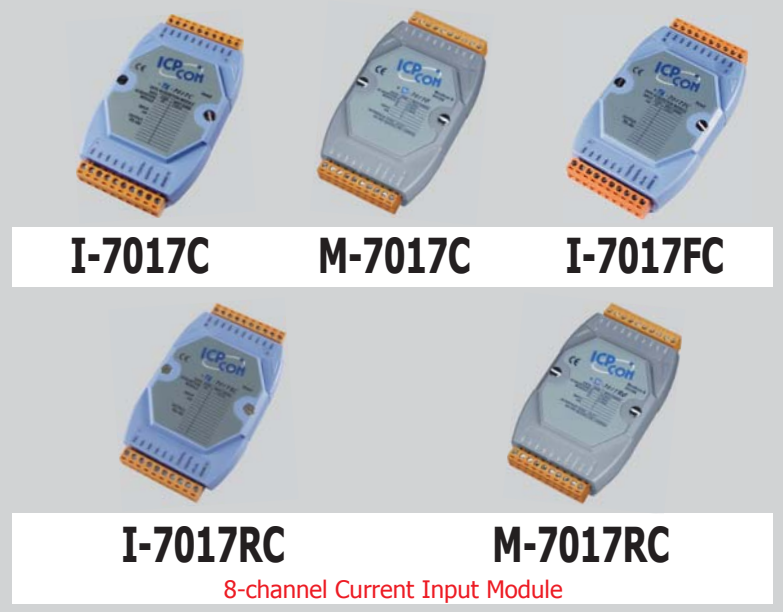


8-channel Current Input Module

Features

- I-7017RC and M-7017RC
  - ±200 VDC Common Voltage Protection
  - Supports Fast and Normal Mode
- I-7017FC
  - Supports Fast and Normal Mode
- Current Input Only
- Built-in Resistor to simplify Current measurement
- Open Wire Detection for 4 ~ 20 mA input
- 3000 VDC Intra-module Isolation
- 4 kV ESD Protection
- RoHS Compliance
- Wide Operating Temperature Range: -25 ~ +75°C

Introduction

The I-7017C is an 8-channel current input module that is specifically designed to measure current only. Its user-friendly design saves both time and effort when measuring a current thanks to a built-in resistor, meaning that you can now measure current directly. The I-7017RC is an upgraded version of the I-7017C, with the only difference being that the I-7017RC is much more suitable for critically harsh environments. The I-7017RC also has 4 kV ESD protection and +/- 200 VDC common voltage as current input protection, and also features 3000 VDC intra-module isolation and open wire detection for 4 ~ 20 mA input. The sampling rate of the I-7017RC and I-7017FC is adjustable, meaning that either fast mode or normal mode can be selected. The M-7017C and M-7017RC has the same specifications as the I-7017C and M-7017RC, but provides additional support for the Modbus RTU protocol as well as the DCON protocol.

System Specifications

Model	I-7017C M-7017C	I-7017RC M-7017RC	I-7017FC
Communication			
Interface	RS-485		
Format	(N, 8, 1), (N, 8, 2), (E, 8, 1), or (E, 8, 2)		
Baud Rate	1200 ~ 115200 bps		
Protocol	DCON		
	Modbus RTU, DCON		
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)		
LED Indicators/Display			
System LED Indicator	Yes, 1 LED as Power/Communication Indicator		
I/O LED Indicators	-		
7-Segment LED Display	-		
Isolation			
Intra-module Isolation, Field-to-Logic	3000 VDC		
EMS Protection			
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal		
EFT (IEC 61000-4-4)	±4 kV to Power Line		
Surge (IEC 61000-4-5)	±0.5 kV for Power Line		
Power			
Reverse Polarity Protection	Yes		
Input Range	10 ~ 30 VDC		
Consumption	1.3 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		

Applications

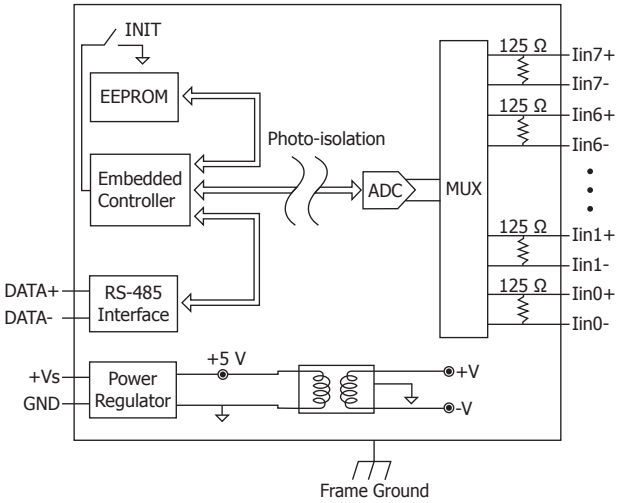
- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

