SJ-ETHER/SJ Series

Analog Module

RTD Input Module《4 Channels》

C0-04RTD

General Specifications

Items	Specifications
Field to Logic Side Isolation	No isolation
External DC Power Required	None
Bus Power Required (24 V DC)	25 mA
Thermal Dissipation	2.047 BTU/hour
Terminal Block Replacement	ADC p/n C0-16TB
Weight	86 g

Input Specifications

Items	Specifications
Number of Channels	4
Common Mode Signal Range	±2.5 V
Common Mode Rejection	100 dB at DC and 100 dB at 50/60 Hz
Input Impedance	> 5 MΩ
Absolute Maximum Rating	Failure-resistant input to ±50 V DC
Display Resolution	±0.1°C or °F, 0.1Ω or 0.01 Ω
Input Range*	Pt100 Type: -200.0°C to 850.0°C, (-328°F to 1,562°F) Pt1000 Type: -200.0°C to 595.0°C, (-328°F to 1,103°F) jPt100 Type: -100°C to 450°C (-148°F to 842°F) 10 Ω Cu: -200°C to 260°C (-328°F to 500°F) 25 Ω Cu: -200°C to 260°C (-328°F to 500°F) 120 Ω Ni: -80°C to 260°C (-112°F to 500°F) 0 to 3,125.0 Ω: Resolution 0.1 Ω 0 to 1,562.5 Ω: Resolution 0.1 Ω 0 to 781.2 Ω: Resolution 0.1 Ω 0 to 390.62 Ω: Resolution 0.01 Ω 0 to 195.31 Ω: Resolution 0.01 Ω
RTD Linearization	Automatic
Excitation Current (All Ranges)	210 µA
Accuracy Against Temperature	Maximum ±10 ppm/°C
RTD Input Maximum Inaccuracy	±3°C (Excluding RTD error); ±5°C (Ranges Cu10 and Cu25)
RTD Linearity Error (End-to-end)	±2°C maximum, ±0.5°C typical, monotonic with no missing codes
Resistance Input Maximum Zero Scale Error	±0.0015% of full scale range in ohms (Negligible)
Resistance Input Maximum Full Scale Error	±0.02% of full scale range
Maximum Linearity Error	±0.015% of full scale range maximum at 25°C, monotonic with no missing codes
Resistance Maximum Input Inaccuracy	0.1% at 0°C to 60°C (32°F to 140°F), typical 0.04% at 25°C (77°F)
Warm Up Time	30 minutes for ±1°C repeatability
Sample Duration Time	240 ms
All Channel Update Rate	Single channel update rate times the number of enabled channels on the module
Open Circuit Detection Time	Positive full-scale reading within 2 seconds
Conversion Method	Sigma - Delta

* While it is possible to use different resistive ranges, we recommend using the narrowest range that covers the resistance being measured. For example, if measuring approximately 100 Ω resistance, use the 0 to 195.31 Ω range. While the resolution is the same as the 0 to 390.62 Ω range, output RMS noise will be lower and stability will be improved.

Initialization Time

The Number of Channels Used	The same Input Type is selected for all Channels	Mixed Input Types are selected
1	4 sec	N/A
2	5 sec	May take up to 13 sec
3	6 sec	May take up to 18 sec
4	7 sec	May take up to 24 sec

Wiring Diagram