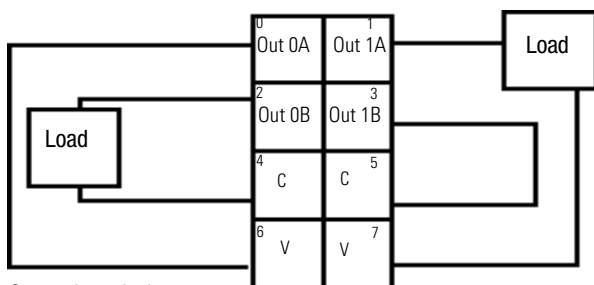
C = Common
V = Supply

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ATTENTION



Relay contacts are not powered by the internal power bus. Load power can be provided by the internal power bus or an external power source.

Load powered by Internal Power Bus

Out = Output channel relay contacts

V = Supply (can range from +5V dc to 240V ac)

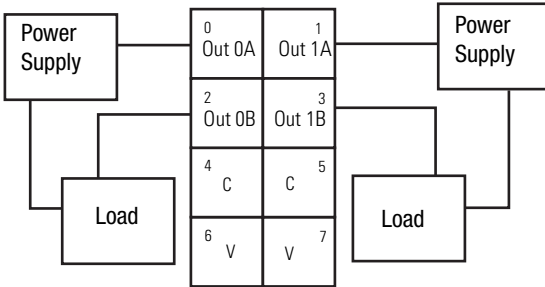
C = Common

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Channel	Output	Common	Supply
0A	0	4	6
0B	2	4	6
1A	1	5	7
1B	3	5	7

Supply voltage can range from +5V dc to 240V ac, depending on relay load.
12/24V dc power for the module is provided by the internal power bus.

Load powered by External Power Bus



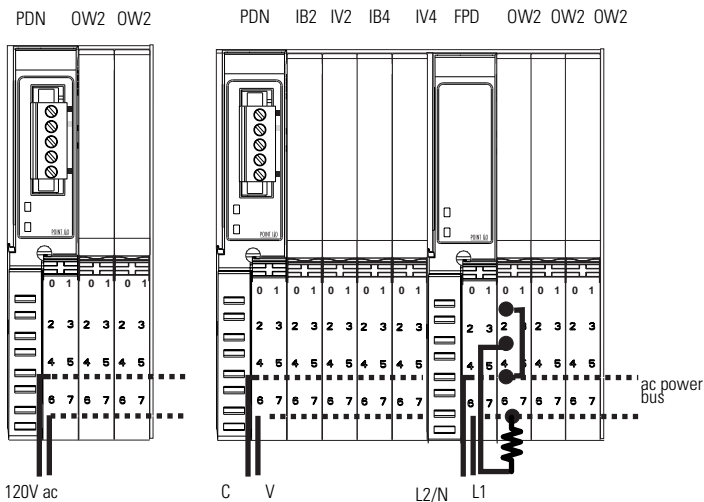
Out = Output channel relay contacts
 Power Supply = can range from +5V dc to 240V ac
 C = Common

Channel	Output	Common	Supply ¹
0A	0		
0B	2		
1A	1		
1B	3		

¹ Supply voltage can range from +5V dc to 240V ac, depending on relay load.
 12/24V dc power for the module is provided by the external power supply.

ATTENTION

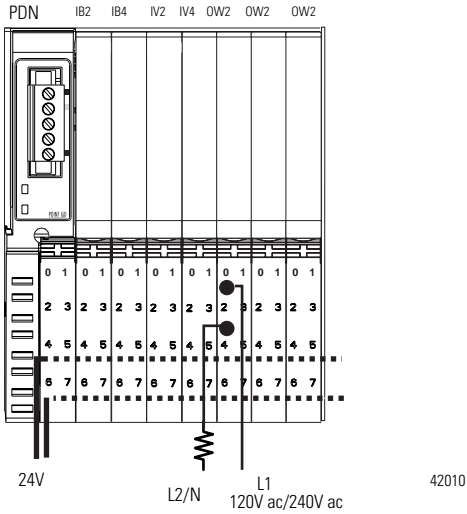
- Do not attempt to increase load current or wattage capability beyond the maximum rating by connecting 2 or more outputs in parallel. The slightest variation in relay switching time may cause one relay to momentarily switch the total load current.
- Make certain that all relay wiring is properly connected before applying any power to the module.
- Total current draw through the wiring base unit is limited to 10A. Separate power connections to the terminal base unit may be necessary.
- Use the end cap from your adapter or interface module 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.



Wiring with ac Modules only

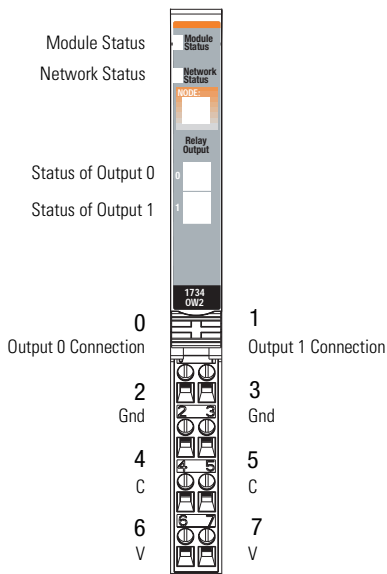
Wiring Using a 1734-FPD to Create a New ac Power Bus

10 POINT I/O 2 Relay Output Module



Wiring using external power source for ac Relay power

Troubleshooting with the Indicators



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NC = No Connection GND = Ground
 C = Common V = Supply





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

Indicator	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.

