

Allen-Bradley 1756 Series Service Manual

1756-OF8I

1. Description

Overview Allen-Bradley 1756-OF8I ControlLogix Analog Output Module, 8-Pt

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Brand	Allen-Bradley
Part	Number/Catalog No. 1756-OF8I
Series	ControlLogix
Outputs	8 Current
Module	Type Isolated Analog Output Module
Current	Draw (24 Volts DC) 400 milliamps
No.	of Outputs Eight (8) Current / Voltage
Power	Dissipation 6.5 Watts
Output	Current Range 0-20 mA; 4-20 mA
Output	Range 0-20 or 4-20 milliamps
Output	Voltage Range 10...10V; 0...10V; 0...5V
Resolution	15 bits
Resolution	16-Bit
Data	Format IEEE 32-bit floating point
Removeable	Terminal Block(s) 1756-TBNH, 1756-TBSH
Conversion	Method R-Ladder DAC, monotonicity with no missing codes
Isolation	Voltage 50 Volts Continuous
Removable	Terminal Block(s) 1756-TBCH, 1756-TBS6H
Open	circuit detection Current only
Short	circuit detection Voltage only
Overvoltage	protection $\pm 30V$ DC (voltage/current)
Enclosure	None Description
Eight	(8) isolated voltage or current outputs. This module is installed in any slot of the 1756 ControlLogix chassis. It has selectable output ratings of -10 to 10V, 0 to 10V,

3. Product Information

Overview Allen-Bradley 1756-OF8I ControlLogix Analog Output Module, 8-Pt

Mfr. Part Number:

1756-OF8I

Manufacturer: Allen-Bradley / Rockwell Automation

Description: Allen-Bradley 1756-OF8I ControlLogix Analog Output Module, 8 Isolated Points

Full Description: Allen Bradley 1756-OF8I ControlLogix Analog Output Module, Current/Voltage, 8 Isolated Points (36 Pin) The 1756-OF8I is a ControlLogix analog output module. This module has Eight (8) individually isolated channels. It is capable of providing Voltage and Current output signals with ranges of -10 to 10V, 0 to 10V, and 0 to 5V and 0-20 mA signals respectively. This module is used to drive modulating actuators and devices. This module is directly installed to any 1756 ControlLogix chassis. Technical specifications for 1756-OF8I

Manufacturer Rockwell Automation

Brand Allen-Bradley

Part Number/Catalog No. 1756-OF8I

Series ControlLogix

Outputs 8 Current

Module Type Isolated Analog Output Module

Current Draw (24 Volts DC) 400 milliamps

No. of Outputs Eight (8) Current / Voltage

Power Dissipation 6.5 Watts

Output Current Range 0-20 mA; 4-20 mA

Output Range 0-20 or 4-20 milliamps

Output Voltage Range 10...10V; 0...10V; 0...5V

Resolution 15 bits

Resolution 16-Bit

Data Format IEEE 32-bit floating point

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

Conversion Method R-Ladder DAC, monotonicity with no missing codes

Isolation Voltage 50 Volts Continuous

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

Open circuit detection Current only

Short circuit detection Voltage only

Overvoltage protection $\pm 30V$ DC (voltage/current)

Enclosure None Description

Eight (8) isolated voltage or current outputs. This module is installed in any slot of the 1756 ControlLogix chassis. It has selectable output ratings of -10 to 10V, 0 to 10V, 0 to 5V, and 0 to 20 mA, all with 16-bit resolution. The module's backplane current rating is 200mA at 5.1 VDC and 275mA at 24VDC. It has a backplane power output of 6.3W at voltage mode.

When in current mode, the backplane output power ranges from 6.3-10.2W with 250-1000 Ohm loads. The 1756-OF8I also has a thermal and power dissipation level that is load dependent at current mode at 18.4 BTU/hr. The 1756-OF8I's overall current output impedance is 46 Ohms. Each channel is provided with open-circuit detection for a current output and a short-circuit protection for the voltage output. It offers over-voltage protection of $\pm 30V$ DC on both voltage/current modes. The drive capability rating of this module includes 0-1000 Ohms (current) and > 1000 Ohms (Voltage). It has a calibration accuracy of 0.05% with a module can-time of 1ms it can only accommodate a module error of 0.1%. The data format on the 1756-OF8I is IEEE 32-bit floating point format and it utilizes the R-Ladder DAC module conversion method. It has an isolation voltage of 250V with both basic and reinforced insulation types tested at 1500V AC and 2300V AC for 60s between output and output and outputs and backplane. The 1756-OF8I has an IEC 60068-2-1 tested operational voltage range between 0 and 60 °. Celsius at 5-95% non-condensing humidity and it is IEC 60068-2-27-tested to withstand an operational shock of 30G.

The Allen-Bradley 1756-OF8I is a High-Resolution analog output module that is capable of providing Voltage or Current signals to drive modulating actuators and analog devices. This module features Eight (8) individually isolated and configurable channels. The module's output Voltage range is -10 to 10V, 0 to 10V, and 0 to 5V while the Current Output range is 0 to 20 mA at 16-bit resolution.

Resolution is critical as it provides higher accuracy and efficiency. The higher the module's accuracy, more areas of control points may be covered. High resolution modules is especially compatible for critical processes. The module's specific resolution includes (0.32 mV/count) for ± 10 VDC; (0.16 mV/count) for 0-10VDC; (0.08 mV/count) for 0 - 5VDC and 0.32 μA /count) for 0-21 mA. The module's registers are composed of Readable and Writeable bits, capable of output forcing that is useful during commissioning phase.

This module support stand-alone or distributed application. With stand-alone application, the module is installed to the chassis where the ControlLogix Processor is also installed. This configuration may be used for small to medium process scale processes. It also supports installation in a Remote I/O rack where the output module is installed away the processor rack instead, it is installed in a ControlLogix rack paired with a communication module. The communication module communicates the operational status as well as the individual channel information to the main processor.

www.oilautotech.com