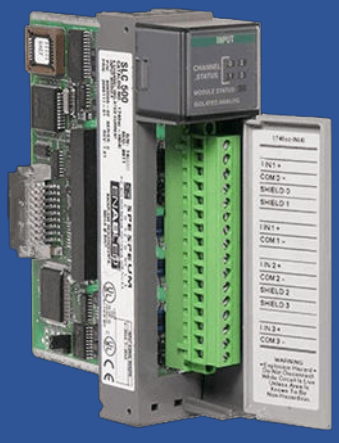
SLC 500™

1746sc-INI4i/ INI4vi

4-Channel Isolated Analog Input Module



The 1746sc-INI4i and 1746sc-INI4vi Modules provide isolated analog input capability for noisy environments in individual I/O modules. The 1746sc-INI4i and 1746sc-INI4vi modules can replace analog input modules without compromising performance or price:

- Four, isolated, current inputs (INI4i), and four isolated current/voltage inputs (INI4vi).
- Six input ranges.
- 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.
- On-board ambient temperature compensation to manage fluctuating ambient temperatures in overcrowded cabinets.

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PN: 0100362-01
Rev. E (March 2025)

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1746sc- INI4i/INI4vi Specifications

Input Types	4 V or V/C inputs (differential)
Input Ranges Current Voltage	 0-20 mA, 4-20 mA 0-5 V, 1-5 V, 0-10 V, ±10 V
Resolution Current Voltage	16 bits 312.8 nA per count 312.8 uV per count
Advanced Features	4 selectable filter frequencies, full auto-calibration, on-board error checking
Update Times (minimum in ms) Current (4 channels) Voltage (4 channels)	 14 ms with 500 Hz filter 18 ms with 500 Hz filter
Step Response Time (typical)	8 ms with 500 Hz filters 67 ms with 60 Hz filters
Electrical Isolation	Field wiring to backplane: 125 VAC continuous Channel-to-channel isolation: 125 VAC continuous
Input Impedance Current Voltage (INI4vi only)	 Less than 250 ohm Greater than 220 Kohm
Input Overcurrent Protection	33 mA continuous; 70 mA (transient)
Input Overvoltage Protection	50 VDC (continuous, INI4vi only)
Common Mode Rejection	99 dB at 1 kHz, 25 °C ; 150 dB at 60 Hz
Normal Mode Rejection	98/98 dB at 50/60 Hz
Accuracy Current Voltage (INI4vi only)	25 °C 60 °C 0.10% of full scale 0.25% of full scale 0.25% of full scale 0.25% of full scale
Backplane Current Required INI4i INI4vi	 440mA at 5 V; 0 mA at 24 V (typical) 550 mA at 5 V; 0 mA at 24 V (typical)
Environmental Conditions Operational Temperature: Storage Temperature: Relative Humidity	 0 °C to 60 °C (32 °F to 140 °F) -40 °C to 85 °C (-40 °F to 185 °F) 5 to 95% (non-condensing)
Thermal Dissipation	3.25 Watts, maximum
Certifications	UL/cUL Listed ANSI ISA 12.12.01 (Class I, Div 2, Groups ABCD), CE per 89/336/EEC for EMC, UKCA, FCC, CMIM
Recommended Cable	Shielded twisted-pair; Belden 8761 or equivalent

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