



## M-2217CI-4    M-2217CI

Channel to Channel Isolation 4/8-channel differential analog Inputs

### Features

- 3000 VDC Channel-to-Channel Isolation
- M-2217CI-4: 4-channel differential analog inputs
- M-2217CI: 8-channel differential analog inputs
- Current, Voltage Input
- 120 VDC Overvoltage Protection
- Resolution: 12/16 bits
- Adjustable Sampling Rate
- Wide Operating Temperature Range: -25 ~ 75 °C



### Introduction

The M-2217CI is a Channel to Channel Isolation analog input module that includes 8 differential analog input channels and provides a programmable input range on all analog inputs ( $\pm 1$  V,  $\pm 2.5$  V,  $\pm 5$  V,  $\pm 10$  V,  $\pm 20$  mA). It provides a high overvoltage protection of 120 VDC. The sampling rate of the M-2217CI is adjustable and is available in either fast or normal mode and It also provides 4 kV ESD protection as well as 3750 VDC intra-module isolation.

The M-2217CI-4 has the same specifications as the M-2217CI, but provides 4 differential analog input channels.

### System Specifications

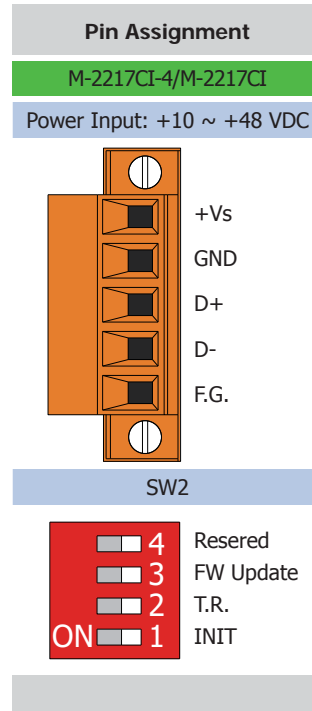
Module	M-2217CI-4	M-2217CI
<b>Communication</b>		
Interface	RS-485	
Bias Resistor	10 k $\Omega$ resistor	
Format	N81, N82, E81, O81	
Baud Rate	1200 to 115200 bps	
Protocol	Modbus RTU, DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)	
<b>LED Indicators/Display</b>		
System LED Indicator	Yes, 1 as Power/Communication Indicator	
I/O LED Indicators	-	
<b>Isolation</b>		
Intra-module Isolation, Field-to-Logic	3750 Vdc	
<b>EMS Protection</b>		
ESD (IEC 61000-4-2)	$\pm 4$ kV Contact for each Terminal	
	$\pm 8$ kV Air for Random Point	
EFT (IEC 61000-4-4)	$\pm 4$ kV for Power Line	
Surge (IEC 61000-4-5)	$\pm 2$ kV for Power Line	
<b>Power</b>		
Reverse Polarity Protection	Yes	
Input Range	+10 ~ +48 Vdc	
Consumption	5.4 W (Max.)	
<b>Mechanical</b>		
Dimensions (W x L x H)	33 mm x 176 mm x 130 mm	
Installation	DIN-Rail Mounting	
<b>Environment</b>		
Operating Temperature	-25 to +75 °C	
Storage Temperature	-30 to +80 °C	
Humidity	10 to 90% RH, Non-condensing	

### I/O Specifications

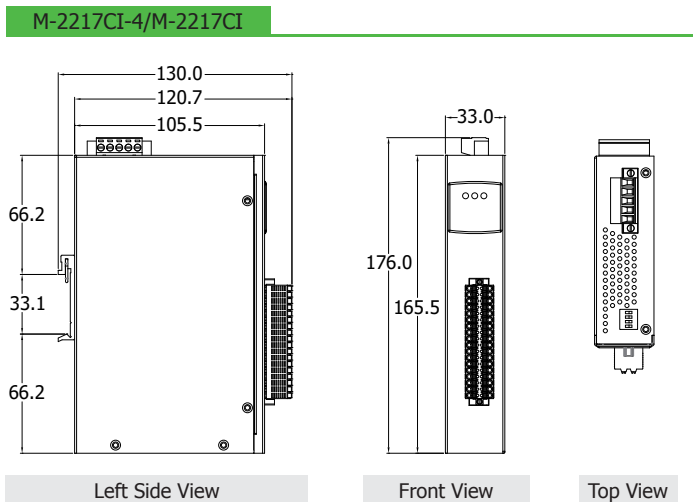
Module	M-2217CI-4	M-2217CI
<b>Analog Input</b>		
Channels	4 Differential	8 Differential
Type	Voltage	$\pm 1$ V, $\pm 2.5$ V, $\pm 5$ V, $\pm 10$ V
	Current	$\pm 20$ mA
Resolution	Normal Mode	16-bit
	Fast Mode	12-bit
Accuracy	Normal Mode	$\pm 0.1\%$ of FSR
	Fast Mode	$\pm 0.5\%$ of FSR
Sampling Rate	Normal Mode	10 Hz (Total)
	Fast Mode	200 Hz (Total)
Zero Drift	$\pm 20$ $\mu$ V/ $^{\circ}$ C	
Span Drift	$\pm 25$ ppm/ $^{\circ}$ C	
Input Impedance	20 M $\Omega$	
Overvoltage Protection	120 Vdc	
Channel-to-Channel Isolation	Yes, 3000 Vdc	

## Pin Assignments

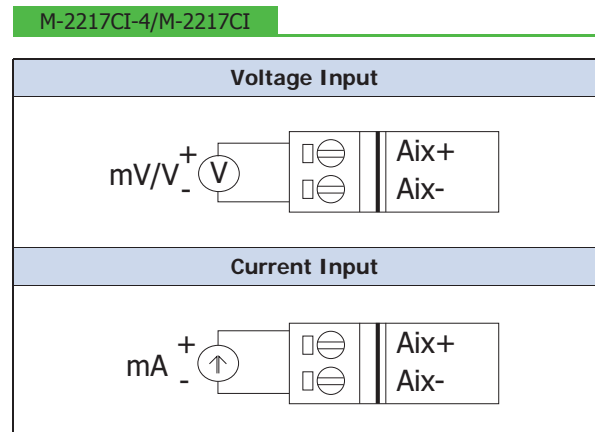
Pin Assignment		Terminal No.	Pin Assignment	
M-2217CI-4	M-2217CI		M-2217CI-4	M-2217CI
AI0-	AI0-	02	01	AI0+
		04	03	
	AI1-	06	05	AI1+
		08	07	
AI1-	AI2-	10	09	AI1+
		12	11	
	AI3-	14	13	AI3+
		16	15	
AI2-	AI4-	18	17	AI2+
		20	19	
		22	21	
	AI5-	24	23	AI5+
		26	25	
		28	27	
AI3-	AI6-	30	29	AI3+
		32	31	
		34	33	
	AI7-	36	35	AI7+



## Dimensions (Units: mm)



## Wire Connections



## Ordering Information

<b>M-2217CI-4 CR</b>	4-ch Channel to Channel Isolation Differential Analog Input Module using the DCON and Modbus Protocols (RoHS)
<b>M-2217CI CR</b>	8-ch Channel to Channel Isolation Differential Analog Input Module using the DCON and Modbus Protocols (RoHS)

## Accessories

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

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)