



I-7018R

8-channel Analog Input Module with High Voltage Protection

Introduction

I-7018R is an analog input module with an extremely excellent protection mechanism where over voltage protection is up to 240 Vrms. Its input type includes current, voltage as well as thermocouple. Naturally, I-7018R is an upgraded version of I-7018; the only difference is that the I-7018R is much more suitable for critically harsh environment! Moreover, a newly-added feature for open thermocouple detection makes I-7018R more sweet than ever. I-7018R also has qualification for 4kV ESD protection and 3000VDC intra-module isolation.

Analog Input

Features

- Current Input, Voltage Input and Thermocouple Input
- Over Voltage Protection is up to 240 Vrms
- High Resolution: 16 bit
- Open Thermocouple Detection
- 4kV ESD Protection
- 3000 V_{dc} Intra-Module Isolation
- Dual Watchdog
- RoHS Compliance
- Wide Range of Operating Temperature: -25 ~ +75 °C



Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote diagnosis, Testing Equipment.

I/O Specifications

Analog Input	
Input Channels	8 (Differential)
Input Type	Thermistor
Thermistor Type	+/-15 mV, +/-50 mV, +/-100 mV, +/-500 mV, +/-1V, +/-2.5V, +/-20 mA (requires optional external 125 ohm resistor) Thermocouple Type J, K, T, E, R, S, B, N, C, L, M
Resolution	16-bit
Sampling Rate	10 Sample/Sec.
Accuracy	+/-0.1% of F.S.R.
Zero Drift	+/-10 μ V/°C
Span Drift	+/-25 ppm/°C
Bandwidth	15.7 Hz
Common Mode Rejection	86 dB Min.
Normal Mode Rejection	100 dB
Input Impedance	>400k Ω
Over Voltage Protection	240 Vrms
Open Thermocouple Detection	Yes
ESD Protection	+/-4 kV (Contact for each channel)
Intra-module Isolation, Field to Logic	3000 V _{dc}

Note: We recommend to choose I-7018Z for accurate thermocouple measurement.

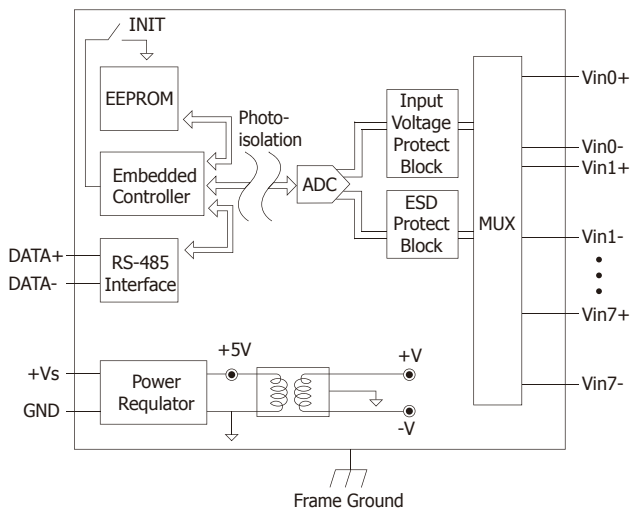
System Specifications

Interface	
Interface	RS-485
Format	N, 8, 1
Baud Rate	1200 ~ 115200 bps
LED Display	1 LED as Power/Communication Indicator
Power	
Input Voltage Range	+10 V _{dc} ~ +30 V _{dc}
Power Consumption	1.8 W
Environment	
Operating temperature	-25 °C ~ +75 °C
Storage temperature	-40 °C ~ +85 °C
Humidity	10 ~ 95% RH, non-condensing
Dimensions	
	72 mm x 121 mm x 35 mm (W x L x H)

Thermocouple Type

Type Cod	Thermocouple Type	Temperature Range
0E	Type J	-210 °C ~ +760 °C
0F	Type K	-270 °C ~ +1372 °C
10	Type T	-270 °C ~ +400 °C
11	Type E	-270 °C ~ +1000 °C
12	Type R	0 °C ~ +1768 °C
13	Type S	0 °C ~ +1768 °C
14	Type B	0 °C ~ +1820 °C
15	Type N	-270 °C ~ +1300 °C
16	Type C	0 °C ~ +2320 °C
17	Type L	-200 °C ~ +800 °C
18	Type M	-200 °C ~ +100 °C
19	Type L2(DIN43710)	-200 °C ~ +900 °C

