

Allen-Bradley 1746 1747 Series Service Manual

1762-IR4

1. Description

The 1762-IR4 is an Allen-Bradley MicroLogix module with Four (4) channel RTD and Resistance input module. This input module is compatible for 100? Platinum 385, 200? Platinum 385, 500? Platinum 385 ,1000? Platinum 385, 100? Platinum 3916, 200? Platinum 3916, 500? Platinum 3916, 1000? Platinum 3916, 10? Copper 426, 120? Nickel 672, 120? Nickel 618 and 604? Nickel-Iron 518 RTD. It is also Technical specifications for 1762-IR4

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Brand	Allen-Bradley
Function	Resistance Module
Part	Number/Catalog No. 1762-IR4
Converter	Type Sigma-Delta
Product	Family MicroLogix
Inputs	4
Heat	Dissipation 1.5 Watts
Product	Type RTD / Resistance Input Module
No.	of Inputs Four (4)
UPC	10611320861676
Compatible	RTD Sensors RTD Type 100? Platinum 385, 200? Platinum 385, 500? Platinum 385 , 1000? Platinum 385, 100? Platinum 3916, 200? Platinum 3916, 500? Platinum 3916, 1000? Platinum 3916, 10? Copper 426, 120? Nickel 672, 120? Nickel 618 and 604? Nickel-Iron 518 RTD, 2-Wire, 3-Wire, 4-Wire RTD
Compatible	Resistance signals 0 to 150?, 0 to 500?, 0 to 1000? and 0 to 3000?
Compatible	Controllers MicroLogix 1100 / 1200 / 1400
Data	Formats raw/proportional, engineering units x 1, engineering units x 10, scaled- for-PID and percent full scale
Input	Filters 10 Hz, 50 Hz, 60 Hz, 250 Hz, 500 Hz and 1 kHz
Resolution	Input filter and configuration dependent.
Conversion	Method Delta-Sigma
The	Description

3. Product Information

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Brand Allen-Bradley

Function Resistance Module

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Converter Type Sigma-Delta

Product Family MicroLogix

Inputs 4

Heat Dissipation 1.5 Watts

Product Type RTD / Resistance Input Module

No. of Inputs Four (4)

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Compatible RTD Sensors RTD Type 100? Platinum 385, 200? Platinum 385, 500? Platinum 385 , 1000? Platinum 385, 100? Platinum 3916, 200? Platinum 3916, 500? Platinum 3916, 1000? Platinum 3916, 10? Copper 426, 120? Nickel 672, 120? Nickel 618 and 604? Nickel-Iron 518 RTD, 2-Wire, 3-Wire, 4-Wire RTD

Compatible Resistance signals 0 to 150?, 0 to 500?, 0 to 1000? and 0 to 3000?

Compatible Controllers MicroLogix 1100 / 1200 / 1400

Data Formats raw/proportional, engineering units x 1, engineering units x 10, scaled- for-PID and percent full scale

Input Filters 10 Hz, 50 Hz, 60 Hz, 250 Hz, 500 Hz and 1 kHz

Resolution Input filter and configuration dependent.

Conversion Method Delta-Sigma Description

The Allen-Bradley 1762-IR4 is an Allen-Bradley analog input module that is specifically made to interface Resistance Temperature Detectors (RTD) and Resistance generating devices. This module is suitable for use in Temperature applications as RTD are instruments that measure temperature by generating a specific resistance output as a certain temperature. Additionally, this module may also be used to monitor displacement or measure displacement of devices. Devices such as cylinders, clamping devices and many others.

This module is compatible for a variety of RTD types. Specifically, compatible RTD sensors include 100? Platinum 385, 200? Platinum 385, 500? Platinum 385 ,1000? Platinum 385, 100? Platinum 3916, 200? Platinum 3916, 500? Platinum 3916, 1000? Platinum 3916, 10? Copper 426, 120? Nickel 672, 120? Nickel 618 and 604? Nickel-Iron 518 RTD. These RTDs may be 2-Wire, 3-Wire or 4-Wire RTDs. If used with resistance generating devices, this module accepts resistance ranges of 0 to 150?, 0 to 500?, 0 to 1000? and 0 to 3000?.

The received analog value from the individual channels is converted and saved to a register which may be formatted as raw/proportional, engineering units x 1, engineering units x 10, scaled-for-PID and percent full scale. Input filters may be used to filter noises or contamination of the input signal.

This module is compatible expansion module of MicroLogix 1100, 1200 and 1400. The number of instance of this module depends on the MicroLogix controller used.

The 1762-IR4 is an Allen-Bradley MicroLogix expansion module. This module has Four (4) channel RTD/resistance input module. It enhances the functionality of MicroLogix 1100 / 1200 / 1400 controllers.

The 1762-IR4 has a dimension of 90 x 87 x 40 mm. The analog input data is converted via Delta-Sigma conversion. The module's heat dissipation is 1.5 Watts and requires minimum mounting space. The module' installation could be either DIN rail or panel mounted. It is compatible with various RTDs (Resistance Temperature Detectors) and Resistance devices.

The 1762-IR4 module has a single diagnostic LED that indicates both status and power and helps identify the source of all problems. The module communicates and receives 5V and 24V DC power via the 1762 bus interface. It auto-calibrates on the channel enable but the user can also program it to calibrate every 5 minutes. For wiring the input terminal blocks, a finger-safe cover is present. The 1762-IR4 module can be connected to three types of RTDs i.e., 2-wire, 3-wire, and 4-wire and 2 types of resistance devices i.e. 2-wire and 3-wire. It uses 6 input words and 5 configuration words. The operation details must be configured for each channel after module installation. The module update time is fastest when only 1 input channel is connected to 1 kHz filter and slowest when all 6 input channels are connected to 10 Hz filter. With an increase in autocalibration and lead wire compensation cycles, the module update time also increases. For safety, while troubleshooting, always stands away from the equipment and always check for any program change. The safety circuits should always be wired in series to the master relay. It should be installed in non-hazardous, dry, and clean environments away from any electrical noise and heat. The 1762-IR4 module performs both module and channel diagnostics.