Allen-Bradley 1756-OF8I

ControlLogix Isolated Analog Output Module

Allen-Bradley 1756-OF8I sends analog control signals from a ControlLogix system to field devices. Its eight isolated output channels can be configured for voltage or current, allowing different analog signal types on the same module. The 1756-OF8I is an isolated-output model; similar eight-channel output catalog numbers are not automatically equivalent.



Technical Specifications

Product Identity	
Manufacturer	Allen-Bradley
Catalog number	1756-OF8I
Functional Configuration	
Output channels	8, individually isolated; voltage/current combination
Voltage output ranges	±10V, 0–10V or 0–5V
Current output range	0–20mA
Data format	IEEE 32-bit floating point
Isolation	250V continuous, output-to-backplane and output-to-output
Removable terminal block	1756-TBCH or 1756-TBS6H
Performance & Power	
Resolution	16 bits
Current-mode load	0–1000Ω
Voltage-mode load	Greater than 1000Ω
Backplane current at 5.1V	200mA
Backplane current at 24V	220mA for voltage mode or 250Ω current loads; up to 385mA with 1000Ω current loads
Settling time	Less than 2ms to 95% of the final value with a resistive load
Minimum module scan time	1ms
Environment	
Operating temperature	0–60°C

Selected original manufacturer material follows on page 3.

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Compatibility & Selection Guide

System and software compatibility. Configure the 1756-OF8I in the Logix Designer I/O project with the correct module revision, output type, range and engineering-unit scaling. Channel functions include ramping, hold for initialization and output clamps. When scaling changes, review the clamp settings separately because their engineering-unit values do not update automatically.

Wiring & Installation Reference

Signal and terminal selection

Voltage output. OUT-x/V and RTN-x · Use a load greater than 1000Ω.

Current output. OUT-x/I and RTN-x · Keep the loop load within 0–1000Ω.

Channel returns. Individual RTN-x connections · Preserve the channel-isolated wiring shown in the terminal diagram.

Installation checks

Check mode and load. Record each channel voltage/current mode, signal span, load resistance and required safe output state.

Install the module and RTB. Use a keyed 1756-TBCH or 1756-TBS6H and follow the isolated-channel terminal diagram. Route and ground shields as specified.

Verify the output configuration. Seat and lock the RTB. Check scaling, ramping, hold and clamp settings before returning the controlled process to service.

Installation precautions. Remove power or establish a nonhazardous area before insertion, removal or disconnection; observe electrostatic-discharge precautions. Ensure outputs cannot cause unintended equipment operation during wiring and commissioning. Verify the power budget for the actual output loads.

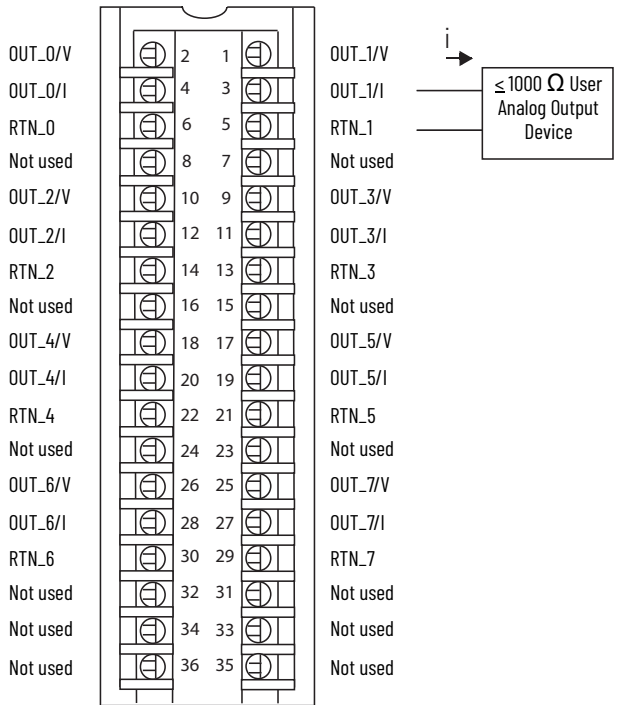
View terminal diagram (PDF) · PDF page 3 | View installation guide · PDF page 2

Manufacturer sources: ControlLogix System Selection Guide / ControlLogix I/O Modules Technical Data / ControlLogix High-resolution Isolated Analog I/O Modules Installation Instructions / ControlLogix Isolated Analog I/O Modules User Manual.

1756-OF8I, 1756-OF8IK

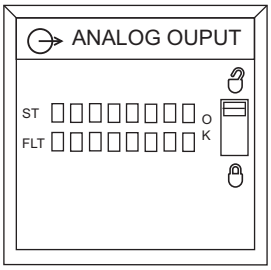
ControlLogix isolated voltage/current output analog module.

1756-OF8I Module Wiring Diagram - Current Mode

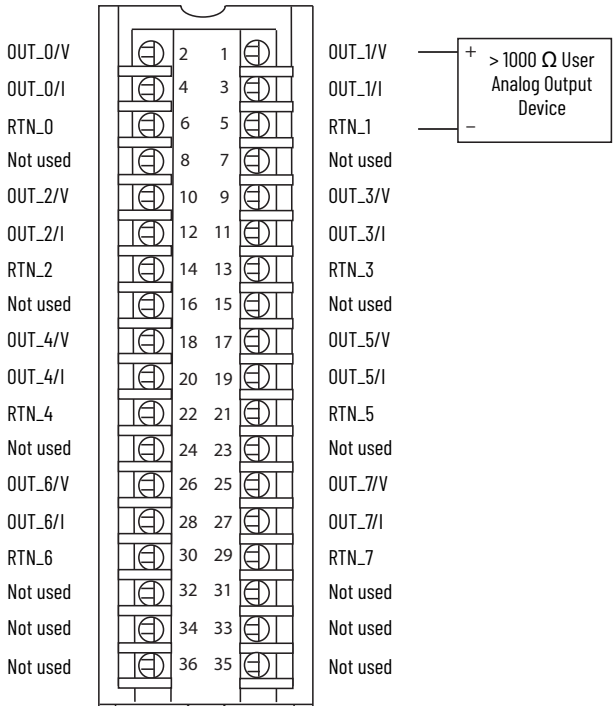


IMPORTANT: Remember the following:

- If separate power sources are used, do not exceed the specific isolation voltage as listed in the specifications.
- Place additional devices anywhere in the loop.



1756-OF8I Module Wiring Diagram - Voltage Mode



IMPORTANT: Remember the following:

- If separate power sources are used, do not exceed the specific isolation voltage as listed in the specifications.
- Place additional devices anywhere in the loop.