

Allen-Bradley 1769 Series Service Manual

1769-IQ16

1. Description

The Allen-Bradley 1769-IQ16 is a Compact I/O module with Sixteen (16) DC input channels operating at voltage range of 24VDC sink / source. This module is compatible for use with a 1769 CompactLogix chassis or MicroLogix 1500. Technical specifications for 1769-IQ16

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation / Allen-Bradley
Brand	Allen-Bradley
Part	Number/Catalog No. 1769-IQ16
Product	Family: Compact I/O
Product	Line CompactLogix
Product	Type: Discrete Input Module
Module	Type DC Input Module
Input	Type Digital Input
No.	of Inputs: 16
No.	of Groups: 2 groups (8 inputs each)
Power	Supply Distance rating: 8
Communication	Cable 16 Point
Compatible	Controllers: MicroLogix 1500; CompactLogix
Shipping	Weight 2 lbs.
Voltage	Category: 24V DC sink/source
Shipping	Dimensions 8 x 8 x 5 in.
Series	A and B
Operating	Voltage range: 10...30V DC @ 30 °C (86 °F) 10...26.4V DC @ 60 °C (140 °F)
Distance	Rating 8 Modules
Off-state	Voltage: 5V DC
On-state	Voltage: 10V DC
Working	Voltage Rating 30 Volts AC/ 30 Volts DC
Input	delay, On: 6 ms
Wire	Type Copper-90 degrees Celsius
Power	Supply: 1769-PA2, 1769-PB2, 1769-PA4, 1769-PB4
Replacement	Terminal Block 1769-RTBN18
Wire	Size (Solid) 22-14 AWG
UPC	10662468992814
Wire	Size 22-14 AWG (Solid); 22-16 AWG (stranded) Description
The	1769-

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Series A and B

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Distance Rating 8 Modules

Off-state Voltage: 5V DC

On-state Voltage: 10V DC

Working Voltage Rating 30 Volts AC/ 30 Volts DC

Input delay, On: 8 ms

Wire Type Copper-90 degrees Celsius

Power Supply: 1769-PA2, 1769-PB2, 1769-PA4, 1769-PB4

Replacement Terminal Block 1769-RTBN18

Wire Size (Solid) 22-14 AWG

UPC 10662468992814

Wire Size 22-14 AWG (Solid); 22-16 AWG (stranded) Description

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The 1769-IQ16 DC digital input module by Allen-Bradley is a DC digital input module with Sixteen (16) 24 Volts DC sinking and sourcing inputs. This module has Two (2) input groups with Eight (8) channels per group. It has an optimum voltage range of 10 to 30 Volts DC at 30 degrees Celsius (86 degrees Fahrenheit) and 10 to 26.4 Volts DC at 60 degrees Celsius (140 degrees Fahrenheit). It has 8 milliseconds input OFF/ON signal delay time and draws a 115mA current at 5.1 Volts DC. It has a maximum OFF state voltage and current rating of 5 Volts DC and 1.5mA respectively. It also has an ON rating of 10 Volts DC and 2mA. The 1769-IQ16 has a maximum surge current of 250mA and a nominal input impedance of 3 kW. It has an IEC Class 2 reinforced insulation type with an isolation voltage of 75 Volts DC tested at 1697 Volts DC for 1 second between inputs-to-BUS and group-to-group. Its maximum heat dissipation is 3.55W (12.11 BTU per hour) in an open-style enclosure. It weighs approximately 270g (0.60 pounds), and dimensions of 118 x 35 x 87 millimeters (4.65 x 1.38 x 3.43 inches). The 1769-IQ16 supports panel mounting a DIN rail installation using a six pounds on an inch terminal screw. The 1769-IQ16 uses either the 1769-PA2, 1769-PB2, 1769-PA4, or the 1769-PB4, with an 8-module supply distance rating. It uses copper (Cu at 90 degrees Celsius (194 degrees Fahrenheit)) wire with a 22/14 AWG solid and a 22/16 AWG stranded wire size. It has an operational temperature range between 0 and 60 degrees Celsius (32 and 140 degrees Fahrenheit) at 5 to 95% relative humidity range without condensation.

The 1769-IQ16 is a Compact I/O module that is compatible with Allen Bradley's MicroLogix 1500 and 1769 CompactLogix family of controllers. This modules features Sixteen (16) 24VDC sink / source input channels. This module is used for interfacing relay and magnetic contactors auxiliary contacts, Thermal overload mechanism, switches, sensors and other devices that operate in ON/OFF mode and rated for 24VDC voltage. This module has input channel grouping which consists of Two (2) groups of Eight (8) inputs. This input grouping allows independent operation of the channel groups.

The module's input groups consists of input channels 0, 1, ,2 ,3 ,4 ,5 ,6 ,7 for group 1 while input channels 8, 9, 10, 11, 12, 13, 14, 15 forms group 2. The power supply distance rating of this module is 8 modules. This module can be inserted to any location of 1769 CompactLogix assembly, whether local I/O or an I/O bank. It may be attached to any adjacent module including the CPU as long as the power supply distance rating is observed. If used with a MicroLogix 1500, this module is inserted after the base unit or to any adjacent module after the base unit. 1769IQ16 Allen Bradley INPUT MODULE 16PT 24VDC SINK/SOURCE COMPACT LOGIX AB Rockwell Automation