

FLEX IO™

1794sc-IRT8I

8-Channel Isolated Thermocouple RTD Input Module



The 1794sc-IRT8I Input Module provides full isolated, Thermocouple, RTD/Resistance input capability for noisy environments, in one I/O module. The 1794sc-IRT8I module can replace Thermocouple, Resistance/RTD modules without compromising performance or price:

- Eight channels of thermocouple, RTD/resistance.
- 22 input types.
- Use any combination of input types at one time.
- Supports multiple thermocouple and RTD input types.
- Individually programmable input type, open circuit detection, and high and low range alarms 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.
- Accuracy comparable with dedicated analog modules.

1794sc-IRT8I Specifications



Input Types	8 TC, RTD/Res
Input Ranges: Thermocouple RTD Resistance	J, K, T, E, R, B, S, N, C T385/3916, Ni618/672, NiFe518, Cu426 0-150, 0-1000, 0-3000 ohms
Resolution	16 bits
Advanced features	6 filter frequencies (individually selectable by channel)
Update Times (sec) * 8-Channel Sample Time (sec) *with TC, update times may be longer	4.17Hz 10 Hz 16.7 Hz 19.6 Hz 62 Hz 470 Hz 0.30 0.63 0.53 0.15 0.09 0.07
Electrical Isolation (continuous)	120 VAC channel-to-channel isolation 120 VAC field-wiring-to-backplane 120 VAC field-wring-to-chassis-ground
Input Impedance	Greater than 1 Mohm thermocouple, voltage, RTD Less than 250 ohm, current
Input Overvoltage Protection	+24 VDC continuous
Input Overcurrent Protection	31 mA continuous
Backplane Current Required	240 mA at 24 V maximum (19.1 VDC to 31.2 VDC); 80 mA at 5 VB
Common Mode Rejection	60 dB at 50/60 Hz
Normal Mode Rejection	65 dB at 50/60 Hz (20 Hz filter); 70 dB at 50/60 Hz (4.17 Hz filter)
Environmental Conditions	
Operational Temperature	0 °C -+55 °C (32 °F - +131 °F)
Storage Temperature	-40 °C - +85 °C (-40 °F - +185 °F)
Relative Humidity	5% - 95% (non-condensing)
Thermal Dissipation	5.18 Watts
Certifications	UL/cUL Listed ANSI ISA 12.12.01 (Class I, Div 2, Groups ABCD), CE, ATEX, CCC, CMIM, UKCA, IECEEx
Terminal Base	1794-TB3G