

Allen-Bradley 1746 1747 Series Service Manual

1746-IB32

1. Description

The Allen-Bradley 1746-IB32 is an SLC 500 input module. This is a 24VDC sinking input module that features Thirty-Two (32) sink input channels, accepting signal voltage range of 15-30VDC at 50 Deg. Celsius and 15-26.4VDC at 60 Deg. Celsius. It has backplane current consumption of 0.05 A with signal delay of 3 ms for both transitions. Technical specifications for 1746-IB32

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Module	Type Digital DC Input Module
Series	SLC 500
Part	Number/Catalog No. 1746-IB32
Brand	Allen-Bradley
No.	of Inputs Thirty-Two (32) Inputs
Input	Voltage 24VDC
Operating	Voltage Range 15 to 30V dc at 50° C; 15 to 26.4V dc at 60° C.
Input	Delay Time, OFF to ON 3 ms
Power	Dissipation, per channel 0.20 Watts
Power	Dissipation, per module 6.65 Watts
Backplane	Current at 24 Volts 0 mA
Backplane	Current at 5 Volts 0.05 A
Voltage	Range 15-30 Volts DC Sink
Inputs	32
Backplane	Current (5 Volts DC) 103 milliamps
Signal	delay 3 milliseconds
Off	State Current 1 milliamps
Applications	General Purpose DC Inputs
I/O	Connection 1746-HT and 1746-HCA
Step	Response 100 milliseconds in, 2.5 milliseconds out
Shock	rating 300
UPC	10662468092712 Description
The	Allen-Bradley 1746-IB32 is an SLC 500 discrete input module. This module operates at a nominal voltage of 24VDC and at a voltage range of 15-30V DC @ 50 °C (122 °F) or 15-26.4V DC @ 60 °C (140 °F). This module is ty

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Backplane Current at 24 Volts 0 mA

Backplane Current at 5 Volts 0.05 A

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Inputs 32

Backplane Current (5 Volts DC) 103 milliamps

Signal delay 3 milliseconds

Off State Current 1 milliamps

Applications General Purpose DC Inputs

I/O Connection 1746-HT and 1746-HCA

Step Response 100 milliseconds in, 2.5 milliseconds out

Shock rating 30G

UPC 10662468092712 Description

The Allen-Bradley 1746-IB32 is an SLC 500 discrete input module. This module operates at a nominal voltage of 24VDC and at a voltage range of 15-30V DC @ 50 °C (122 °F) or 15-26.4V DC @ 60 °C (140 °F). This module is typically used to interface electrical devices such as Switches, Sensors, Auxiliary contacts and other binary or ON/OFF devices. Up to Thirty-Two (32) input signals may be wired to this module via the embedded 32 input module channels.

It is compatible for use with any SLC 500 processor, locally with the SLC 500 Module rack hardware. It supports being installed locally, along the controller or to an expansion I/O rack or to a Remote I/O chassis along an SLC 500 communication adapter. It directly installs to any available slot of the 1746 chassis except slot 1 which is reserved for the SLC 500 controller.

The 1746-IB32 has a backplane current draw of 50 mA at 5VDC with maximum Off-State Input voltage of 5VDC, Nominal Input Current of 5.1 mA @ 24V DC, maximum Off state input current of 1.5 mA with typical signal delay of 8 ms for both ON to OFF and OFF to ON signal transition.

When installing the module, ensure that the power is removed from the chassis as this module does not support Removal and Insertion Under Power (RIUP). It comes with a removable terminal block that permits wiring remote to the module as well as simplified maintenance as the RTB permits insertion to another module of the same type.

The 1746-IB32 offers isolation from the backplane tested at 1500 Volts AC for 60 seconds between the backplane and the I/O and it has a 1500 Volt AC dielectric withstand. The minimum voltage across its circuit in the ON state is 15.0 Volts DC and in its OFF state, it has a maximum voltage drop of 5.0 Volts DC and a maximum leakage current of 1.5 mA. The 1746-IB32 module has a maximum signal delay time of 3ms across its inputs in the ON and the OFF mode and it has an overall nominal input current of 5.1 mA at 24 Volts DC nominal voltage. The 1746-IB32 has an operating temperature bracket between 0 and 60 degrees Celsius (32 and 140 degrees Celsius) at 5 to 95% non-condensing humidity and it has an operational vibrational withstand of 1G at 5 to 200 Hertz and a shock rating of 30G.

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