

# Allen-Bradley 1746 1747 Series Service Manual

## 1762-IQ8

### 1. Description

The Allen-Bradley 1762-IQ8 is a MicroLogix 1200 Discrete input module. This module features Eight input channels in a single group. It accepts a nominal input voltage of 10 to 30V dc at 30°C (86°F) and 10 to 26.4V dc at 55°C (131°F) while the nominal input voltage is 24VDC. It supports sink and source wiring configuration. Technical specifications for 1762-IQ8

### 2. Specifications

| Specification | Value                                                                                                                                                           |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manufacturer  | Rockwell Automation                                                                                                                                             |
| Module        | Type Discrete input module                                                                                                                                      |
| Series        | MicroLogix                                                                                                                                                      |
| Part          | Number/Catalog No. 1762-IQ8                                                                                                                                     |
| Brand         | Allen-Bradley                                                                                                                                                   |
| No.           | of Inputs Eight (8) channels                                                                                                                                    |
| No.           | of groups One (1) isolated groups                                                                                                                               |
| Channels      | per group: Eight (8)                                                                                                                                            |
| Nominal       | input voltage 24VDC                                                                                                                                             |
| Input         | voltage range 10-30 VDC                                                                                                                                         |
| ON-state      | Current, min. 2.0 mA min. at 10VDC; 8.0 mA nominal at 24VDC; 12.0 mA max. at 30VDC                                                                              |
| Off-state     | Current, max. 1.5 mA                                                                                                                                            |
| Signal        | Delay, ON transition 8 ms                                                                                                                                       |
| Backplane     | Current, 5.1VDC 50 mA                                                                                                                                           |
| Backplane     | Current, 24VDC 0 mA                                                                                                                                             |
| Isolation     | rating Verified by one of the following dielectric tests: 1200V ac for 1 sec. or 1697V dc for 1 sec. 75V dc working voltage (IEC Class 2 reinforced insulation) |
| Input         | Power 24 Volts DC                                                                                                                                               |
| Inputs        | (8) Sink and Source                                                                                                                                             |
| Operating     | Voltage Range 10 to 30 Volts DC                                                                                                                                 |
| Heat          | Dissipation 3.7 Watts                                                                                                                                           |
| UPC           | 10612598207203 Description                                                                                                                                      |
| The           | Allen-Bradley 1762-IQ8 is a MicroLogix 1200 discrete input module. This module is a single-slot width module that serves as an expansion to a MicroLogix contro |

### 3. Product Information

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Manufacturer Rockwell Automation

Module Type Discrete input module

Series MicroLogix

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No. of groups One (1) isolated groups

Channels per group: Eight (8)

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Signal Delay, ON transition 8 ms

Backplane Current, 5.1VDC 50 mA

Backplane Current, 24VDC 0 mA

Isolation rating Verified by one of the following dielectric tests: 1200V ac for 1 sec. or 1697V dc for 1 sec. 75V dc working voltage (IEC Class 2 reinforced insulation)

Input Power 24 Volts DC

Inputs (8) Sink and Source

Operating Voltage Range 10 to 30 Volts DC

Heat Dissipation 3.7 Watts

UPC 10612598207203 Description

The Allen-Bradley 1762-IQ8 is a MicroLogix 1200 discrete input module. This module is a single-slot width module that serves as an expansion to a MicroLogix controller. This controller features Eight (8) input channels operating at input voltage ranges of 10 to 30V dc at 30°C (86°F) and 10 to 26.4V dc at 55°C (131°F).

The 1762-IQ8 has a backplane current draw of 50 mA at 5VDC with power consumption of 0.25 Watts. Additionally, it has a heat dissipation rating of 3.7 total Watts. The module's input channels comes with inherent signal delay of 8 ms for both signal transitions, specifically, OFF to ON and ON to OFF.

The 1762-IQ8 comes with single group of input channels. Inputs 0 to 7 are provided with internally connected commons and comes with input group to backplane isolation of 1200V ac for 1 sec. or 1697V dc for 1 sec. 75V dc working voltage (IEC Class 2 reinforced insulation).

The number of module instance depends on the hardware support of the host MicroLogix controller. Compatible MicroLogix controller for this I/O modules include MicroLogix 1100, 1200, 1400 and 1500.

The 1762-IQ8 supports DIN rail or direct panel mounting. When mounting this module, the installation clearance must be followed specifically, 50.8 cm or 2-inches on all sides. This ensures that appropriate working space is maintained and natural flow of cooling air and ventilation is maintained.

A sink/source module describes the current flow between the input module and the connected device. Devices connected to the negative side of power supply are called sinking field device and those connected to the positive side are called sourcing field devices. Sources always provide current to the sink. The 1762-IQ8 module has a single status LED that indicates power and helps to identify the operational state of the module. The module communicates and receives 10, 24, and 30 Volts DC power via the 1762 bus interface. For wiring, the input terminal blocks come with a finger-safe cover. It uses bit positions 0 to 7 for input terminals. The operation details must be configured for each channel after the module installation. For safety, while troubleshooting, always stand away from the equipment and always check for any program changes. Safety circuits should always be wired in series to the master relay. The 1762-IQ8 module should be installed in non-hazardous, dry, and clean environments with circuits not crossing over Voltage Category II Standards. To avoid damage to the module, always prevent electrostatic discharge and remove power before servicing. The Allen-Bradley 1762-IQ8 is a MicroLogix 1200 Expansion I/O Module. This 1762-IQ8 Expansion I/O Module is intended for dry and clean environments and should use circuits that do not exceed Over Voltage Category II. The 1762-IQ8 module is compatible with MicroLogix 1100 and MicroLogix 1400 controllers in addition to the MicroLogix 1200 controller.