

M-2017

8-channel Isolated Analog Input Module
with High Voltage Protection

Features

- 8-channel Differential Analog Input
- DIP Switch Selectable Voltage or Current Input
- Supports Fast and Normal Mode Sampling
- Overcurrent Protection
- Individual Channel Configuration
- Dual Watchdog

Introduction

The M-2017 is an analog input module that includes 8 differential input channels. The module provides a programmable input range on all analog input channels, and each channel can be configured for an individual input range, providing a high overvoltage protection of 240 Vrms and 50mA overcurrent protection at 110 VDC/VAC. Voltage and current input is DIP switch selectable. The sampling rate for the M-2017 module is adjustable and can be set to either fast or normal mode. The module provides 8 kV ESD protection, 4 kV EFT protection, 2 kV surge protection, and 3000 VDC intra-module isolation. The M-2017 module supports both the Modbus RTU and DCON protocols, which can be configured via software.

System Specifications

CPU Module	
Watchdog Timer	Module, Communication (Programmable)
Isolation	
Intra-module Isolation	3000 VDC
EMS Protection	
EFT (IEC 61000-4-4)	±4 kV for Power Line
ESD (IEC 61000-4-2)	±8 kV Contact for each Terminal ±16 kV Air for Random Point
Surge (IEC 61000-4-5)	±2 kV for Power Line
LED Indicators	
Status	1 x Power and Communication
COM Ports	
Ports	1 x RS-485
Baud Rate	1200 ~ 115200 bps
Data Format	(N, 8, 1) (N, 8, 2) (E, 8, 1) (O, 8, 1)
Protocol	Modbus RTU, DCON
Bias Resistor	1 kΩ (DIP switch selectable)
Power	
Reverse Polarity Protection	Yes
Input Range	+10 ~ +48 VDC
Consumption	0.7 W Max
Mechanical	
Dimensions (mm)	33 x 110 x 96 (W x L x H)
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +80 °C
Humidity	10 ~ 95% RH, Non-condensing

Applications

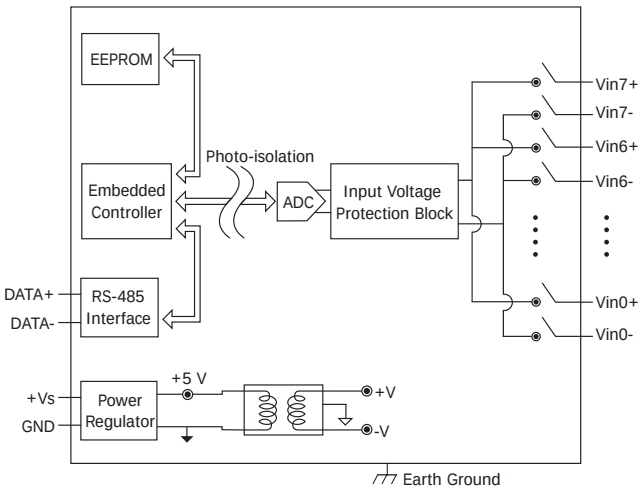
- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

