

Allen-Bradley 1756 Series Service Manual

1756-IA16

1. Description

Mfr. Part Number:

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Input	Voltage 120VAC
Series	ControlLogix
Part	Number/Catalog No. 1756-IA16
Brand	Allen-Bradley
No.	of Inputs Sixteen (16)
Input	Voltage range 74-132VAC
ON-state	Current, min. 5 mA @ 79V AC, 47...63 Hz
ON-state	Current, max. 13 mA @ 132V AC, 47...63 Hz
Cyclic	update time 200 µs...750 ms
Signal	Delay, ON transition Hardware delay: 8 ms max + filter time User-selectable filter time: 9 ms or 18 ms
Signal	Delay, OFF Transition Hardware delay: 10 ms max + filter time User-selectable filter time: 1 ms or 2 ms
Backplane	Current, 5.1VDC 100 mA
Backplane	Current, 24VDC 2 mA
Total	Backplane power 0.58 W
Removable	Terminal Block (RTB) 1756-TBNH 1756-TBSH
Module	Type Digital AC Input Module
Inputs	16
Operating	Voltage Range 74 to 132 Volts AC
Input	Delay Time Programmable 9 or 18 milliseconds
Minimum	Operating Current 5 milliamperes at 74 Volts AC
Maximum	Operating Current 13 milliamperes at 132 Volts AC
Maximum	Input Current, Off-State 2.5 milliamperes
Power	Dissipation

www.oilautotech.com

3. Product Information

Mfr. Part Number:

1756-IA16

Manufacturer: Allen-Bradley / Rockwell Automation

Description: Allen-Bradley 1756-IA16 ControlLogix 79-132V AC Input Module, 16 Points (20 Pin)

Full Description: Allen-Bradley 1756-IA16 ControlLogix 79-132V AC Input Module, 16 Points (20 Pin). Number of Inputs: 16; Voltage, On-State Input, Nom: 120V AC; Operating Voltage: 74-132V AC. Allen-Bradley 1756-IA16 uses 1756-TBNH or 1756-TBSH Removable Terminal Block Housing. The Allen-Bradley 1756-IA16 is a ControlLogix module that features Sixteen (16) Discrete input channels. It has Two (2) groups of Eight (8) input channels each group and operates at nominal signal voltage of 120VAC with operating voltage range of 74-132 VAC with frequency of 47-63 Hz. It is compatible for use with any ControlLogix chassis. Technical specifications for 1756-IA16

Manufacturer Rockwell Automation

Input Voltage 120VAC

Series ControlLogix

Part Number/Catalog No. 1756-IA16

Brand Allen-Bradley

No. of Inputs Sixteen (16)

Input Voltage range 74-132VAC

ON-state Current, min. 5 mA @ 79V AC, 47...63 Hz

ON-state Current, max. 13 mA @ 132V AC, 47...63 Hz

Cyclic update time 200 μ s...750 ms

Signal Delay, ON transition Hardware delay: 8 ms max + filter time User-selectable filter time: 9 ms or 18 ms

Signal Delay, OFF Transition Hardware delay: 10 ms max + filter time User-selectable filter time: 1 ms or 2 ms

Backplane Current, 5.1VDC 100 mA

Backplane Current, 24VDC 2 mA

Total Backplane power 0.58 W

Removable Terminal Block (RTB) 1756-TBNH 1756-TBSH

Module Type Digital AC Input Module

Inputs 16

Operating Voltage Range 74 to 132 Volts AC

Input Delay Time Programmable 9 or 18 milliseconds

Minimum Operating Current 5 milliamperes at 74 Volts AC

Maximum Operating Current 13 milliamperes at 132 Volts AC

Maximum Input Current, Off-State 2.5 milliamperes

Power Dissipation (Max) 5.8 Watts at 60 degrees Celsius

Backplane Current at 5 Volts 105 milliamperes

Backplane Current at 24 Volts 2 milliamperes

UPC 10612598171276 Description

The Allen-Bradley 1756-IA16 is a Sixteen (16) channel AC input module from the ControlLogix Programmable Automation Controller (PAC) platform. This module is used to interface discrete signaling devices such as switches, auxiliary contacts and similarly operating devices that are rated for 120VAC, nominal and voltage range of 74-132VAC with frequency of 47-63 Hz.

The 1756-IA32 has Two (2) input groups with each input group having Eight (8) channels each. It is provided with individual channel status LED that activates to provide feedback regarding the state of each of the channel. Each of the input channel has a hardware delay time of 10 ms max + filter time for OFF to ON signal transition and 8 ms max + filter time for ON to OFF signal transitions. User selectable filter time for OFF to ON transition are 1 ms or 2 ms and 9 ms or 18 ms for ON to OFF transition. This module has a cyclic update time 200 μ s-750 ms.

This module draws Current from the backplane amounting to 100 mA @ 5.1 VDC and 2 mA @ 24VDC. It consumes a total backplane power of 0.58 Watts and maximum power dissipation of 5.8 W @ 60 °C (140 °F) with Thermal dissipation of 18.41 BTU/hr.

The 1756-IA32 has a maximum OFF-state voltage of 20VAC and maximum OFF-state current of 2.5 mA. Similarly, the minimum ON-state current rating of 5 mA @ 74V AC and maximum ON-state current of 13 mA @ 132V AC. It is able to withstand a maximum inrush current of 250 mA peak.

It has Sixteen (16) input channels, grouped into Two (2) groups of Eight (8) points per group. The 1756-IA16 module's operating voltage range is from 74 to 132 Volts AC at a frequency of 47 to 63 Hertz, while both the voltage category and input frequency are 120 Volts AC and 50/60 Hertz, respectively. This module has an input delay time of 10 milliseconds for OFF to ON transition the configured filter time (user-selectable at 1 or 2 milliseconds). For ON to OFF transition, hardware delay is 8 milliseconds maximum plus filter time (user-selectable at 9 or 18 milliseconds). At 5.1 Volts DC, the current draw is 100 milliamps and there are 2 milliamps of current draw at 24 Volts DC. The total backplane power is 0.58 Watts and it dissipates 5.8 Watts of power at 60 degrees Celsius for and 18.41 BTU/hour of thermal energy. The maximum off-state voltage is 20 Volts and the current is 2.5 milliamps. The on-state current of the 1756-IA16, on the other hand, ranges from a minimum of 5 milliamps at 74 Volts AC to a maximum of 13 milliamps at 132 Volts AC. The maximum recorded inrush current is 250 milliamps peak, decaying to less than 37% in 22 milliseconds without activation.