Internal I/O Structure

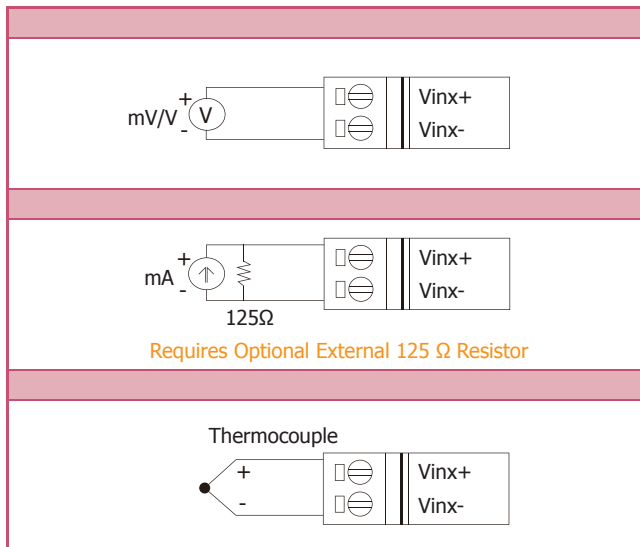


Pin Assignment

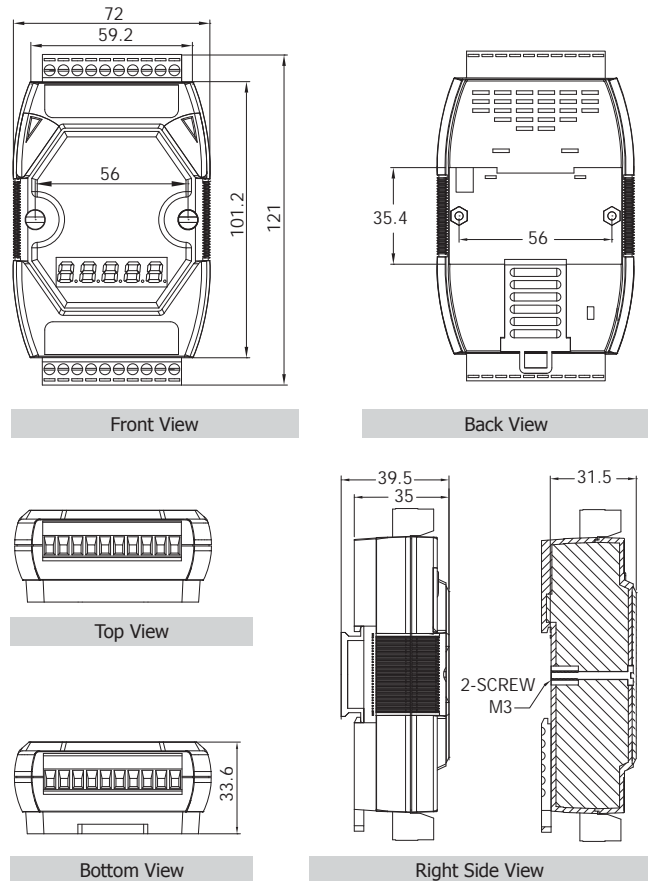
Terminal No.	Pin Assignment
01	Vin5+
02	Vin5-
03	Vin6+
04	Vin6-
05	Vin7+
06	Vin7-
07	(Y)DATA+
08	(G)DATA-
09	(R)+Vs
10	(B)GND

Terminal No.	Pin Assignment
20	Vin4-
19	Vin4+
18	Vin3-
17	Vin3+
16	Vin2-
15	Vin2+
14	Vin1-
13	Vin1+
12	Vin0-
11	Vin0+

Wire Connection



Dimensions (Unit: mm)



Ordering Information

I-7018R CR	8-channel Analog Input Module with High Voltage Protection (RoHS)
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Related Products

Converters	USB, RS-232, Fiber Optical to RS-485 Converters and Repeaters
Power Supply	24 Vdc Power Supply
Relay Module	External Relay Modules for I-7000 DO Module
125 Ω, 0.1% DIP Resistors	Use for Current Type of I-7011/I-7012/I-7017/I-7018 Series

Learning Kit	Starter Learning Kit
Application Books	Application Books Designed with Our Products
Data Logger Software	User Friendly Data Logger Software (free)