

Allen-Bradley 1794-OE4 Manual

Brand	Allen-Bradley
Product Series	1746 1747
Product Type	Flex I/O Output Analog Module

Description

The Allen-Bradley 1794-OE4 is a Flex I/O analog output module. This module has Four (4) analog output channels, providing analog output signals such as 0 to 20 mA; 4 to 20 mA; +/- 10VDC; 0 to 10 VDC. It has a resolution of 12-bit and compatible for installation with terminal bases such as 1794-TB2, -TB3, -TB3S, -TB3T, -TB3TS, and -TBN. Technical specifications for 1794-OE4

Manufacturer Rockwell Automation

Conversion Type Pulse Width modulation

Data Format left justified, 16 bit 2s complement

Resolution 12 bits plus sign Voltage: 2.56mV/cnt Current: 5.13µA/cnt

Brand Allen-Bradley

Product Description: Flex IO High Density Analog Output Module

No. of inputs: Four (4) Single Ended

Output type: 0 to 20 mA; 4 to 20 mA; +/- 10VDC; 0 to 10 VDC

Conversion Rate: 1.024ms maximum all channels

Terminal base: 1794-TB2, -TB3, -TB3S, -TB3T, -TB3TS and -TBN

Indicators: 1 green/red power/status indicator

External DC supply, nom: 24V DC

External DC supply range: 10.0...31.2V DC (includes 5% AC ripple)

Mounting: DIN Rail

Wire Size: Determined by installed terminal base

Operating Temperature: 0 to 55 C (32 to 131 F)

Storage Temperature: -40...85 °C (-40...185 °F)

Vibration: 5g @ 10 to 500 Hz

Part Number/Catalog No. 1794-OE4

Product Type Flex I/O Output Analog Module

Outputs 4 Single-ended

Output Current Terminal 4 to 20 mA

Output Voltage Terminal +/- 10 Volts

Current Load on Voltage Output 3 mA maximum

Flexbus Current 20 mA

Power Dissipation 4.5 W at 31.2 Volts DC maximum

Thermal Dissipation 13.6 BTU/hour at 31.2 Volts DC maximum

UPC 10612598137876

UNSPSC 32151602 Description

The Allen-Bradley 1794-OE4 is an analog output module from the Flex IO product family. This module is used as a component of Distributed I/O node, compatible with Flex I/O communication adapters such as Ethernet, ControlNet, Profibus and Remote I/O. This module features Four (4) user configurable output channels, designed to provide 0 to 20mA, 4 to 20 mA current signals and, +/- 10VDC and 0 to 10 VDC voltage signals signals. Use this module to implement automatic and manual control of modulating devices such as Variable Frequency Drives (VFD), modulating control valves, converters, transducers, dampers, louvers and other Final Control Elements (FCE). The output channels of this module support non-isolated, single ended configuration.

The 1794-OE4 has a resolution of 12 bits plus sign with specific increments and decrements of 2.56mV/cnt for voltage and 5.13μA/cnt for Current. The module's analog data is stored to a registered formatted as left justified, 16 bit 2's complement. This register is converted using pulse width modulation method.

The 1794-OE4 supports installation with Flex I/O communication adapters including 1794-ACN15, 1794-ACNR15, 1794-AND, 1794-AENT, and 1794-AENTR. It may also be used with a MicroLogix compact controller, via 1794-ASB and 1794-APB communication adapters.

The 1794-OE4 is compatible with a variety of terminal bases such as 1794-TB2, 1794-TB3, 1794-TB3S, 1794-TB3T, 1794-TB3TS, and 1794-TBN. Only One (1) terminal base is required to install the module. Terminal bases provide DIN rail attachment as well as output signal wiring termination points. The 1794-OE4 required keyswitch position is 4. The module has a dimension of 94.0 x 94.0 x 53.3 mm or 3.7 x 3.7 x 2.1 in. It has a with built-in group diagnostic LEDs that consists of One (1) green/red power/status indicator.

The 1794-OE4 is provided with green status indicator for monitoring the module's operation. This module does not require calibration. The module comes with an output resolution of 12 bit + sign, 2.56 mV/cnt for voltage, and 5.13 μA/cnt for current output. It uses pulse width modulation as its output conversion type, with an output conversion rate for all channels of 1.024 milliseconds. The 1794-OE4 module has a current input accuracy of 0.425% full scale at 25 degrees Celsius and it has 0.0069% full scale per degree Celsius current input accuracy drift with temperature. Its voltage input accuracy is 0.133% full scale at 25 degrees Celsius and it has 0.0045% full scale per degree Celsius voltage input accuracy drift with temperature.

The module's output signal ranges are 4 to 20 mA, 0 to 20 mA, +/-10 Volts, and 0 to 10 Volts. The 1794-OE4 also has an external DC supply current of 70 mA at 24 Volts DC. No individual channels are isolated, but the module has a continuous isolation voltage of 50 Volts between I/O and the system. It has a 24 milliseconds input step response time for the voltage or input terminals and a 20 mA bus rating. This module has 24 milliseconds (voltage output) step response time of up to 63% of the full-scale setting. It has a 3 mA maximum current load on the voltage output and a 5 to 750 Ω resistive load for the output current. This module's maximum power dissipation is 4.5W at 31.2 Volts DC and its maximum thermal dissipation is 15.3 BTU/ hour also at 31.2 Volts DC. It also has an operating temperature range of 0 to 55 degrees Celsius.

Technical Specifications

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