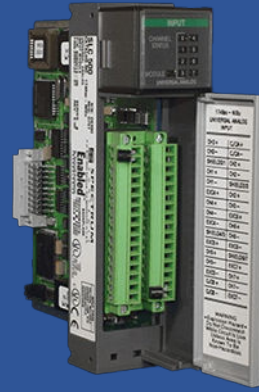


SLC 500™

1746sc-NI8u

8-Channel Universal Analog Input Module



The 1746sc-NI8u Input Module provides full universal analog capability in one I/O module. The 1746sc-NI8u module can replace analog input, thermocouple, and RTD modules without compromising performance or price.

- Eight channels of voltage, current, or two groups of thermocouple or RTD/resistance inputs or 4 RTD/resistance (2-, 3-, or 4-wire).
- 31 input types.
- Use any combination of input types at one time.
- Accuracy comparable with dedicated analog modules.
- Individually programmable for each channel.
- Easy to configure using ladder register settings or RSLogix programming software.
- Channel-selectable filtering for fastest analog update time and noise rejection.
- Cold junction compensation included for thermocouples.

1746sc-NI8u Specifications



Input Types	8 V, C, or TC, or 2 RTD/Res (2 groups of 4 Ch)								
Input Ranges Thermocouple RTD Resistance Current Voltage	J, K, T, B, E, R, S, N, C PT385/3916, Ni618/672, Cu426 0-3000 ohms 0-20 mA, 4-20 mA, ± 50 mV, ± 100 mV, ± 0.5 V ± 2.0 V 0-5 V, 1-5 V, 0-10 V, ± 10 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 (ms) * 8-Channel Sample Time (s)* with TC/RTD; update times may be longer. Autocalibration times not included	<table border="1"> <thead> <tr> <th>10 Hz</th> <th>50 Hz</th> <th>60 Hz</th> <th>250 Hz</th> </tr> </thead> <tbody> <tr> <td>314</td> <td>74</td> <td>64</td> <td>26</td> </tr> </tbody> </table>	10 Hz	50 Hz	60 Hz	250 Hz	314	74	64	26
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314	74	64	26						
Electrical Isolation	± 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 Voltage Current	Greater than 10 Mohm Thermocouple RTD 249 ohm								
Input Overvoltage Protection	± 14.5 VDC continuous 250 W pulsed for 1 ms								
Input Overcurrent Protection	28 mA continuous; 40 mA; 1 ms pulsed; 10% duty cycle maximum								
Backplane Current Required	120 mA at 5 V maximum , 100 mA at 24 V maximum								
Common Mode Rejection	100 dB at 50/60 Hz								
Normal Mode Rejection	100 dB at 50/60 Hz								
Environmental Conditions Operational Temperature Storage Temperature Relative Humidity	-0 °C - 60 °C (32°F - 140 °F) -40 °C - 85 °C (-40 °F - 185 °F) 5% - 95% (non-condensing)								
Thermal Dissipation	3.0 Watts, maximum								
Certifications	UL/cUL Listed ANSI ISA 12.12.01 (Class I, Div 2, Groups ABCD), CE EMC per 89/336/EEC for EMC, UKCA, FCC, CMIM								
Recommended Cable	For TC inputs: shielded, twisted-pair TC extension wire; For RTD, mV, V, or mA inputs: Belden 8761 or equivalent; For RTD inputs: shielded Belden 9501, 9533, 83503								