I/O Specifications

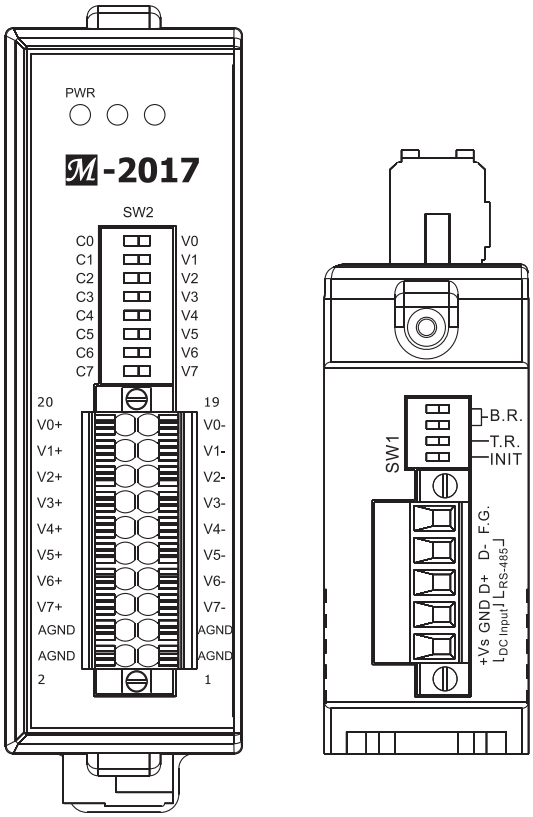
Analog Input		
Channels		8 Differential
Input Range	Voltage	±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V
	Current	±20 mA, 0 ~ 20 mA, 4 ~ 20 mA (DIP switch selectable)
Resolution		16-bit
Accuracy		Normal Mode: ±0.1% of FSR
		Fast Mode: ±0.5% of FSR
Sampling Rate		Normal Mode: 10 Hz (Total)
		Fast Mode: 60 Hz (Total)
Input Impedance		1 MΩ
Common Voltage Protection		±200 VDC
Overvoltage Protection		240 Vrms
Overcurrent Protection		50 mA at 110 VDC
Individual Channel Configuration		Yes

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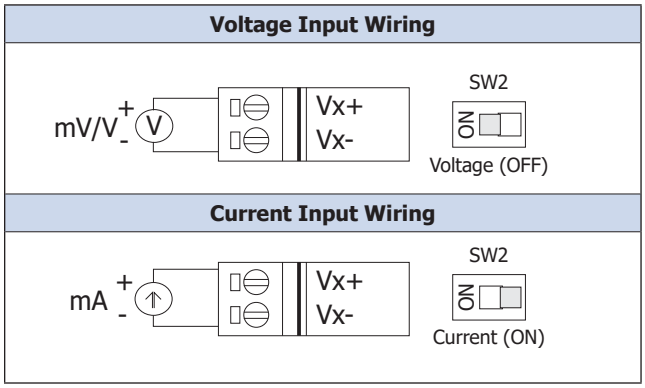
Internal I/O Structure



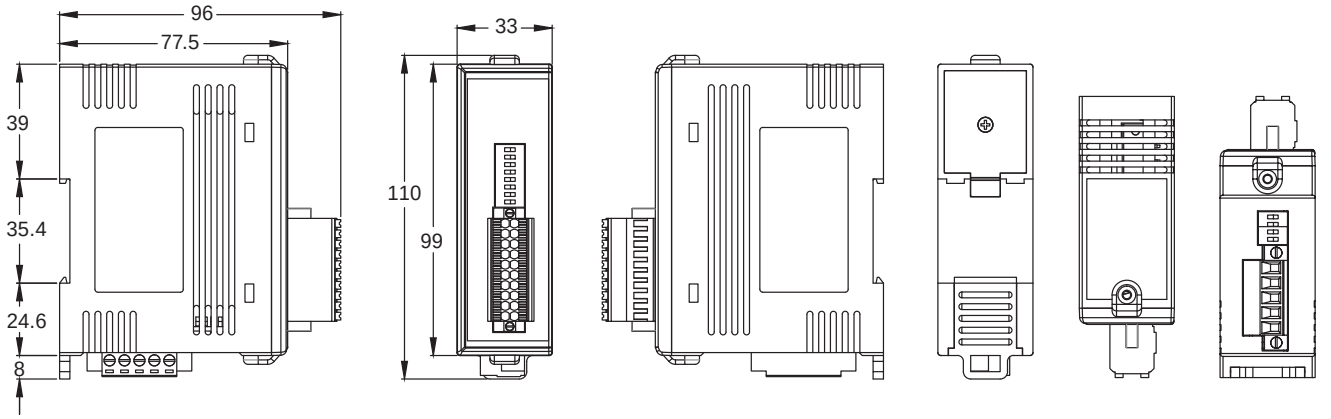
Pin & Terminal Assignments



Wire Connections



Dimensions (Units: mm)



Left Side View | Front View | Right Side View | Rear View | Top View | Bottom View

Ordering Information

M-2017 CR	8-channel Isolated Analog Input Module With High Voltage Protection (RoHS)

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