

1746sc Isolated-Circuit 74 to 276 Vac Triac Output Module, 1.5 A per Point

Catalog No. 1746sc-OAP8I

Product Profile



- Installs and operates exactly like an Allen-Bradley product, using a standard Allen-Bradley removable terminal block
- Features 1 common per output and 1500 V output-to-output isolation to allow mixing phases and control voltages on one module
- Can be used in applications requiring from 74 to 276 Vac triac output, ideal for motor starters and other inductive loads (1.5 A/point and 9 A/module limit)
- Each circuit is individually fuse protected and provides “fuse blown” indication to the SLC500™, pin-pointing which fuse has opened
- Completely solid-state, no relays to fail
- Can be directly wired to a Spectrum Controls 1746sc-IA8I or -IM8I isolated-circuit input module to monitor output state

The 1746sc-OAP8I provides 8 triac-controlled, isolated-circuit outputs, each with its own common. The module also provides a broad operating range (74 to 276 Vac) for increased versatility. It is designed for use with high inductive loads, such as solenoids, relays, and motor starters.

Increases Safety

The 1746sc-OAP8I provides a separate fuse for each output. This means a blown fuse in one output won't affect other outputs. The module also indicates to the logic controller's input image table which fuse has blown, so you can actively monitor each output and alert personnel to a fault. For visual diagnostics, the 1746sc-OAP8I provides an LED block to indicate which outputs are on and if any fuse has blown.

Reduces System Costs

The 1746sc-OAP8I can save you hundreds of dollars on system installation costs. The module allows direct control of 120 to 240 V circuits, eliminating the need for costly interposing relays and transformers. One 1746sc-OAP8I can also be used with devices of different voltages and phases (something you can only do with an isolated-circuit module) so you don't need to buy separate modules for each power source.

Simplifies Installation

The 1746sc-OAP8I incorporates proprietary Allen-Bradley technology so it operates and performs like an Allen-Bradley product for easy installation. The

module also allows you to control up to 8 devices without worrying about whether they're powered by different supplies. The 1746sc-OAP8I can even directly drive terminals on an isolated-circuit AC/DC input module (Spectrum Controls catalog no. 1746sc-IA8I or -IM8I) without any snubber circuitry, for those who want to actively monitor each output.

1746sc-OAP8I Specifications

1746sc-OAP8I Wiring

VAC 0	OUT 0
VAC 1	OUT 1
VAC 2	OUT 2
VAC 3	OUT 3
E-GND	E-GND
VAC 4	OUT 4
VAC 5	OUT 5
VAC 6	OUT 6
VAC 7	OUT 7

0 Vac	74 Vac*	276 Vac*
Operation Not Guaranteed		Recommended Operating Range

* Frequency = 47 to 63 Hz

Number of Outputs	8 triac	
Points per Common	1 (individually isolated)	
Voltage Category	120/240 Vac @ 50/60 Hz	
Operating Voltage	74 to 276 Vac @ 47 to 63 Hz	
Output Current Rating Per Point	1.5 A @ 30°C; 1 A @ 60°C	
Output Current Rating Per Module	9 A @ 30°C; 4 A @ 60°C	
Surge Current (maximum)	25 A per output for 100 ms, repeatable every 1 sec 25 A per module for 100 ms, repeatable every 1 sec	
Load Current (minimum)	5 mA per output	
On-State Voltage Drop (maximum)	1.0 V @ 1.5 A	
Off-State Leakage Current (max.)	1 mA	
Signal Delay	Off to On On to Off	Zero crossing: 8.3 ms @ 60 Hz; 10.0 ms @ 50 Hz Zero crossing: 8.3 ms @ 60 Hz; 10.0 ms @ 50 Hz
Power Dissipation (maximum)	9.85 W ^①	
Backplane Current Draw (max.)	5 V 24 V	0.170 A 0.0 A
Isolation Voltage	1500 Vac output-to-output 1500 Vac field wiring-to-backplane	
Environmental Conditions	Operational Temperature Storage Temperature Relative Humidity	
	0° to 60°C (32° to 140°F) -40° to +85°C (-40° to 185°F) 5 to 95% (non-condensing)	
Certifications	UL/C-UL (Class I, Div 2, Groups ABCD) CE per Council Directive 89/336/EEC for EMC	
Conductors	Wire Size Category	14 gauge stranded maximum 3/64 inch insulation maximum 1 ^②
Fuses	3 A, 250 V, 2 AG SLO-BLO fuses (1 per output) Littelfuse 229003	
Field Wiring Terminal Block	Red; removable; AB-part 1746-RT25R (included)	
Module ID Code	1905	

^① Maximum with the module dissipating 9 A (100% duty cycle).

^② Use this conductor-category information for planning conductor routing as described in the Allen-Bradley system-level *Installation and Operation Manual*.



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