

Allen-Bradley 1746 1747 Series Service Manual

1763-L16BBB

1. Description

The Allen-Bradley 1763-L16BBB is a MicroLogix 1100 Controller. This controller is powered by an external supply voltage of 24VDC with built-in Twelve (12) 24VDC discrete inputs, Two (2) 0-10 VDC analog inputs, Two (2) Relay Outputs, and Four (4) FET Outputs. This controller has a built-in RS232 and Ethernet communication interfaces. Technical specifications for 1763-L16BBB

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Communication	Port 1 RS-232 / 485; 1 Ethernet
Dimensions	3.5 x 4.33 x 3.43 inches
Digital	Outputs Two (2) Relay; Four (4) FET
Digital	Inputs (10) 24VDC
Display	Type LCD
Analog	Inputs (2) Voltage Input
Point	Count 16 Points
Series	MicroLogix 1100
Part	Number/Catalog No. 1763-L16BBB
Input	Power 24V DC (-15%, +10%) Class 2 SELV
Product	Type Programmable Controller
Brand	Allen-Bradley
Memory:	1763-MM1
Analog	Voltage Range 0-10VDC
Analog	Data Type 10-bit unsigned integer
Analog	Resolution 10 Bit
Relay	Output operating Voltage: 125V DC / 120/240 VAC
FET	Output Voltage range: 24VDC
Protocol:	DF1 / MODBUS / Ethernet I/P
Power	Consumption 35 Watts
UPC	10662974925049 Description
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UPC 10662074023049 Description

The Allen-Bradley 1763-L16BBB is a Programmable Logic Controller (PLC) that is part of the MicroLogix 1100 product category. This controller is ideally used in micro or small automation requirements, compatible of being installed in a wide variety of applications such as machine and process automation.

The 1763-L16BBB has an internal power circuitry that requires an external supply voltage of 24VDC. It has a variety of input and output devices such as Ten (10) 24VDC discrete inputs, Two (2) 10VDC analog inputs, Two (2) relay outputs and Four (4) 24VDC FET outputs. The embedded input channels may be operated at 14 - 26.4VDC (+10%) at 65 °C/149 °F or 14 - 30VDC (+25%) at 30 °C/86 °F voltage range. Included in the ten (10) input channels are four (4) high-speed input channels, located at channels 0-3. It accepts input switching frequency of 0 Hz-20 kHz or 0 Hz-40 kHz. Inputs 4 to 10 are standard DC inputs with switching frequency of 0Hz-1kHz.

The analog input channels are compatible for 0-10VDC input signals with resolution of 10-bit. It has an analog to digital converter that saves the converted data to 10-bit signed integer with input coding of 0 - 1023 units. Each of the channel has an overall accuracy of +/- 0.5% of and non-linearity of +/- 0.5% both in full-scale.

The 1763-L16BBB has a Field Effect Transistor (FET) output circuit type. Each channel is rated 24VDC while the relay output operate at 125 VDC with continuous current of 1.0A, 120/240VAC with continuous current of 2.5A.

The 1763-L16BBB has built-in RS232 and One (1) Ethernet communication interface. The RS232 ports is used for peer-to-peer communication while the Ethernet communication interface supports 10/100 Mbps communication rate, supporting networked and multi-node communication.

The 1763-L16BBB's operating temperature range is around -4 to 149 degrees Fahrenheit, and it has an operational vibration of 1.5 G at a 30G 3-directional relay shock rate.

The 1763-L16BBB has a 24 Volts DC digital input and a two-relay 24 Volts DC FET outputs. The analog output impedance of the 1763-L16BBB is 210 kOhms at a 10-bit resolution. The 1763-L16BBB is a device that has been certified for use in Class 1, Division 2, Hazardous Locations, (Groups A, B, C, D). For hazardous applications locations, the 1763-L16BBB has a relay load of 360 Volts and a current of 3 Amps. For a non-hazardous location, it has a maximum control load of 720VA and a current of 5 Amps. The 1763-L16BBB uses an RS-232 and an RS-485 combo port for communication and an LCD that allows users to monitor data within the controller.