

Allen-Bradley 1756 Series Service Manual

1756-OB8

1. Description

Mfr. Part Number:

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Module	Type Digital DC output module
Series	ControlLogix
Part	Number/Catalog No. 1756-OB8
Brand	Allen-Bradley
No.	of Outputs Eight (8)
Output	Voltage 24VDC
Output	Voltage range 10-30VDC
No.	of output groups: Two (2)
No.	of channels per group: Four (2)
Current	per point 2 A @ 60 °C (140 °F)
Current	per module, max 8 A @ 60 °C (140 °F)
Signal	Delay, ON transition 1 ms max
Signal	Delay, OFF Transition 2 ms max
Backplane	Current, 5.1VDC 165 mA
Backplane	Current, 24VDC 2 mA
Total	Backplane power 0.89 W
Removable	Terminal Block (RTB) 1756-TBNH 1756-TBSH
Outputs	8-Point
Voltage	12-24 Volts DC Source
Operating	Voltage Range 10-30 Volts DC
Maximum	Output Current Rating-Point 2 Amps at 60 degrees Celsius
Maximum	Output Current Rating-Module 8 Amps at 60 degrees Celsius
Power	Dissipation (Max) 2.5 Watts at 60 Celsius
Removeable	Terminal Block(s) 1756-TBNH, 1756-TBSH
Isolation	Voltage 50 Volts Continuous
Enclosure	None
UPC	10662468702994 Description
The	Allen-Brad

3. Product Information

Mfr. Part Number:

1756-OB8

Manufacturer: Allen-Bradley / Rockwell Automation

Description: Allen-Bradley 1756-OB8 ControlLogix 19-30V DC 8-Ch Digital Output Module

Full Description: Allen-Bradley 1756-OB8 ControlLogix 19-30V DC Digital Output Module, 8 Points (20 Pin) The Allen-Bradley 1756-OB8 is a ControlLogix discrete output module. It features Eight (8) 24VDC output channels in Two (2) groups of Four (4) channels each. Each channel delivers an output voltage range of 10-30VDC with nominal signal voltage of 24VDC. It is compatible for use with any ControlLogix chassis and uses the 1756-TBNH and 1756-TBSH Removable Terminal Block (RTB). Technical specifications for 1756-OB8

Manufacturer Rockwell Automation

Module Type Digital DC output module

Series ControlLogix

Part Number/Catalog No. 1756-OB8

Brand Allen-Bradley

No. of Outputs Eight (8)

Output Voltage 24VDC

Output Voltage range 10-30VDC

No. of output groups: Two (2)

No. of channels per group: Four (2)

Current per point 2 A @ 60 °C (140 °F)

Current per module, max 8 A @ 60 °C (140 °F)

Signal Delay, ON transition 1 ms max

Signal Delay, OFF Transition 2 ms max

Backplane Current, 5.1VDC 165 mA

Backplane Current, 24VDC 2 mA

Total Backplane power 0.89 W

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

Outputs 8-Point

Voltage 12-24 Volts DC Source

Operating Voltage Range 10-30 Volts DC

Maximum Output Current Rating-Point 2 Amps at 60 degrees Celsius

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

Power Dissipation (Max) 2.5 Watts at 60 Celsius

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

Isolation Voltage 50 Volts Continuous

Enclosure None

UPC 10662468702994 Description

The Allen-Bradley 1756-OB8 is a ControlLogix discrete output module. This module delivers an output voltage range of 10-30 VDC with nominal value of 24VDC. It is used to energize electrical loads that operate in DC voltages as well as AC loads, used with an interposing circuitry.

The 1756-OB8 is a single slot module that occupies any available slot of the chassis except the left-most slot which is intended for the ControlLogix processor or ControlLogix communication adapter / scanner module. It is compatible acting as a local I/O component or as part of a distributed I/O system. It may be installed to any available 1756-ControlLogix chassis and operate along standard or power supply modules.

The 1756-OB8 has a backplane current draw of 165 mA at 5.1 VDC and 2 mA at 24VDC while the total backplane power is 0.89 W and power dissipation of 2.5 W @ 60 °C (140 °F) and thermal dissipation of 8.53 BTU/hr. Each channel of this output module can deliver up to 2 Amperes @ 60 °C (140 °F) and 8 Amperes @ 60 °C (140 °F) per module.

This module uses a Removable Terminal Block (RTB) for connecting each channel of the module to the electrical loads. Compatible RTBs are 1756-TBNH and 1756-TBSH while appropriate RTB keying is user-defined, mechanical keying.

It is entered in the hardware configuration where module parameters and properties can be further modified/ Some of these parameters are Request Packet Interval (RPI), filter time, module inhibition and many others.

This module uses a Removable Terminal Block (RTB) which can either be the 1756-TBNH or the 1756-TBSH (20 pins RTB). This module has the following communication formats available: rack optimization, listen-only - rack optimization, output data, listen-only output data, and scheduled output data. Pilot duty is also available for the 1756-OB8 module.

The 1756-OB8 module has a voltage category of 12/24 volts DC source and an operating range of 10 to 30 volts DC. Its current draw is 165 mA at 5.1V and 2 mA at 24V. It has a backplane power of 0.89 W, with a maximum dissipation of 2.5 W at 60 Degrees Celsius (140 degrees Fahrenheit), and a thermal dissipation of 8.53 BTU/hr. The maximum off-state leakage current of this module is 1 mA per point and during an on-state, it has a maximum voltage drop of 1.2V DC at 2 A. It also has a maximum current of 2 A per point at 60 Degrees Celsius and a maximum current of 8 A at 60 Degrees Celsius per module. Its surge current per point is 4 A for 10 ms each that is repeatable every 1 s at 60 Degrees Celsius and its minimum load current is 2 mA per point. The module's isolation voltage is continuous at 250V. This module also allows you to modify states in Fault Mode per point and states in Program Mode per point. The choices for both are Hold Last State, On, or Off, with 'Off' set as default. Temperature ranges for the 1756-OB8 module are 0 to 60 Degrees Celsius when in operation and -40 to 85 Degrees Celsius when not in operation. It also has a maximum surrounding air temperature of 60 Degrees Celsius and a non-condensing relative humidity of 5% to 95%.