

## 8-Channel Universal Analog Input Module for 1746

For use with Voltage, Current, Resistance, RTDs and Thermocouples  
Catalog No. 1746sc-NI8u

### Product Profile



- Eight channels of voltage, current, resistance or thermocouple, input provide a flexible solution to analog monitoring applications. If RTD inputs are required, four channels are exclusively available with the remaining four channels individually configurable as voltage, current, resistance or thermocouple.
- Installs and operates exactly like an Allen-Bradley product for full compatibility
- Ideal for demanding analog applications in industrial environments
- Features 500 Vdc channel-to-backplane isolation; 500 Vdc channel-to-chassis ground isolation; 12.5 Vdc channel-to-channel isolation for voltage, thermocouple, and current input types
- Easily configured by ladder register settings and on-board jumpers
- Provides several input noise filters that are selectable on a channel by channel basis to customize your installation for maximum speed with minimum noise
- Fully auto-calibrating
- Cold junction compensation included for thermocouple applications

### Reduce System Costs

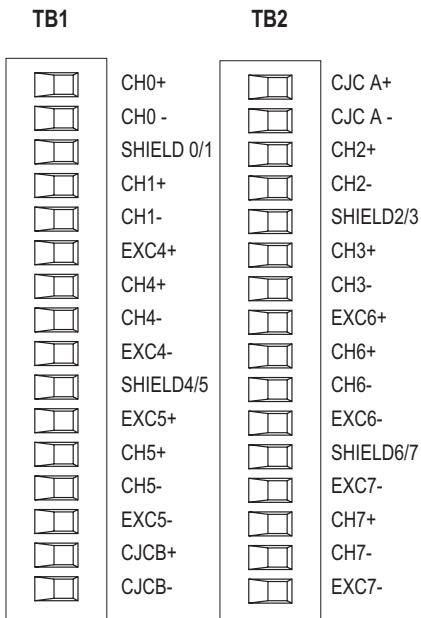
Unsurpassed flexibility is provided with the broad variety of input signals that can be applied. For systems requiring a variety of analog input types, the 1746sc-NI8u can help you save money on I/O racks, power supplies and enclosures.

### Get State-of-the-Art Features

This module incorporates proprietary Allen-Bradley technology so it operates and performs like an Allen-Bradley product. It also provides ladder configuration, and filter frequencies that are programmable separately for each channel. Open circuit detection, high and low signal alarms along with on-board continuous auto-calibration makes this a great choice for monitoring voltage, current, resistance or thermocouple or RTD inputs with a high level of accuracy.

## 1746sc-NI8u Specifications

### 1746sc-NI8u Wiring



Inputs per Module	8 (eight), two groups of four
Module Location	1746 I/O chassis—1 slot
Input Types Thermocouple RTD Resistance Current Voltage	J, K, T, B, E, R, S, N, C PT 385/3916, NI 618/672, CU 426 0-3000 ohms 0-20 mA, 4-20 mA $\pm 50\text{mV}$ , $\pm 100\text{mV}$ , $\pm 0.5\text{V}$ , $\pm 2.0\text{V}$ , 0-5V, 1-5V, 0-10V, $\pm 10\text{V}$
Advanced Features	4 filter frequencies (individually selectable by channel); full auto-calibration; on-board error checking; open circuit detection for most input types, short circuit for RTDs
* Update Times	With eight channels enabled: @ 10 Hz 2.51 sec @ 50 Hz 0.59 sec @ 60 Hz 0.51 sec @ 250 Hz 0.21 sec * = RTD/TC update times may be longer. Update times do not include autocalibration time.
SLC Communication Formats	16-bit two's complement Scaled engineering units Scaled for PID
Electrical Isolation	$\pm 12.5$ Vdc channel-to-channel for all but RTDs 500 Vdc field-wiring-to-backplane 500 Vdc field-wiring-to-chassis-ground 0 Vdc between RTD channels
Input Impedance	>10 Mohm Thermocouple, Voltage, RTD <200 ohm, Current
Input Overvoltage Protection	14.5 Vdc continuous 250W pulsed for 1 msec.
Input Overcurrent Protection	28mA continuous 40mA, 1msec pulsed, 10% duty cycle max
Common Mode Rejection	100 dB @ 50/60 Hz
Normal Mode Rejection	100 dB @ 50/60 Hz
Backplane Current Required	100 mA @ 24 V max 120 mA @ 5 V max
Thermal Dissipation	3.00 Watts, maximum
Environmental Conditions Operational Temperature Storage Temperature Relative Humidity	0° to 60°C (32° to 140°F) -40° to 85°C (-40° to 185°F) 5 to 95% (non-condensing)
Certifications	UL/CUL (Class I, Div 2, Groups ABCD) and CE
Recommended Cable	For TC inputs: Shielded, twisted-pair TC extension wire For mV, V or mA inputs: Belden 8761 or equivalent For RTD inputs: Shielded Belden #9501, #9533 or #83503



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