



I-7011(D)

M-7011(D)

1-channel Thermocouple Input Module

Features

- 1-channel Analog Input
- Current Input, Voltage Input and Thermocouple Input
- Open Thermocouple Detection
- High Resolution: 16-bit
- 50 Hz Event Counter for Digital Input
- High/Low Alarm for Digital Output
- 3000 Vdc Intra-Module Isolation
- Dual Watchdog
- Wide Operating Temperature Range: -25 ~ +75°C



Introduction

I-7011 features current input, voltage input as well as thermocouple input and there is 1-channel analog input available for your consideration. It provides 1-channel digital input as 50 Hz event counter and 2-channel digital output as high/low alarm. The module also features open wire detection for thermocouple and 3000 Vdc intra-module isolation. M-7011 supports Modbus RTU and DCON protocols which can be configured via software and all hardware specifications are the same as I-7011.

Applications

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

I/O Specifications

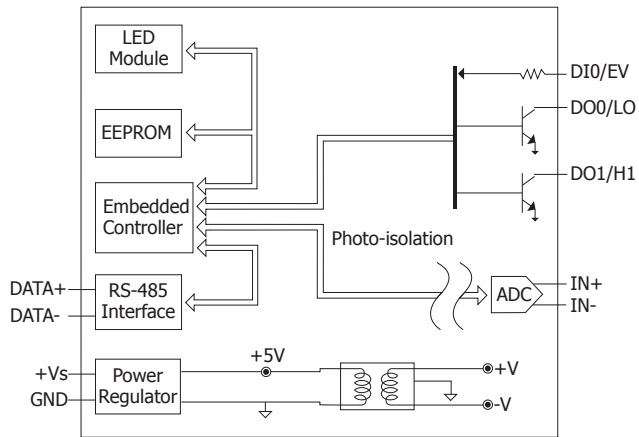
Models	I-7011	I-7011D	M-7011	M-7011D
Analog Input				
Channels	1			
Wiring	Differential			
Sensor Type	Thermocouple	J, K, T, E, R, S, B, N, C		
	Voltage	+/-1.5 mV, +/-50 mV, +/-100 mV, +/-500 mV, +/-1 V, +/-2.5 V		
	Current	+/-20 mA (requires optional external 125 Ω resistor)		
Resolution	16-bit			
Accuracy	0.1%			
Sampling Rate	10 Hz			
Input Impedance	> 400 kΩ			
Common Voltage Protection	+/-5 Vdc			
Individual Channel Configuration	-			
Overvoltage Protection	+/-5 Vdc			
Open Wire Detection (for thermocouple only)	Yes			
Temperature Outputs Consistency	-			
Stable Temperature Output in the Field	-			
Digital Input				
Channels	1			
Contact	Dry			
Sink/Source (NPN/PNP)	Source			
On Voltage Level	Close to GND			
Off Voltage Level	Open			
Counter (50 Hz, 16-bit)	Yes			
Input Impedance	3 kΩ			
Overvoltage Protection	+/-30 Vdc			
Digital Output				
Channels	Open Collector			
Type	Open Collector			
Sink/Source (NPN/PNP)	Sink			
Load Voltage	3.5 ~ 30 Vdc			
Max. Load Current	30 mA/Channel			
Power-on Value	Yes			
Safe Value	Yes			

System Specifications

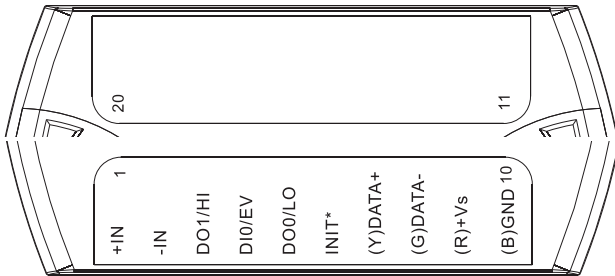
Models	I-7011	I-7011D	M-7011	M-7011D
Communication				
Interface	RS-485			
Format	N, 8, 1			
Baud Rate	1200 ~ 115200 bps			
Protocol	DCON			
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)			
LED Indicator/Display				
System LED Indicator	Yes, 1 LED as Power/Communication Indicator			
I/O LED Indicator	-			
7-Segment LED Display	-	Yes	-	Yes
Isolation				
Intra-Module Isolation, Field-to-Logic	3000 Vdc			
EMS Protection				
ESD (IEC 61000-4-2)	-			
EFT (IEC 61000-4-4)	-			
Power				
Reverse Polarity Protection	Yes			
Input Range	10 ~ 30 Vdc			
Consumption	0.9 W	1.5 W	0.9 W	1.5 W
Mechanical				
Dimensions (W x L x H)	72 mm x 123 mm x 35 mm			
Installation	DIN-Rail or Wall Mounting			
Environment				
Operating Temperature	-25 ~ +75°C			
Storage Temperature	-40 ~ +85°C			
Humidity	10 ~ 95% RH, Non-condensing			



Internal I/O Structure



Pin Assignments



Wire Connections

Voltage Input Wire Connection		Current Input Wire Connection	
		<p>Requires Optional External 125 Ω Resistor</p>	
Thermocouple Input Wire Connection			
Digital Input/Counter	Readback as 1	Readback as 0	
	Open	Closed to GND	
Dry Contact			
Digital Output	ON State Readback as 1	OFF State Readback as 0	
Resistance Load			
Inductance Load			

Ordering Information

I-7011 CR	1-channel Thermocouple Input Module with DCON Protocol (Blue Cover) (RoHS)
I-7011D CR	I-7011 with 7-Segment LED Display (Blue Cover) (RoHS)
M-7011-G CR	1-channel Thermocouple Input Module with DCON and Modbus Protocol (Gray Cover) (RoHS)
M-7011D-G CR	M-7011 with 7-Segment LED Display (Gray Cover) (RoHS)



PLCs



Acquisition



Instruments



Data logger



Power



HMIs



Switches



Motion



Sensors



Converters



Keyboards



SCADA



Telemetry