

F-8019

8-channel Isolated Thermocouple Input Redundant Module



Model: F-8019

Features

- 8 thermocouple input channels
- User defined up/down scale
- Open wire detection
- RoHS compliance
- 3000 VDC isolation from output to backplane
- 3000 VDC isolation from output to frame ground
- Redundancy
- Fast redundant switching time (<100us)

Introduction

The F-8019 is a 16-bit, 8-channel thermocouple input module that features programmable input range on all channels. It measures millivolt input ($\pm 15\text{mV}$, $\pm 50\text{mV}$, $\pm 100\text{mV}$, $\pm 150\text{mV}$, $\pm 500\text{mV}$), voltage input ($\pm 1\text{V}$, $\pm 2.5\text{V}$, $\pm 5\text{V}$, $\pm 10\text{V}$) and thermocouple input (Type J, K, T, E, R, S, B, N, C). An external CJC is supported for accurate temperature measurement. Moreover, this module has $\pm 0.05\%$ accuracy for highly accurate application. Besides, the F-8019 provides 3000VDC optical isolation between channels and backplane bus. If any high voltage or current damages these channels, this module won't affect other component in iDCS-8000 system.

Applications

- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

Specifications

Feature	
Redundant	Yes (Switching time < 100us)
Over Voltage Protection	Yes
Resolution	Yes
Sampling Rate	Yes
Accuracy	1 RUN, 1 ACT, 1 DUX
Thermocouple Input	
Number of channels	8
Type	$\pm 15\text{mV}$, $\pm 50\text{mV}$, $\pm 100\text{mV}$, $\pm 150\text{mV}$, $\pm 500\text{mV}$, $\pm 1\text{V}$, $\pm 2.5\text{V}$, $\pm 5\text{V}$, $\pm 10\text{V}$, Type J, K, T, E, R, S, B, N, C

Temperature Range	J	-210 ~ +1200 °C
	K	-270 ~ +1372 °C
	T	-270 ~ +400 °C
	E	-270 ~ +1000 °C
	R	-50 ~ +1765 °C
	S	-50 ~ +1765 °C
	B	0 ~ +1820 °C
	N	-270 ~ +1300 °C
	C	0 ~ +2320 °C
Maximum Allowable Input Voltage	120 VDC	
Resolution	16 bit	
Sampling Rate	8 Samples/sec (Total)	
Accuracy	±0.05% FSR	
Zero Drift	±0.5 µV/°C	
Span Drift	±20 ppm/°C	
Common Mode Rejection	106 dB	
Normal Mode Rejection	90 dB	
Input Impedance	10 MΩ	
Data Range	-2500 ~ 12500	
Isolation	3000 VDC	
Certification		
EMC	EN61000-6-2, EN61000-6-4, IEC/EN 61000-4-2, IEC/EN 61000-4-4	
General		
Termination board	DN-TC-M	
Maximum power consumption	1.3 W	
Operating temperature	-25°C ~ +75°C	
Humidity	5 ~ 95 % RH, Non-condensing	
Weight	300 g	
Dimensions (W x L x H)	30 mm x 85 mm x 115 mm	

Ordering Information

F-8019 CR	8-channel Isolated Thermocouple Input Redundant Module (Gray Cover)(RoHS)
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Accessories

DN-37-A	I/O Connector Block with DIN-Rail Mounting and 37-pin D-sub Connector (pitch: 5.08 mm)
DN-37-381-A	I/O Connector Block with DIN-Rail Mounting and 37-pin D-sub Connector (pitch: 3.81 mm)
DN-TC-M	Termination board for thermocouple input modules
CA-01	D-Sub 37pin Female-Male 1m Cable
CA-02	D-Sub 37pin Female-Male 2m Cable
CA-03	D-Sub 37pin Female-Male 3m Cable
CA-05	D-Sub 37pin Female-Male 5m Cable