

Allen-Bradley 1746 1747 Series Service Manual

1734-IE2C

1. Description

The 1734-IE2C is an analog input module that is part of Allen-Bradley’s POINT IO product family. This module features Two (2) single-ended, non-isolated Current input channels. Each channel is configurable for 0-20 mA and 4-20 mA output signals with 16 bits resolution - over 0...21 mA 0.32 µA/cnt. It is compatible with any POINT IO communication adapter, typically used for implementing Technical specifications for 1734-IE2C

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Resolution	16 bits - over 0...21 mA 0.32 µA/cnt
Module	Type Analog Input Module
Series	POINT I/O
Part	Number/Catalog No. 1734-IE2C
Brand	Allen-Bradley
No.	of outputs Two (2) Single-ended, non-isolated channels
Output	signal 0-20 mA; 4-20 mA
Absolute	Accuracy 0.1% Full Scale @ 25 Deg. Celsius
Input	step response (per channel) 80 ms @ Notch = 50 Hz 70 ms @ Notch = 60 Hz (default) 16 ms @ Notch = 250 Hz 8 ms @ Notch = 500 Hz
Input	update rate per module 120 ms @ Notch = 50 Hz 100 ms @ Notch = 60 Hz (default) 24 ms @ Notch = 250 Hz 12 ms @ Notch = 500 Hz
Current	Draw 75 mA @5V dc
Power	Dissipation 0.6 W @ 28.8V DC
Dimensions	56 x 12 x 75.5 mm (2.2 x 0.47 x 2.97 in.)
Enclosure	type rating None (open-style)
Keyswitch	position 3
Module	Location 1734-TB, 1734-TBS, 1734-TOP, or 1734-TOPS wiring base assembly
Inputs	2-Point
Conversion	Type Delta Sigma
Calibration	Factory calibrated
Max	Overload Fault Protected 28.8 Volts DC
Enclosure	Type Open
Data	Format Signed

3. Product Information

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Module Location 1734-TB, 1734-TBS, 1734-TOP, or 1734-TOPS wiring base assembly

Inputs 2-Point

Conversion Type Delta Sigma

Calibration Factory Calibrated

Max Overload Fault Protected 28.8 Volts DC

Enclosure Type Open

Data Format Signed Integer

Voltage 10 to 28.8 Volts DC

Current 10 mA

UPC 10612598205230 Description

The 1734-IE2C module is a member of the Allen-Bradley 1734 series of distributed I/O modules. This module operates at an input current of 4 to 20 mA or one of 0 to 20 mA. For wiring input signals, recommended wire size is 22 to 14 AWG solid or stranded shielded copper wire rated at 167 degrees Fahrenheit or higher.

This module weighs approximately 0.036 kilograms or 0.08 pounds. In addition, it has an open-style enclosure type rating and it has dimensions of 56 x 12 x 75.5 millimeters or 2.21 x 0.47 x 2.97 inches. The 1734-IE2C's compact design makes installation easy and it can be mounted horizontally or vertically.

The 1734-IE2C POINT I/O current input analog module has 2 single-ended, non-isolated channels. It gives 16 bits across a 0 to 21 mA resolution. When mounting to a terminal base, position the key switch at 3. The 1734-IE2C is a 2-channel module that converts an analog input current to a digital value and reads a current input between 0 to 20 mA or 4 to 20 mA depending on the mode that is selected. The supported networks include ControlNet, DeviceNet, and EtherNet/IP. Moreover, the 1734-IE2C uses an external DC power supply rated at 10 to 28.8 Volts DC and 24 Volts DC nominal, and it uses a current with a 10 mA rating. The 1734-IE2C is rated to withstand 2550 Volts DC for 60 seconds and it has 50 Volts of continuous isolation voltage. It gives off a maximum power dissipation of 0.6 W at 28.8 Volts DC and a maximum thermal dissipation of 2.0 BTU/hour at 28.8 Volts DC.

The 1734-IE2C is basically an analog input card that requires a terminal base to function. Compatible terminal bases for use with this analog input module include 1734-TB, 1734-TBS, 1734-TOP, or 1734-TOPS. This module support vertical and horizontal mounting and support mounting to a standard 35 mm DIN rail. When mounting the module to the appropriate terminal base, the module's keyswitch must be positioned at position 3.

The 1732-IE2C has an internal Analog to Digital (ADC) converter which has a conversion resolution of 16 bits - over 0...21 mA 0.32 μ A/cnt using Delta-Sigma conversion. Converted data is stored in Signed Integer format with absolute accuracy of 0.1% Full Scale @ 25 °C (77 °F) with accuracy drift of 30 ppm/°C.

The 1734-IE2C is compatible for use with any Allen-Bradley controller platform. Most especially, it is well suited with the Logix product family specifically, CompactLogix and ControlLogix controller platforms. This module supports a variety of communication adapters which enable the module to communicate to the master controller over a particular industrial protocol.

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