

Allen-Bradley 1746-NO8V Manual

Brand	Allen-Bradley
Product Series	1746 1747
Product Type	Analog output module

Description

The Allen-Bradley 1746-NO8V is a SLC 500 analog output module. This module has Eight (8) single-ended analog output channels that delivers an output voltage range of $\pm 10.25\text{V}$ dc. It has 16-bit, $320\text{ }\mu\text{V}/\text{count}$ resolution with overall accuracy of 0.1% of full scale at 25°C and 0.2% of full scale at 60°C . Technical specifications for 1746-NO8V

Manufacturer Rockwell Automation

Resolution 16-bit $320\text{ }\mu\text{V}/\text{count}$

Module Type Analog output module

Series SLC 500

Part Number/Catalog No. 1746-NO8V

Brand Allen-Bradley

Output wiring Single-ended

Output voltages -10 to +10VDC; -10.25 to +10.25VDC; 0 to 10VDC; 0 to 5VDC and 1 to 5VDC.

Output coding -32,768 to +32,767

Compatible chassis Any 1746 chassis except slot 0

Backplane current consumption 120 mA at 5V dc 160 mA at 24V dc (J4 jumper set to RACK) 0 mA at 24V dc (J4 jumper set to EXT)

Backplane Power consumption 5.6W

SLC Data Formats Scaled engineering units Scaled for PID Proportional counts 1746-NO4 format User-defined scale

Optional Output Data Parameters User defined scale limits Output clamping limit Output alarm limits Ramp rate/limit Preset fault value

Output behavior under fault condition (reset, hold, preset) Alarms latch Reset latched alarms

Outputs 8

Backplane Current (5 Volts) 120 milliamps

Backplane Current (24 Volts) 160 milliamps

Update Time 540 microseconds/8 channel

Step Response 60 milliseconds in, 2.5 milliseconds out

UPC 10781180054577 Description

The Allen-Bradley 1746-NO8V is an analog output module that is compatible for use with SLC 500 controllers. This module provides voltage output signal ranging from $\pm 10.25\text{VDC}$. This module is ideally used to control modulating devices such as valves, dampers, Variable Frequency Drives (VFD), Louvers, and other devices that operate with analog signals.

The 1746-NO8V has Eight (8) output channels with resolution of 16-bits or $320\text{ }\mu\text{V}/\text{count}$. It has output coding of 32,768 to +32,767 and comes with a built-in R-2R Ladder Network as the Digital to Analog (DAC) conversion method. It has an output step response of 1 ms or 0 to 95% of full scale with individual channel update time of 5 ms to update all 8 channels for class 1 and 10 ms to update all 8 channels for class 2.

The 1746-NO8V has an overall accuracy of 0.1% of full scale at 25°C and 0.2% of full scale at 60°C with maximum overall accuracy drift of $\pm 33\text{ ppm}/^{\circ}\text{C}$ of full scale. It has a load range of 1K ohm and greater and with load current of 10 mA (maximum).

Specific nominal output voltages of the 1746-NO8V are -10 to +10VDC; -10.25 to +10.25VDC; 0 to 10VDC; 0 to 5VDC and 1 to 5VDC. Converted analog data, configurable for each channel are Scaled engineering units, Scaled for PID, Proportional counts, 1746-NO4 format and User-defined scale while Optional Output Data Parameters are User defined scale limits, Output clamping limit,

Output alarm limits, Ramp rate/limit, Preset fault value, Output behavior under fault condition (reset, hold, preset), Alarms latch and Reset latched alarms.

The 1746-NO8V has an overall backplane power output of 5.6W and a user-optional DC power source with a power rating of 24V DC. It has an output voltage range within $\pm 10.25V$ DC and uses an R-2R Ladder Digital-to-Analog Converter with a Channel resolution of 16-bits (320 μV /count). The 1746-NO8V has an output step response time of 1ms and it uses approximately 5ms to update signals on all 8 channels. The load range on the 1746-NO8V's outputs can go above 1K Ω and the maximum load current on the outputs is 10mA. The 1746-NO8V has an output impedance less than 1 Ω and a 2.5% ($\pm 10.25V$) over-range capability. It offers an overall output accuracy of 0.2% with a ± 33 ppm/ $^{\circ}C$ drift accuracy and a gain error of 0.15% with an OFFSET drift error of ± 0.53 LSB/ $^{\circ}C$. The 1746-NO8V offers circuit isolation between the field wiring and the backplane to protect the chassis and the processor is tested at 500V DC and uses LED lights to indicate the module and channel status. It has a 0-60 $^{\circ}C$ operational temperature range at a 5-95% non-condensing relative humidity and it is CUL and CE-certified for use in Class I, Division 2 Hazardous Locations. The 1746-NO8V has an operational shock rating of 30G and a vibration of 5G at 10-500Hz.

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