

Allen-Bradley 1756 Series Service Manual

1756-OB16E

1. Description

Mfr. Part Number:

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Power	Dissipation (Max) 4.1 W @ 60 °C (140 °F)
Module	Type Digital DC output Module
Series	ControlLogix
Part	Number/Catalog No. 1756-OB16E
Brand	Allen-Bradley
No.	of outputs Sixteen (16)
Output	Voltage range 10-31.2 VDC
Nominal	output voltage 24VDC
Module	Keying Electronic
RTB	Keying User-defined mechanical
Slot	Width 1
Output	Delay Time, OFF to ON 70 µs nom/1 ms max
Output	Delay Time, ON to OFF 360 µs nom/1 ms max
Backplane	Current at 24 Volts 2 milliamperes
Backplane	Current at 5.1 Volts 250 milliamperes
Thermal	Dissipation 13.98 BTU/hr @ 60 °C (140 °F)
Removable	Terminal Block(s) 1756-TBNH; 1756-TBSH
Outputs	16-Point Electronically Fused
Voltage	12-24 Volts DC
Operating	Voltage Range 10-30 Volts DC
Maximum	Output Current Rating-Point 1 Amp at 60 Celsius
Maximum	Output Current Rating-Module 8 Amps at 60 degrees Celsius
Backplane	Current at 5 Volts 250 milliamps
Removeable	Terminal Block(s) 1756-TBNH, 1756-TBSH
Isolation	Voltage 50 Volts Continuous
Enc	

3. Product Information

Mfr. Part Number:

1756-OB16E

Manufacturer: Allen-Bradley / Rockwell Automation

Description: Allen-Bradley 1756-OB16E ControlLogix 10-31V DC 16-Ch Fused Output Module

Full Description: Allen-Bradley 1756-OB16E ControlLogix 10-31 VDC Electronically Fused Output Module, 16 Points (20 Pin). 16 Electronically Fused Outputs; Voltage Category: 12/24V DC source; Operating Voltage: 10-31.2V DC. Removable Terminal Block Housing: 1756-TBNH or 1756-TBSH. The Allen-Bradley 1756-OB16E is a ControlLogix Discrete output module. This is a DC output module with Sixteen (16) output channels. It has Two (2) electronically fused groups of Eight (8) outputs each and delivers an output voltage range of 10-31.2 VDC. It may be installed to any 1756 local or distributed I/O chassis. Technical specifications for 1756-OB16E

Manufacturer Rockwell Automation

Power Dissipation (Max) 4.1 W @ 60 °C (140 °F)

Module Type Digital DC output Module

Series ControlLogix

Part Number/Catalog No. 1756-OB16E

Brand Allen-Bradley

No. of outputs Sixteen (16)

Output Voltage range 10-31.2 VDC

Nominal output voltage 24VDC

Module Keying Electronic

RTB Keying User-defined mechanical

Slot Width 1

Output Delay Time, OFF to ON 70 µs nom/1 ms max

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Backplane Current at 24 Volts 2 milliamperes

Backplane Current at 5.1 Volts 250 milliamperes

Thermal Dissipation 13.98 BTU/hr @ 60 °C (140 °F)

Removable Terminal Block(s) 1756-TBNH; 1756-TBSH

Outputs 16-Point Electronically Fused

Voltage 12-24 Volts DC

Operating Voltage Range 10-30 Volts DC

Maximum Output Current Rating-Point 1 Amp at 60 degrees Celsius

Maximum Output Current Rating-Module 8 Amps at 60 degrees Celsius

Backplane Current at 5 Volts 250 milliamps

Removeable Terminal Block(s) 1756-TBNH, 1756-TBSH

Isolation Voltage 50 Volts Continuous

Enclosure None

UPC 10612598180810

UNSPSC 32151705 Description

The Allen-Bradley 1956-OB16E is a Discrete output module that is part of the ControlLogix Programmable Automation Controllers (PLC) platform. This module is specifically a DC output module that delivers an output voltage range of 10-31.2 VDC with nominal value of 24VDC. It comes with Sixteen (16) output channels that is divided in Two (2) electronically-fused groups of Eight (8) channels each group. This module is typically used to actuated 24VDC rated devices such as relay coils, solenoid actuated devices, pilot lamps, sirens and other similar electrical loads.

The 1756-OB16E is a single-slot wide module that is compatible for use with any 1756 ControlLogix controllers. It may be installed to any 1756 ControlLogix rack, specifically 1756-A4; 1756-A17; 1756-A10; 1756-A13 and 1756-A17. Additionally, it may serve as a local I/O or a distributed I/O component.

The 1756-OB16E provides an output current of 1 A @ 60 °C (140 °F) per channel or 8 A @ 60 °C (140 °F) per module. It has a surge current rating of 2 A for 10 ms per point which is repeatable every 2 s @ 0 °C (32 °F) @ 24V DC. Additionally, the module's minimum load current is 3 mA per channel.

Built-in electronic fusing is provided per group. Each output channel exhibits an OFF to ON output delay time of 70 µs nom/1 ms max and On to Off delay time of 360 µs nom/1 ms, max. It draws current from the backplane amounting to 250 mA at 5VDC and 2 mA at 24VDC while the total backplane power requirement is 1.32 Watts and maximum power dissipation is 4.1 W @ 60 °C (140 °F).

The 1756-OB16E module has a voltage category of 12 to 24 Volts DC source voltage, as well as an operating voltage of 10 to 31.2 Volts DC. Its total backplane power is 1.32 Watts and a current draw of 250 milliamps at 5.1 Volts and 2 milliamps at 24 Volts. It also has a maximum of 1 milliamp per point of off-state leakage current and a maximum of 400 mV DC voltage at 1 Amp on-state voltage drop. Its maximum current per point is 1 Amp at 60 degrees Celsius and its maximum current per module is 8 Amps at 60 degrees Celsius. This module has been routine-tested at 1350 Volts AC for 2 seconds and it has a continuous isolation voltage of 250 Volts. Its minimum load current is 3 milliamps per point and its typical surge current is 2 Amps for 10 seconds per point, which is repeatable every 2 seconds at 0 degrees Celsius. The power dissipation of this module is a maximum of 4.1 Watts at 60 degrees Celsius, while its thermal dissipation is 13.98 BTU/hour. It has an output delay time of 70 microseconds nominal/maximum of 1 millisecond from off to on and 360 microseconds nominal/maximum of 1 millisecond from on to off. Its operating temperature is between 0 and 60 degrees Celsius and its non-operating temperature is between -40 and 85 degrees Celsius. This module also allows for the modification of the states in the fault mode and the states in the program mode.