

8-channel Current Input Module

## Features

- I-7017RC and M-7017RC
  - $\pm 200$  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 to +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	I-7017RC	I-7017FC
	M-7017C	M-7017RC	
<b>Communication</b>			
Interface	RS-485		
Bias Resistor	No (Usually supplied by the RS-485 Master. Alternatively, add a tM-SG4 or SG-785.)		
Format	(N, 8, 1), (N, 8, 2), (E, 8, 1), or (E, 8, 2)		
Baud Rate	1200 to 115200 bps		
Protocol	DCON		
	Modbus RTU, DCON		
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)		
<b>LED Indicators/Display</b>			
System LED Indicator	Yes, 1 as Power/Communication Indicator		
I/O LED Indicators	-		
7-segment LED Display	-		
<b>Isolation</b>			
Intra-module Isolation, Field-to-Logic	3000 Vdc		
<b>EMS Protection</b>			
ESD (IEC 61000-4-2)	$\pm 4$ kV Contact for each Terminal		
EFT (IEC 61000-4-4)	$\pm 4$ kV to Power Line		
Surge (IEC 61000-4-5)	$\pm 0.5$ kV for Power Line		
<b>Power</b>			
Reverse Polarity Protection	Yes		
Input Range	+10 ~ +30 Vdc		
Consumption	1.3 W		
<b>Mechanical</b>			
Dimensions (L x W x H)	123 mm x 72 mm x 35 mm		
Installation	DIN-Rail or Wall Mounting		
<b>Environment</b>			
Operating Temperature	-25 to +75°C		
Storage Temperature	-40 to +85°C		
Humidity	10 to 95% RH, Non-condensing		

## Applications

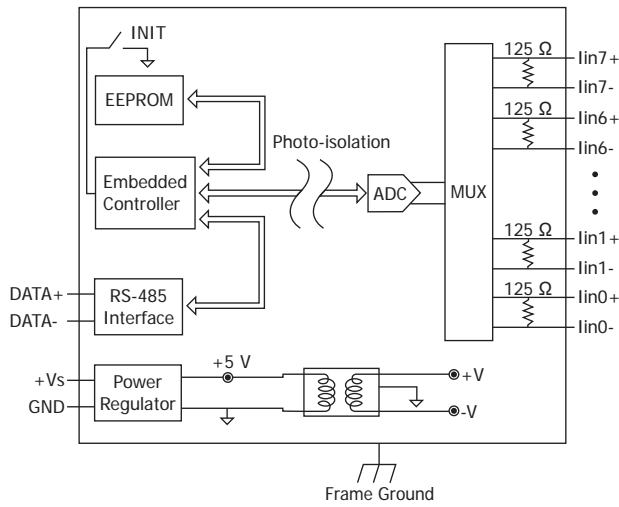
- Building Automation
- Machine Automation
- Remote Diagnosis
- Factory Automation
- Remote Maintenance
- Testing Equipment

## I/O Specifications

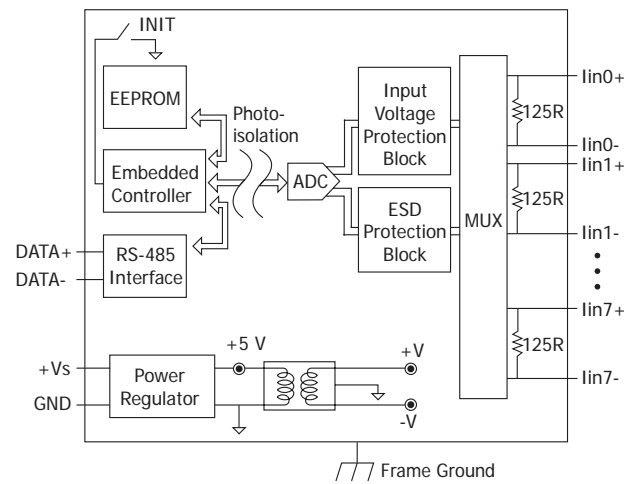
Model	I-7017C	I-7017RC	I-7017FC
	M-7017C	M-7017RC	
<b>Analog Input</b>			
Channels	8		
Wiring	Differential		
Input Range	$\pm 20$ mA, 0 ~ 20 mA, 4 ~ 20 mA		
Resolution	16-bit		
Accuracy	Normal Mode	0.1 %	
	Fast Mode	-	0.5 %
Sampling Rate	Normal Mode	10 Hz	
	Fast Mode	-	60 Hz
Input Impedance	Voltage	-	
	Current	125 $\Omega$	
Common Voltage Protection	$\pm 15$ Vdc	$\pm 200$ Vdc	$\pm 15$ 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

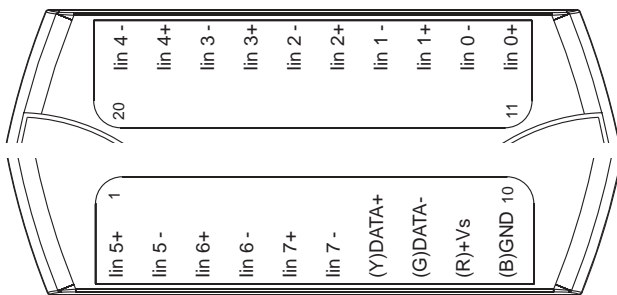
I-7017C/M-7017C/I-7017FC



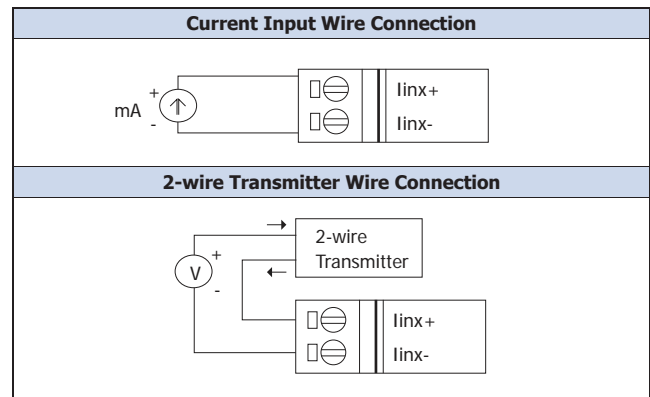
I-7017RC/M-7017RC



## Pin Assignments



## Wire Connections



## Ordering Information

<b>I-7017C CR</b>	8-channel Current Input Module using the DCON Protocol (Blue Cover) (RoHS)
<b>M-7017C-G CR</b>	8-channel Current Input Module using the DCON and Modbus Protocol (Gray Cover) (RoHS)
<b>I-7017FC CR</b>	8-channel Current Input Module using the DCON Protocol (fast sampling version) (Blue Cover) (RoHS)
<b>I-7017FC-G CR</b>	8-channel Current Input Module using the DCON Protocol (fast sampling version) (Gray Cover) (RoHS)
<b>I-7017RC CR</b>	8-channel Analog Input Module using the DCON Protocol with High Voltage Protection (Blue Cover) (RoHS)
<b>I-7017RC-G CR</b>	8-channel Analog Input Module using the DCON Protocol (Gray Cover) (RoHS)
<b>M-7017RC-G CR</b>	8-channel Analog Input Module using the DCON and Modbus RTU Protocol with High Voltage Protection (Gray Cover) (RoHS)

## 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