

1746sc Isolated-Circuit 100/120 Vac/dc Input Module

Catalog No. 1746sc-IA8I

Product Profile



- Installs and operates exactly like an Allen-Bradley product
- 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 from 80 to 150 Vac or 85 to 170 Vdc discrete input, sinking or sourcing
- Ideal for use with proximity switches and other input devices that have off-state leakage current
- Allows direct monitoring of high-voltage control circuits, eliminating costly relays and transformers and simplifying troubleshooting

The 1746sc-IA8I features 8, separate-common, isolated-circuit inputs. The module also features a broad operating range (80 to 150 Vac and 85 to 170 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-IA8I 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-IA8I 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-IA8I 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-IA8I is an isolated-circuit module, one 1746sc-IA8I 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- IA8I Specifications

0 Vac* 30 Vac* 60Vac* 150 Vac*
 0 Vdc 20 Vdc 65 Vdc 170 Vdc

1746sc- IA8I 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

Number of Inputs	8
Points per Common	1 (individually isolated)
Voltage Category	100/120 Vac @ 50/60 Hz 100/120 Vdc, sink or source
Operating Voltage	80 to 150 Vac @ 47 to 63 Hz 85 to 170 Vdc
Nominal Input Current	16 mA @ 120 Vac 2.5 mA @ 120 Vdc
Input Inrush Current (maximum)	0.7 A @ 120 Vac
Input Signal Delay (maximum)	Off to On 17 ms @ 120 Vac 7 ms @ 120 Vdc On to Off 45 ms @ 120 Vac 40 ms @ 120 Vdc
Off-state Current (maximum)	4 mA @ 20 Vac ^① 0.5 mA @ 20 Vdc
Power Dissipation (maximum)	4 W @ 120 Vac/dc ^②
Backplane Current Draw (max.) 5 V 24 V	0.110 A 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/cUL (Class I, Div 2, Groups ABCD) CE per Council Directive 89/336/EEC for EMC
Conductors Wire Size Category	14 gage stranded maximum 3/64 inch insulation maximum 1 ^③
Field Wiring Terminal Block	Red; removable; A-B part 1746-RT25R (included)
Module ID Code	303

^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*.



Corporate Headquarters Spectrum Controls, Inc.

P.O. Box 5533 • Bellevue, Washington 98006 USA
 Tel 425-746-9481 • Fax 425-641-9473
 E-mail spectrum@spectrumcontrols.com
 www.spectrumcontrols.com

