

Allen-Bradley 1756 Series Service Manual

1756-OA16I

1. Description

Mfr. Part Number:

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Operating	Voltage Range 74-265 VAC
Module	Type Digital AC Output Module
Series	1756 ControlLogix
Part	Number/Catalog No. 1756-OA16I
Brand	Allen-Bradley
No.	of Outputs Sixteen (16) isolated outputs
Output	Voltage 120/240 VAC output
Output	Delay Time, OFF to ON 9.3 ms @ 60 Hz; 11 ms @ 50 Hz
OFF	state leakage current 3 mA per point
Backplane	Current at 5.1 Volts 225 mA
Continuous	current per point 2 A @ 30 °C (86 °F) linear derating; 1 A @ 60 °C (140 °F) linear derating
Continuous	current per module, max 5 A @ 30 °C (86 °F) linear derating; 4 A @ 60 °C (140 °F) linear derating
Outputs	16 Points Individually Isolated
Voltage	120-240 Volts AC
Maximum	Output Current Rating-Point 2 Amps at 30 degrees Celsius, 1 Amp at 60 degrees Celsius
Maximum	Output Current Rating-Module 5 Amps at 30 degrees Celsius, 4 Amps at 60 degrees Celsius
Power	Dissipation (Max) 5.5 Watts at 60 degrees Celsius
Backplane	Current at 5 Volts 300 milliamps
Backplane	Current at 24 Volts 3

3. Product Information

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Mfr. Part Number:

1756-OA16I

Manufacturer: Allen-Bradley / Rockwell Automation

Description: Allen-Bradley 1756-OA16I ControlLogix Isolated Output Module 74-265V AC 16-Ch

Full Description: Allen-Bradley 1756-OA16I ControlLogix Isolated Output Module, 74-265V AC, 16 Individually Isolated Outputs 36-Pin The Allen-Bradley 1756-OA16I is a 1756 ControlLogix Discrete AC output module. This module features Sixteen (16) individually isolated AC output channels in each channel. It delivers 120 VAC / 240 VAC nominal voltage output within voltage range of 74-265 VAC, 47-63 Hz. It has continuous output current per point of 2 A @ 30 °C (86 °F) linear derating and 1 A @ 60 °C (140 °F) linear derating.

Technical specifications for 1756-OA16I

Manufacturer Rockwell Automation

Operating Voltage Range 74-265 VAC

Module Type Digital AC Output Module

Series 1756 ControlLogix

Part Number/Catalog No. 1756-OA16I

Brand Allen-Bradley

No. of Outputs Sixteen (16) isolated outputs

Output Voltage 120/240 VAC output

Output Delay Time, OFF to ON 9.3 ms @ 60 Hz; 11 ms @ 50 Hz

OFF state leakage current 3 mA per point

Backplane Current at 5.1 Volts 225 mA

Continuous current per point 2 A @ 30 °C (86 °F) linear derating; 1 A @ 60 °C (140 °F) linear derating

Continuous current per module, max 5 A @ 30 °C (86 °F) linear derating; 4 A @ 60 °C (140 °F) linear derating

Outputs 16 Points Individually Isolated

Voltage 120-240 Volts AC

Maximum Output Current Rating-Point 2 Amps at 30 degrees Celsius, 1 Amp at 60 degrees Celsius

Maximum Output Current Rating-Module 5 Amps at 30 degrees Celsius, 4 Amps at 60 degrees Celsius

Power Dissipation (Max) 5.5 Watts at 60 degrees Celsius

Backplane Current at 5 Volts 300 milliamps

Backplane Current at 24 Volts 3 milliamps

Removeable Terminal Block(s) 1756-TBCH, 1756-TBS6H

Isolation Voltage 50 Volts Continuous

Enclosure None

UPC 10612598164513 Description

The Allen-Bradley 1756-OA16I is a Sixteen (16) channel discrete output module from the ControlLogix product family. This module delivers an output voltage range of 75-265VAC with frequency of 47-63 Hz while the nominal voltage output is 120 / 240VAC and frequency of 50/60 Hz.

The Allen-Bradley 1756-OA16I requires use of Removable Terminal Block (RTB) to provide wiring connections to the electrical loads connected to each of the module's output channels. Compatible terminal blocks are 1756-TBCH and 1756-TBS6H. Each channel of this module has an output delay time of 9.3 ms @ 60 Hz and 11 ms @ 50 Hz, both for Off to On transition and 9.3 ms @ 60 Hz and 11 ms @ 50 Hz for On to Off transition. This module has a current draw of 300 mA at 5.1 VDC and 2.5 mA at 24VDC while the total backplane power requirement 1.59 Watts.

The 1756-OA16I is a single slot module that is mounted to any 1756 chassis. Compatible chassis are 1756-A4, 1756-A7, 1756-A10, 1756-A13 and 1756-A17. This module may also be installed in the local rack, along the ControlLogix controllers or to a remote I/O rack with a 1756 Communication adapter.

The 1756-OA16I supports configuration of fault mode per point. Configurable states are Hold last state, On or Off where Off is default. It also permits configuration of output state during program mode with configurable settings are Hold last state, On or Off where Off is default. This module is not provided with internal fusing however, isolation voltage is present to this module with rating of 250V (continuous), basic insulation type, outputs-to-backplane, and output-to-output.

Its operational voltage ranges between 74 and 265V AC at 47-63 Hz, and exhibits an output signal delay time of 9.3 ms at 60Hz and one of 11ms at 50Hz for both ON to OFF and OFF to ON. The 1756-OA16I has a backplane current draw of 300mA at 5.1V and 2.5A at 24V and an aggregate backplane power of 1.59W. It has a thermal dissipation of 18.76 BTU/hr and dissipates 5.5W at 60 °C (140 °F). The 1756-OA16I has a leakage current of 3mA per point and in the ON state, it has a peak drop voltage of 1.5V at 2A and 6V at a load current of <50mA. The maximum current on each output point is 2A at 30 °C and 1A at 60 °C and the aggregate current on the output module is 5A at 30 °C and 4A at 60 °C. The 1756-OA16I has an inrush current of 20A for 43ms per output point, repeatable every 2 s at 60 °C, and the lowest current load sustain on each point is 10mA. It has an output signal schedule time of 16.7s, and has an isolation voltage of 250V, using basic insulation tested at 1350V AC for 2s between outputs-to-backplane and output-to-output. It has a single width slot and its RTB keying is user-defined. The 1756-OA16I has an open-style enclosure and is designated the T4A temperature code. Its operational temperature ranges between 0 and 60 °C at 5-95% non-condensing humidity and it has a maximum operational shock of 30G.

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