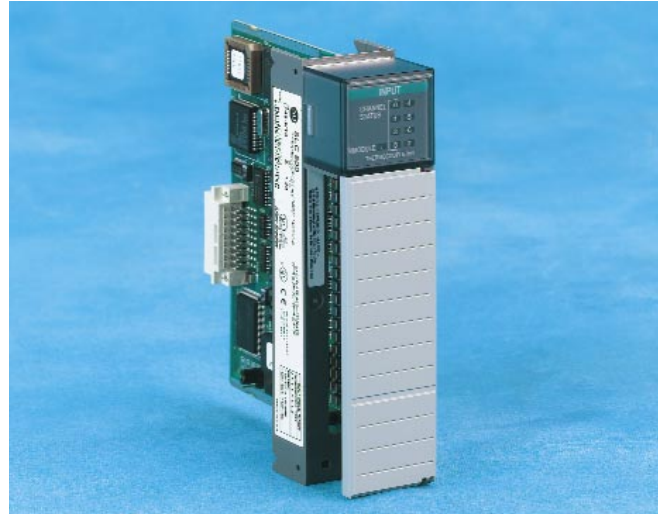


# 1746-NT8 for the SLC 500 Platform



## Product Profile

### A Cost Effective Interface to Thermocouple and Millivolt Sensors



### Enhanced Flexibility

The 1746-NT8 Thermocouple/mV input module expands the present control capabilities of your SLC 500 fixed or modular system by allowing you to directly interface with any of eight types of thermocouple temperature sensors or millivolt sensors such as strain gages. This module greatly enhances the flexibility of SLC 500 applications by eliminating the need for expensive thermocouple transmitters. The 1746-NT8 offers an economical means of addressing process applications for industries requiring temperature measurement and control. It also provides the capability for accepting millivolt signals that are not within the application window of standard analog modules.

### High Density Design and Excellent Performance Characteristics

This new eight-channel module provides more efficient use of rack space and lower cost per point compared to competitive four channel analog modules. A removable terminal block with integrated CJC facilitates wiring and module replacement. The module provides excellent accuracy ranging from  $\pm 1.0^{\circ}\text{C}$  to  $\pm 3.6^{\circ}\text{C}$  (@ $25^{\circ}\text{C}$ ) depending on thermocouple

input type. Cold-junction temperature compensation is fully integrated into the module's removable terminal block to compensate for absolute temperature at the reference junction. The module is also factory calibrated and undergoes auto-calibration when a new filter frequency is selected and every 2 minutes thereafter in order to maintain accuracy. A choice of filter frequencies is also available allowing low filter frequencies to be used for high noise environments and high filter frequencies where fast module updates are required.

### Diagnostic Feedback

Machine uptime is increased and troubleshooting time reduced with the help of diagnostic status bits for open circuit and out of range detection. Eight channel status indicators and a module



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status indicator are also provided. Software Configurable Each channel can be individually configured with the ladder program and can be reconfigured without interrupting CPU operation. Simple bit configuration allows the user to choose the TC type, filtering frequency, data format, and status data best suited for his application. On board scaling is provided eliminating the need to program this function with complex ladder programming.

## Software Configurable

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## 1746-NT8 Specifications

Number of Channels	8
CPU/Remote Chassis Compatibility	Compatible with 5/01 thru 5/05 CPUs plus ASB, ACN15, ACNR15 adapters in remote chassis
Thermocouple/mV Compatibility	J, K, T, E, R, S, B, N, +/-50 mV, +/- 100mV
Accuracy @ 25°C	Ranges from +/- 1.0°C to +/- 3.6°C (+/-1.8°F to +/- 6.5°F) depending on TC type
Accuracy @ 0-60°C (32°F-140°F)	Ranges from +/- 2.5°C to +/- 8.4°C (+/- 4.5°F to +/- 15.12°F) depending on TC type
Channel Update Time	66 msec to 470 msec per enabled channel (dependent on filter selection) plus CJC update time of 290 msec.
Diagnostics	Over & under range status bits, and broken sensor detection.
Auto-Calibration	With filter selection change and every 2 minutes thereafter.
Common Mode Noise Rejection	>100 dB at 50/60 Hz (with 10 Hz, 50 Hz filter)
Normal Mode Noise Rejection	>100 dB at 50/60 Hz (with 10 Hz, 50 Hz filter)
Isolation (Input to backplane)	500 V dc
Isolation (Channel to Channel)	+/- 12.5 V dc

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