I O Specifications

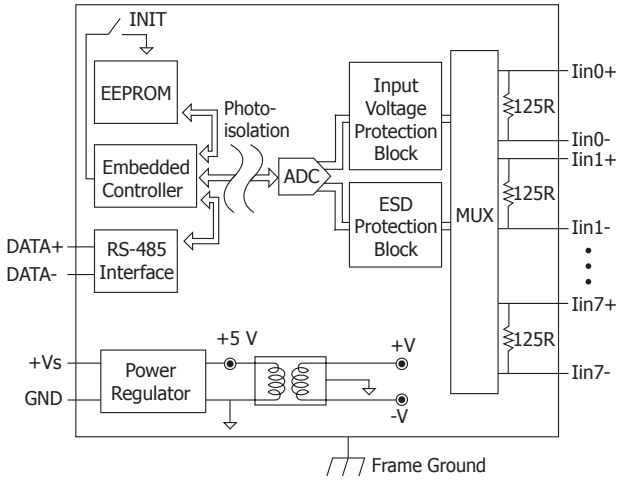
Model		I-7017C M-7017C	I-7017RC M-7017RC	I-7017FC
Analog Input				
Channels		8		
Wiring		Differential		
Input Range		±20 mA, 0 ~ 20 mA, 4 ~ 20 mA		
Resolution		16-bit		
Accuracy	Normal Mode	0.1 %		
	Fast Mode	-	0.5 %	
Sampling Rate	Normal Mode	10 Hz		
	Fast Mode	-	60 Hz	
Input Impedance	Voltage	-		
	Current	125 Ω		
Common Voltage Protection		±15 VDC	±200 VDC	±15 VDC
Individual Channel Configuration		-		
Overvoltage Protection		-		
Overcurrent Protection		Yes, 50 mA at 110 VDC		
Virtual Channel to Channel Isolation		-	Yes, 400 VDC	-
Open Wire Detection for 4 ~ 20 mA		Yes		

Internal I/O Structure

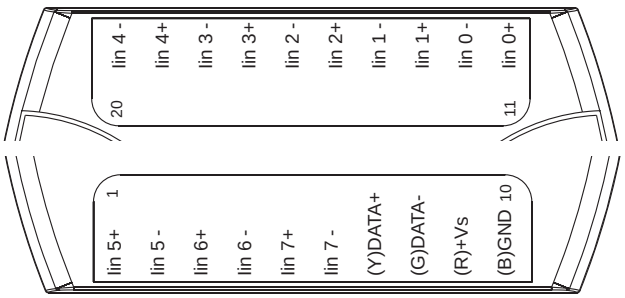
I-7017C/M-7017C/I-7017FC



I-7017RC/M-7017RC

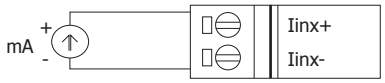


Pin Assignments

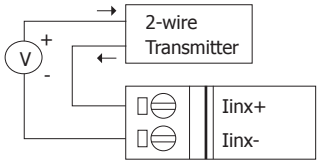


Wire Connections

Current Input Wire Connection



2-wire Transmitter Wire Connection



Ordering Information

I-7017C CR	8-channel Current Input Module using the DCON Protocol (Blue Cover) (RoHS) Art. No. 113313
M-7017C-G CR	8-channel Current Input Module using the DCON and Modbus Protocol (Gray Cover) (RoHS) Art. No. 116930
I-7017FC CR	8-channel Current Input Module using the DCON Protocol (fast sampling version) (Blue Cover) (RoHS) Art. No. 113907
I-7017FC-G CR	8-channel Current Input Module using the DCON Protocol (fast sampling version) (Gray Cover) (RoHS)
I-7017RC CR	8-channel Analog Input Module using the DCON Protocol with High Voltage Protection (Blue Cover) (RoHS) Art. No.
I-7017RC-G CR	8-channel Analog Input Module using the DCON Protocol (Gray Cover) (RoHS)
M-7017RC-G CR	8-channel Analog Input Module using the DCON and Modbus RTU Protocol with High Voltage Protection (Gray Cover) (RoHS) Art. No.115963

Accessories

	tM-7520U CR	RS-232 to RS-485 Converter (RoHS)	
	tM-7561 CR	USB to RS-485 Converter (RoHS)	
	tM-SG4 CR	RS-485 Bias and Termination Resistor Module (RoHS)	
	I-7514U CR	4-channel RS-485 Hub (RoHS)	
	SG-770 CR	7-channel Differential or 14-channel Single-ended Surge Protector (RoHS)	
	SG-3000 Series	Signal Conditioning Modules for Thermocouple, RTD, DC Voltage, DC Current and Power Input transformers	