

1746sc Isolated-Circuit 200/240 Vac/dc Input Module

Catalog No. 1746sc-IM8I

Product Profile



- Installs and operates exactly like an Allen-Bradley product, using a standard Allen-Bradley removable terminal block
- Features 1 common per input and 1500 V input-to-input isolation to eliminate concerns with crossing phases and improve overall system integrity
- Allows input types to be mixed, just like a relay contact module
- Can be used in applications requiring 160 to 264 Vac or 170 to 276 Vdc discrete input, sinking or sourcing
- Provides correct off-state indication when used with proximity switches and other input devices that have off-state leakage current
- Allows direct monitoring of high-voltage control circuits, verifying circuit operation and simplifying troubleshooting

The 1746sc-IM8I features 8 separate-common, isolated-circuit inputs. The module also features a broad operating range (160 to 264 Vac or 170 to 276 Vdc) for increased versatility. It is designed for use with a wide variety of input devices, such as limit switches, float switches, selector switches, push-buttons, and proximity switches (photo-sensors). It can even monitor relay or motor starter outputs directly.

Simplifies Installation

The 1746sc-IM8I incorporates proprietary Allen-Bradley technology so it operates and performs like an Allen-Bradley product for easy installation. The module also allows you to use up to 8 input devices without worrying about whether they're powered by different supplies (something you can only do with an isolated-circuit module). You can also use the 1746sc-IM8I to monitor the outputs on a Spectrum Controls 1746sc-OAP8I isolated-circuit AC output module without adding a snubber circuit.


Reduces System Costs

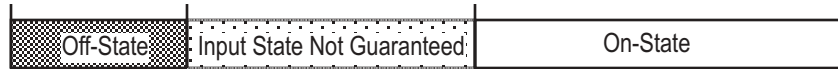
The 1746sc-IM8I can save you hundreds of dollars on system installation costs. The module allows direct monitoring of high-voltage control circuits, eliminating the need for costly interposing relays and transformers. And because the 1746sc-IM8I is an isolated-circuit module, one 1746sc-IM8I can be used with devices of different voltages and phases so you don't need to buy separate modules for use with each power source.

1746sc-IM8I Specifications

0 Vac* 60 Vac* 160Vac* 264 Vac*
 0 Vdc 40 Vdc 170 Vdc 265 Vdc

1746sc-IM8I Wiring

VAC/VDC 0+	IN 0-
VAC/VDC 1+	IN 1-
VAC/VDC 2+	IN 2-
VAC/VDC 3+	IN 3-
E-GND 	E-GND
VAC/VDC 4+	IN 4-
VAC/VDC 5+	IN 5-
VAC/VDC 6+	IN 6-
VAC/VDC 7+	IN 7-



* Frequency = 47 to 63 Hz

276 Vdc short-term overload (1 hour)

Number of Inputs	8
Points per Common	1 (individually isolated)
Voltage Category	200/240 Vac @ 50/60 Hz 200/250 Vdc, sink or source
Operating Voltage	160 to 264 Vac @ 47 to 63 Hz 170 to 265 Vdc
Nominal Input Current	13.5 mA @ 240 Vac 2.5 mA @ 250 Vdc
Input Inrush Current (maximum)	0.7 A @ 240 Vac
Input Signal Delay (maximum)	Off to On 15 ms @ 240 Vac 7 ms @ 250 Vdc On to Off 40 ms @ 240 Vac 36 ms @ 250 Vdc
Off-state Current (maximum)	2.5 mA @ 40 Vac ^① 0.85 mA @ 40 Vdc
Power Dissipation (maximum)	6.6 W @ 240 Vac/dc ^②
Backplane Current Draw (max.)	5 V 0.110 A 24 V 0.0 A
Isolation Voltage	1500 Vac input-to-input 1500 Vac field wiring-to-backplane
Environmental Conditions	Operational Temperature 0° to 60°C (32° to 140°F) Storage Temperature -40° to +85°C (-40° to 185°F) Relative Humidity 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	14 gauge stranded maximum 3/64 inch insulation maximum
Category	1 ^③
Field Wiring Terminal Block	Red; removable; A-B part 1746-RT25R (included)
Module ID Code	304

^① Maximum allowable leakage current from an input device in an off state.

^② Maximum with all 8 inputs turned on (100% duty cycle).

^③ 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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