

Allen-Bradley 1769 Series Service Manual

1769-OB16

1. Description

The 1769-OB16 is a CompactLogix Discrete output module which operate at a voltage category of 24VDC at a frequency of 47 to 63 Hz. This module has Sixteen (16) outputs in a single group. This module is compatible for use with a 1769 CompactLogix chassis or MicroLogix 1500. Technical specifications for 1769-OB16

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation / Allen-Bradley
Brand	Allen-Bradley
Part	Number/Catalog No. 1769-OB16
Product	Family: Compact I/O
Product	Line CompactLogix
Product	Type: Discrete Output Module
Module	Type DC Output Module
Input	Type Digital Output
No.	of Outputs: 16
Power	Supply Distance Rating 8
No.	of Groups: 1
Communication	Cable 16-Point
Voltage	Category 24V DC source
Shipping	Weight 2 lbs
Shipping	Dimensions 8 x 8 x 5 in
Operating	Voltage range: 20.4...26.4V DC
Current	per point: 0.5 A @ 60 °C (140 °F) 1.0 A @ 30 °C (86 °F)
Power	24 Volts DC
Output	delay, On: 0.1 ms
Series	A and B
Output	delay, Off: 1.0 ms
Bus	Current draw, max: 200 mA
Heat	Dissipation: 1.2 W
Wire	Size (Solid) 22-14 AWG
Mounting:	DIN rail or panel mount
UPC	10662468992869
Terminal	Block: 1769-RTBN18 (1 per kit)
UNSPSC	32151705
Power	Supply: 1769-PA2, 1769-PB2, 1769-PA4, 1769-PB4 Description
The	1769-OB16 compact solid output module is a device by Allen Bradley with 16 outputs alongside a 24-volt DC voltage source.

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Brand Allen-Bradley

Part Number/Catalog No. 1769-OB16

Product Family: Compact I/O

Product Line CompactLogix

Product Type: Discrete Output Module

Module Type DC Output Module

Input Type Digital Output

No. of Outputs: 16

Power Supply Distance Rating 8

No. of Groups: 1

Communication Cable 16-Point

Voltage Category 24V DC source

Shipping Weight 2 lbs

Shipping Dimensions 8 x 8 x 5 in

Operating Voltage range: 20.4...26.4V DC

Current per point: 0.5 A @ 60 °C (140 °F) 1.0 A @ 30 °C (86 °F)

Power 24 Volts DC

Output delay, On: 0.1 ms

Series A and B

Output delay, Off: 1.0 ms

Bus Current draw, max: 200 mA

Heat Dissipation: 2.11 W

Wire Size (Solid) 22-14 AWG

Mounting: DIN rail or panel mount

UPC 10662468992869

Terminal Block: 1769-RTBN18 (1 per kit)

UNSPSC 32151705

Power Supply: 1769-PA2, 1769-PB2, 1769-PA4, 1769-PB4 Description

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The 1769-OB16 compact solid output module is a device by Allen Bradley with 16 outputs alongside a 24-volt DC voltage source. The 1769-OB16 module has a functioning voltage range between 20.4 to 26.4 volts DC, and it has a delay output voltage of 0.1ms and an off-mode delay output of 1.0ms. The 1769-OB16 has a 200mA draw current at 5.1V, and heat dissipation at 2.11Watt. The 1769-OB16 is a module with a 1.0mA leakage current around a 26.4V DC, and an on-state minimum current of 1.0mA. The 1769-OB16 has a 1.0V (max) drop voltage (on-state) at a 1.0mA, and with a 1.0 Ampere at 30 deg. Celsius (86 deg. Fahrenheit) and a 0.5 Ampere at 60 deg. Celsius (140 deg. Fahrenheit) current per point (max). The 1769-OB16 also has an 8.0 A at 30 deg. Celsius (86 deg. Fahrenheit) and a 4.0 A at 60 deg. Celsius (140 deg. Fahrenheit) current per module (max), and a current of 2.0 A for 10ms repeatable every 2 s (surge). It is fitted with IEC Class 2 reinforced insulation, which guards against voltage as high as 75 volts DC. It has 8 modules, a single slot width, and can be mounted on a DIN rail or a panel mount. The 1769-OB16 module has dimensions of 4.65 x 1.38 x 3.43 in. (118 x 35 x 87 mm), and a weight of 0.61 lb (280 g).

The 1769-OB16 is a MicroLogix 1500 and 1769 CompactLogix controller compatible module. This electronic module is a Sixteen (16) channel 24VDC discrete output module. This module has a single group of outputs typically used to energize electrical loads operating with 24VDC voltage.

This module may also be used to energize AC loads via interposing function. With interposing function, relays are used wherein the output module energizes the relay coil. AC voltage, such as 120 / 240VAC is terminated across the relay's contacts to allow passage of AC voltage to the connected electrical load.

This module is a single slot module which may be directly installed to the 1769 CompactLogix assembly or MicroLogix 1500 controller. If installed to a CompactLogix controller, the power supply distance rating of 8 modules must be observed. This means any installation of this module must be not greater than 8 modules away from the power supply. If installed with a MicroLogix 1500 controller, the module is installed beside the MicroLogix base module and connects to the backplane via a provided ribbon cable. This module is compatible for use with any 1769 CompactLogix controller and 1769 CompactLogix Power supplies such as 1769-PA2, 1769-PB2, 1769-PA4, 1769-PB4. This module uses a terminal block with part number 1769-RTBN18. This terminal block is shipped along with the module. When wiring the module, use recommended wire sizes of 22-14 AWG for solid wire and 22-16 AWG for stranded wire. The 1769-OB16 module is a solid-state output module that has been manufactured by Allen-Bradley. This module has been designed to be used in an industrial environment and it is recommended to install it by following specific instructions that are intended to extend the life of the module and to guarantee safe operations. These instructions include the prevention of electrostatic discharge and the removal of any power that is being applied to the system before the module is installed. The Allen-Bradley 1769-OB16 solid-state output module can be attached to the controller or module before or after mounting. It is recommended to mount the module on a compatible DIN rail and to leave space between the module and any adjacent equipment. This space needs to be at least 2 inches (50 millimeters) wide for proper air-cooling.

When mounting the Allen-Bradley 1769-OB16 solid-state output module to a panel, it needs to be screwed into place with M4 or #8 panhead screws. This module comes with a height of 118 millimeters, a depth of 87 millimeters, and a width of 35 millimeters, and it also comes with an approximate shipping weight of 280 grams. The Allen-Bradley 1769-OB16 solid-state output module has a voltage category of 24 Volts DC and 16 outputs. The module has a heat dissipation rating of 2.11 Watts. Some of the operating conditions that this module needs are an operating temperature range of 0 to 60 degrees Celsius and a relative humidity range of 5 to 95 percent without condensation. It is important to maintain these conditions so the module can operate optimally. The module also supports shocks of up to 30 g.