

Allen-Bradley 1769 Series Service Manual

1769-IF16C

1. Description

The Allen-Bradley 1769-IF16C is a Compact I/O high-density analog input module with Sixteen (16) single-ended input channels. This module is designed to accept 0-20 mA and 4-20 mA input signals with resolution of 16 bits (unipolar) and 15 bits plus sign (bipolar). This module is compatible for use with a 1769 CompactLogix chassis or MicroLogix 1500 controller. Technical specifications for 1769-IF16C

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation / Allen-Bradley
Product	Type: Analog Input Module
No.	of Inputs: 16 Single Ended Inputs
Power	Supply Distance rating: 8
Input	current range: 0-21 mA
Current	signal normal ranges: 0-20mA; 4-20 mA
Current	signal full range: 0-21 mA; 3.2 - 21 mA
Compatible	Controllers: MicroLogix 1500; CompactLogix
Resolution:	16 bits (unipolar) 15 bits plus sign (bipolar)
Channel	Diagnostics: Over- or under-range by bit reporting, process alarms
Slot	width: 1
Recommended	cable: Belden™ 8761 (shielded)
Dimension:	118 mm (height) x 87 mm (depth) x 35 mm (width) [52.5 mm (width) for 1769-IF8] Height including mounting tabs is 138 mm 4.65 in (height) x 3.43 in (depth) x 1.38 in (width) [2.07 in (width) for 1769-IF8] Height including mounting tabs is 5.43 in
Brand	Allen-Bradley
Part	Number/Catalog No. 1769-IF16C
Product	Line CompactLogix
Module	Type 16 Point Analog Current Input Module
Input	Type Analog Input
Communication	Cable 16 Point
Shipping	Weight: 0.5 pounds
Shipping	Dimen

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3. Product Information

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Brand Allen-Bradley

Part Number/Catalog No. 1769-IF16C

Product Line CompactLogix

Module Type 16 Point Analog Current Input Module

Input Type Analog Input

Communication Cable 16 Point

Shipping Weight 2 pounds

Shipping Dimensions 8 x 8 x 5 inches

Series A and B

Enclosure Type Open

Backplane Current 1.4 Amps at 24 Volts

Power Consumption 33.6 Watts

Power Dissipation 7.5 Watts

Isolation Voltage 30 Volts DC

UPC 10612598626783 Description

The Allen-Bradley 1769-IF16C is a Compact I/O module that is compatible for use with MicroLogix 1500 Programmable Logic Controller (PLC) and CompactLogix Programmable Automation Controllers (PAC). The 1769-IF16C features Sixteen (16) single-ended input channels that are designed to interface field instruments that provides 0-20 mA or 4-20 mA analog Current signal towards the module's input channels.

The 1769-IF16C can be used for interfacing of field instruments such as Transmitters, controllers; Accept feedback signals of Variable Frequency Drives (VFD), modulating valves, panel meters, data loggers and similar devices. It may also be used to received conditioned output signals of signal isolators or splitters.

The 1769-IF16C has an internal Signa-Delta Analog-to-Digital (ADC) converter. This converter translates the received analog signal into digital data with resolution of 16 bits when configured as unipolar and 15 bits when configured as bipolar. This module accepts full-scale analog input signal ranges of 0-21 mA and 3.2-21 mA.

The 1769-IF16C does not require calibration. By configuring an input filter, noises may be eliminated and insignificant changes are neglected by the module.

If used with CompactLogix version 20.

The 1769-IF16C has a BUS draw current of 190mA at 5 Volts DC and 70mA at 24 Volts DC and dissipates 4.0W of heat. It has an input overall accuracy of 0.5% at 25 degrees Celsius (77 degrees Fahrenheit) for 16 Hertz, 50 Hertz, and 60 Hertz selectable filters, and an input drift accuracy of $\pm 0.0045\%$ per degrees Celsius. It has $\pm 0.03\%$ non-linearity, $\pm 0.03\%$ at 16 Hertz filter repeatability, and 1.25% at 16 Hertz filter module error margin.

The 1769-IF16C has a maximum overload of ± 28 mA at 7.0 Volts DC at the input terminal and is built with an IEC reinforced insulation with an isolation voltage of 30 Volts DC tested at 710 Volts DC/500 Volts AC for 1 minute between input group and BUS isolation. It has an operational shock rating of 30G for 11 milliseconds in a panel-mounted installation style at 20G for 11 milliseconds on a DIN rail. The 1769-IF16C has a functional temperature ranging between 0 and 60 degrees Celsius (32-140 degrees Fahrenheit) and it is shipped in a temperature range around -40 to 85 degrees Celsius (-40 to 185 degrees Fahrenheit). It weighs approximately 281 g (0.62 pounds) and has shipping dimensions of 118 x 87 x 35 millimeters (4.65 x 3.43 x 1.38 inches). 1769IF16C Allen Bradley INPUT MODULE AB Rockwell Automation

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