

Allen-Bradley 1769 Series Service Manual

1769-IF4I

1. Description

Mfr. Part Number:

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation / Allen-Bradley
Brand	Allen-Bradley
Part	Number/Catalog No. 1769-IF4I
Product	Type: Analog Input Module
Product	Line CompactLogix
Module	Type Isolated Analog Input Module
Input	Type Analog Input
No.	of Inputs: 4 Individually isolated Differential and single ended inputs
Power	Supply Distance rating: 8
Communication	Cable 4 Point
Input	current range: 0-21 mA
Shipping	Weight 2 lbs.
Current	signal normal ranges: 0-20mA; 4-20 mA
Shipping	Dimensions 8 x 8 x 5 in.
Current	signal full range: 0-21 mA; 3.2 - 21 mA.
Series	A and B
Input	/ Output voltage range: 0-10.5VDC
Inputs	4 Isolated Differential
Voltage	signal normal ranges: $\pm 10V$ DC, 0 ...10V DC, 0...5V DC, 1...5V DC
Voltage	signal full range: $\pm 10.5V$ DC, -0.5...10.5V DC, -0.5...5.25V DC, 0.5...5.25V DC
Replacement	Terminal Block 1769-RTBN18
Converter	Type Sigma-Delta
Resolution:	16 bits (unipolar) 15bits plus sign (bipolar)
Wire	Type Copper 90 degree Celsius
Wire	Size (Solid) 22-14 AWG
Rated	working voltage: 30VAC; 30V

3. Product Information

Mfr. Part Number:

1769IF4I

Manufacturer: Allen-Bradley / Rockwell Automation

Description: Allen Bradley 1769IF4I CompactLogix Analog Cur/Volt Input, 4-Ch, Isolated

Full Description: Allen Bradley 1769IF4I CompactLogix Analog Current/Voltage Input Module, (4) Current/Voltage Inputs, Differential or Single-ended, Input Range: 0...20 mA, 4...20 mA, $\pm 10V$, 0...10V, 0...5V, 1...5V; 16-Bit Resolution, Individually Isolated

Status: Discontinued by manufacturer The Allen-Bradley 1769-IF4I is a Compact I/O analog input module with Four (4) isolated, differential input channels. This module is designed to interface field devices that sends 0-21 mA and +/- 10VDC analog signals. This module is compatible for use with a 1769 CompactLogix chassis or MicroLogix 1500. Technical specifications for 1769-IF4I

Manufacturer Rockwell Automation / Allen-Bradley

Brand Allen-Bradley

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Product Type: Analog Input Module

Product Line CompactLogix

Module Type Isolated Analog Input Module

Input Type Analog Input

No. of Inputs: 4 Individually Isolated Differential and single ended inputs

Power Supply Distance rating: 8

Communication Cable 4 Point

Input current range: 0-21 mA

Shipping Weight 2 lbs.

Current signal normal ranges: 0-20mA; 4-20 mA

Shipping Dimensions 8 x 8 x 5 in.

Current signal full range: 0-21 mA; 3.2 - 21 mA.

Series A and B

Input / Output voltage range: 0-10.5VDC

Inputs 4 Isolated Differential

Voltage signal normal ranges: $\pm 10V$ DC, 0 ...10V DC, 0...5V DC, 1...5V DC

Voltage signal full range: $\pm 10.5V$ DC, -0.5...10.5V DC, -0.5...5.25V DC, 0.5...5.25V DC

Replacement Terminal Block 1769-RTBN18

Converter Type Sigma-Delta

Resolution: 16 bits (unipolar) 15bits plus sign (bipolar)

Wire Type Copper-90 degrees Celsius

Wire Size (Solid) 22-14 AWG

Rated working voltage: 30VAC; 30VDC

UPC 10781180908634

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 Description

The Allen-Bradley 1769-IF4I is a part of the 1769 CompactLogix 5370 Controller series. It is an Analog Current/Voltage Isolated Input Module with 4 differential analog input channels. It digitally stores and converts analog data for use by controllers like the MicroLogix 1500 controller and the CompactLogix controller. It has dimensions of 4.65 x 3.43 x 1.38 in. and a weight of 0.65 lbs. The module must not be installed more than 8 modules away from the system power supply. It has a maximum heat dissipation of 3 Watts. For installation, it has Panel or DIN Rail mounting options and an open enclosure. It thus allows for a common development environment with high performance and low cost. It has removable terminal blocks which provide greater user flexibility for installation and wiring. For communication with the controller, it uses the bus interface. The 1769-IF4I also receives 5 and 24V DC power through its bus interface. The 1764-IF4I module has an LED to indicate fault status. It turns ON if a fault is found during normal channel operation or during the power cycle diagnostics. It is intended for use in clean, dry industrial environments with circuits that do not exceed Over Voltage Category II. For wiring, it is recommended to use Belden 8761 (shielded) or equivalent cable at the shortest possible length to lower impedance. The 1769-IF4I also performs channel diagnostics for configuration errors, and open circuit, over-range and under-range errors.

The 1769-IF4I is a Four (4), individually isolated Channel analog input module. This module is designed in compatibility with MicroLogix 1500 and 1769 CompactLogix Controller. This modules receives signals from instruments that sends 0-20 mA and 4-20 mA current and +/-10 VDC voltage signals. It only supports differential signal wiring configuration. Due to isolation, the module is capable of mixed signal as inputs. Individually isolated channels allow wiring of signals with different power sources and potentials. Analog input signals from instruments represent the magnitude of a process variable. The received signal by the channel is also converted to a Sixteen (16) bit integer and called as raw data. Compatible current signals for this module are 0-20 mA and 4-20mA with full signal ranges of 0-21 mA and 3.2 - 21 mA while compatible voltage signals are +10VDC, 1-5VDC, 0-5VDC, 0-10VDC with full signal ranges of +/- 10.5 VDC, 0.5 - 5.25 VDC, -0.5 - +5.25VDC, -0.5 - +10.5VDC respectively. Regardless of the input type, the received analog input is converted to binary signal by the integral Analog to Digital (ADC) circuit. The data processed by the module can be configured as engineering units, scaled for PID, percent range and raw data and stored at the Central Processing Unit's (CPU) registers.