

Allen-Bradley 1756 Series Service Manual

1756-OB8EI

1. Description

Mfr. Part Number:

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Module	Type Digital DC Sourcing Output
Series	ControlLogix
Part	Number/Catalog No. 1756-OB8EI
Brand	Allen-Bradley
No.	of outputs Eight (8) Electronically-fused, individually isolated channels
Output	Voltage 24VDC
Output	Voltage range 10-30VDC
Output	Current per channel, nom. 2 A @ 60 °C (140 °F)
Output	Current per module, max. 10 A @ 60 °C (140 °F); 16 A @ 55 °C (131 °F) linear derating
Backplane	Current, 5.1VDC 250 mA
Backplane	Current, 24VDC 2 mA
Power	Dissipation 4.7 W @ 60 °C (140 °F)
Output	Signal delay, OFF to ON 1 ms, max
Output	Signal delay, ON to OFF 5 ms max
Enclosure	type rating None (open-style)
Removable	Terminal Block 1756-TBCH; 1756-TBS6H
Outputs	8-Point Individually Isolated, Electronically Fused
Voltage	12-24 Volts DC
Operating	Voltage Range 10-30 Volts DC
Maximum	Output Current Rating-Point 2 Amps at 60 degrees Celsius
Maximum	Output Current Rating-Module 16 Amps at 55 degrees Celsius, 10 Amps at 60 Celsius
Power	Dissipation (Max) 4.7

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3. Product Information

Mfr. Part Number:

1756-OB8EI

Manufacturer: Allen-Bradley / Rockwell Automation

Description: Allen-Bradley 1756-OB8EI ControlLogix Fused Isolated Output 10-30V DC 8-Point, A

Full Description: Allen-Bradley 1756-OB8EI ControlLogix DC Electronically Fused Isolated Output Module, 10-30V DC, 8-Point, 36-Pin The Allen-Bradley 1756-OB8EI is a ControlLogix Discrete output module that features Eight (8) electronically fused, individually isolated non-isolated sourcing output channels. It has One (1) group of channels with Eight (8) outputs per channel. It delivers a nominal actuating voltage of 24VDC and compatible with any POINT IO communication adapter for implementing distributed I/O Technical specifications for 1756-OB8EI

Manufacturer Rockwell Automation

Module Type Digital DC Sourcing Output

Series ControlLogix

Part Number/Catalog No. 1756-OB8EI

Brand Allen-Bradley

No. of outputs Eight (8) Electronically-fused, individually isolated channels

Output Voltage 24VDC

Output Voltage range 10-30VDC

Output Current per channel, nom. 2 A @ 60 °C (140 °F)

Output Current per module, max. 10 A @ 60 °C (140 °F); 16 A @ 55 °C (131 °F) linear derating

Backplane Current, 5.1VDC 250 mA

Backplane Current, 24VDC 2 mA

Power Dissipation 4.7 W @ 60 °C (140 °F)

Output Signal delay, OFF to ON 1 ms, max

Output Signal delay, ON to OFF 5 ms max

Enclosure type rating None (open-style)

Removable Terminal Block 1756-TBCH; 1756-TBS6H

Outputs 8-Point Individually Isolated, Electronically Fused

Voltage 12-24 Volts DC

Operating Voltage Range 10-30 Volts DC

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

Maximum Output Current Rating-Module 10 Amps at 55 degrees Celsius, 16 Amps at 60 degrees Celsius

Power Dissipation (Max) 4.7 Watts at 60 Celsius

Backplane Current at 5 Volts 250 milliamps

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

Isolation Voltage 50 Volts Continuous

Enclosure None Description

The Allen-Bradley 1756-OB8EI is a discrete output module from the ControlLogix product family. This module features Eight (8) electronically fused and individually isolated output channels that is able to deliver 24VDC nominal voltage output, with output voltage range of 10-30VDC. This module is generally used to energize electrical loads such as relay coils, pilot lamps, buzzer, horn, siren, valves and other actuating devices.

The 1756-OB8EI is directly installed to an available slot of the 1756 ControlLogix chassis. It occupies a single slot and permits multiple instances of the same module whether on a local or distributed I/O rack. It draws backplane current of 250 mA at 5.1VDC and 2 mA at 24VDC and consumes total backplane power of 1.30 W. This module has a power dissipation of 4.7 W when operated at 60 Deg. Celsius.

The 1756-OB8EI has an output current rating of 2 A @ 60 °C (140 °F) per point while the total current per module are 10 A @ 60 °C (140 °F) and 16 A @ 55 °C (131 °F), linear derating. It has a Surge current rating of 4 A for 10 ms each, repeatable every 2 s. The 1756-OB8EI has an OFF to ON delay time of 1 ms, maximum and ON to OFF delay time of 5 ms, maximum.

The 1756-OB8EI is used with a Removable Terminal Block (RTB) where signal wires are terminated. Compatible terminal blocks are 1756-TBCH and 1756-TBS6H.

This module has an operating voltage of 10-30V DC and a voltage category of 12-24V DC sink/source. It has a short trip of greater than 4.5 A for a maximum of 500 µs (output on, then short) and greater than 4.5 A for a maximum of 1.5 ms (output on into short), with a +/- 1 ms timestamp of diagnostics. It has a current draw of 250 mA at 5.1V and 2 mA at 24V. The module's total backplane power is 1.30 W with a maximum thermal dissipation of 16.03 BTU/hr. The module has a maximum off-state leakage current of 1 mA per point and a maximum voltage drop of 1.2V DC at 2 A. It also has a maximum current per point of 2A at 60 degrees Celsius and a maximum current per module of 10A at 60 Degrees Celsius and of 16A at 55 Degrees Celsius (linear derating). It has a surge current per-point of 4 A for 10 ms that is repeatable every 2s and with a 3 mA load current minimum. It also has a continuous isolation voltage of 250V and this module is routine-tested for 2s at 1350V. The 1756-OB8EI allows you the option of holding the last state and turning on or turning off the states in Fault Mode or Program Mode. Note that the default setting for both is "Off". It also has an output delay time of a maximum of 1 m from off to on and a maximum of 5 ms from on to off. Its operating temperature has a range of 0-60 degrees Celsius, while its non-operating temperature has a range of -40-85 degrees Celsius. It also has a maximum surrounding air temperature of 60 degrees Celsius and a non-condensing relative humidity level of 5-95%.