Indicator	Indication	Probable Cause
I/O Status		
	Off	Outputs off.
	Yellow	Outputs on.

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>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>Example of the C-UL and UL certification product label:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>LISTED</p>  </div> <div style="text-align: center;"> <p>CL I, DIV 2 GP A, B, C, D TEMP</p> </div> </div>	<p>Exemple d'étiquette de certification d'un produit par la C-UL/UL :</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>LISTED</p>  </div> <div style="text-align: center;"> <p>CL I, DIV 2 GP A, B, C, D TEMP</p> </div> </div>
<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> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>LISTED</p>  <p>Look for temperature code rating here.</p> </div> <div style="text-align: center;"> <p>CL I, DIV 2 GP A, B, C, D TEMP</p> </div> </div>	<p>Code de température :</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>LISTED</p>  <p>Le code de température est indiqué ici.</p> </div> <div style="text-align: center;"> <p>CL I, DIV 2 GP A, B, C, D TEMP</p> </div> </div>
<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

Specifications - 1734-OW2 Output Relay Module	
Outputs per Module	2 Form A isolated (normally open) electromechanical relays
Off-State Leakage Current (max at 240V ac)	1.2mA and bleed resistor thru snubber circuit
Output Voltage Range (load dependent)	5-28.8V dc @ 2.0A resistive 48V dc @ 0.5A resistive 125V dc @ 0.25A resistive 125V ac @ 2.0A resistive 240V ac @ 2.0A resistive
Output Current Rating (at rated power)	Resistive 2A @ 5-28.8V dc 0.5A @ 48V dc 0.25A @ 125V dc 2A @ 125V ac 2A @ 240V ac Inductive 2.0A steady state @ 5-28.8V dc, L/R = 7ms 0.5A steady state @ 48V dc, L/R = 7ms 0.25A steady state @ 125V dc, L/R = 7ms 2.0A steady state, 15A make @ 125V ac, PF = $\cos \theta = 0.4$ 2.0A steady state, 15A make @ 240V ac, PF = $\cos \theta = 0.4$
Power Rating (steady state)	250W max. for 125V ac resistive output 480W max. for 240V ac resistive output 60W max. for 28.8V dc resistive output 24W max. for 48V dc resistive output 31W max. for 125V dc resistive output 250VA max. for 125V ac inductive output 480VA max. for 240V ac inductive output 60VA max. for 28.8V dc inductive output 24VA max. for 48V dc inductive output 31VA max. for 125V dc inductive output
Output Signal Delay OFF to ON ON to OFF	10ms maximum (time from valid output on signal to relay energization by module) 26ms maximum (time from valid output off signal to relay deenergization by module)
Initial Contact Resistance	30m Ω
Switching Frequency	1 operation/3s (0.3Hz at rated load) max
Operate/Release Time	10ms max

Bounce Time	1.2ms (mean)
Minimum Contact Load	100 μ A at 100mV dc
Expected Life of Electrical Contacts	Minimum 100,000 operations @ rated loads
Fusing	Module outputs are not fused. If fusing is desired, you must supply external fusing.
Indicators	2 green/red module/network status 2 yellow output status
Keyswitch position	7

General Specifications

Module Location	1734-TB or -TBS wiring base assembly
Pointbus Current	80mA max @ 5V dc
Power Dissipation	0.5W max
Thermal Dissipation	1.7 BTU/hr max
Isolation Voltage Between any 2 sets of contacts Customer load to logic	2550V dc for 1s 2550V dc for 1s
Field Power Bus Supply Voltage Voltage Range Supply Current	None required 240V ac max 2A per channel maximum, 4A per module
Dimensions Inches (Millimeters)	2.21H x 0.47W x 2.97L (56H x 12W x 75.5L)
Environmental Conditions Operational Temperature Storage Temperature Relative Humidity Shock Operating Non-operating Vibration	-20 to 55°C (-4 to 131°F) -40 to 85°C (-40 to 185°F) 5 to 95% noncondensing 12g peak acceleration, 11(\pm 1)ms pulse width 50g peak acceleration, 11(\pm 1)ms pulse width Tested 2g @ 10-500Hz per IEC 68-2-6
Conductors Wire Size Category	14 AWG (2.5mm ²) - 22 AWG (0.25mm ²) solid or stranded wire rated @ 75°C or greater 3/64 inch (1.2mm) insulation maximum 2'
Terminal Base Screw Torque	7 pound-inches (0.6Nm)

Field Wiring Terminations	0 - Output 0A 2 - Output 0B 4 - Common 6 - Supply	1 - Output 1A 3 - Output 1B 5 - Common 7 - Supply
Mass	1.30 oz/36.9 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	Use this conductor category information for planning conductor routing. Refer to publication 1770-4.1, "Industrial Automation Wiring and Grounding Guidelines."	

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