

M-7026

6-ch AI, 2-ch AO, 3-ch DI and 3-ch DO Module

Features

- Multifunction (6 AI, 2 AO, 3 DI, and 3 DO)
- Jumper Selectable Voltage or Current Input/Output
- High Over-voltage Input Protection
- High Common Voltage Protection
- Adjustable Sampling Rate (Fast/Normal Mode)
- Individual Channel Configuration
- Open Wire Detection for Current Output
- Overload and Short Circuit Protection for Digital Output
- Configurable Power-on Value and Safe Value Settings
- Built-in Dual Watchdog

Introduction

The M-7026 is a multifunction module that includes 6 analog input channels, 2 analog output channels, 3 digital input channels, 3 digital output channels. It provides a programmable input range on all analog input (+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA or 0 ~ +20 mA), analog outputs are 12-bit at +/-5 V, +/-10 V, 0 ~ +20 mA or +4 ~ +20 mA and all digital outputs can be set as alarm output. Each analog input can be configured for an individual range and provides a High Over-voltage Input Protection of 240 Vrms. Voltage and current inputs/outputs are jumper selectable.

Applications

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

System Specifications

CPU Module	
Watchdog Timer	Module, Communication (Programmable)
Isolation	
Intra-module Isolation	2500 VDC
EMS Protection	
EFT (IEC 61000-4-4)	±4 kV for Power Line
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal ±8 kV Air for Random Point
Surge (IEC 61000-4-5)	±3 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)
Protocol	Modbus RTU, DCON
Power	
Reverse Polarity Protection	Yes
Input Range	+10 ~ +30 VDC
Consumption	1.8 W
Mechanical	
Dimensions (mm)	72 x 123 x 35 (W x L x H)
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-40 ~ +85 °C
Humidity	10 ~ 95% RH, Non-condensing

I/O Specifications

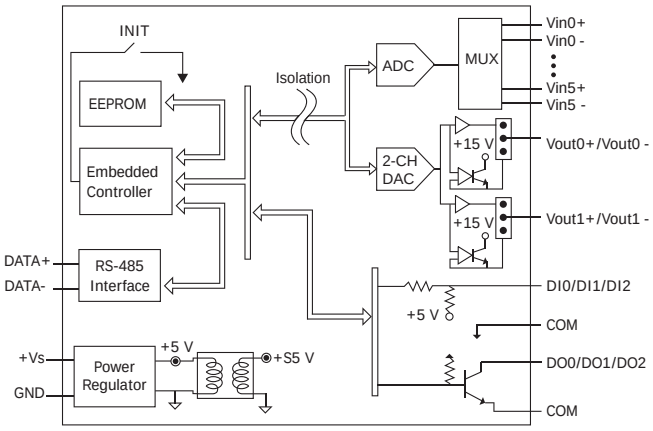
Analog Input		
Channels		6 Differential
Type		Voltage, Current
Range		±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V, ±20 mA, 0 ~ 20 mA, 4 ~ 20 mA (Jumper Selectable)
Resolution		16-bit
Accuracy	Normal Mode	±0.1% of FSR
	Fast Mode	±0.5% or better
Sampling Rate	Normal Mode	10 Hz (total channels)
	Fast Mode	60 Hz (total channels)
Input Impedance	Voltage	2 MΩ
	Current	140 Ω
Common Voltage Protection		±200 V
Overvoltage Protection		240 Vrms
Overcurrent Protection		50 mA at 110 VDC
Individual Channel Configuration		Yes
Channel-to-Channel Isolation		400 VDC
Open Wire Detection		For 4 ~ 20 mA Only
Analog Output		
Channels		2
Type		Voltage, Current
Range (Jumper Selectable)		+0 ~ +5 VDC, +0 ~ +10 VDC, ±5 VDC, ±10 VDC, +0 ~ +20 mA, +4 ~ +20 mA
Resolution		12-bit
Accuracy		±0.1% of FSR
Open Wire Detection		For 4 ~ 20 mA Only
Voltage Output Capability		10 V @ 20 mA
Power-on Value		Programmable
Safe Value		Programmable

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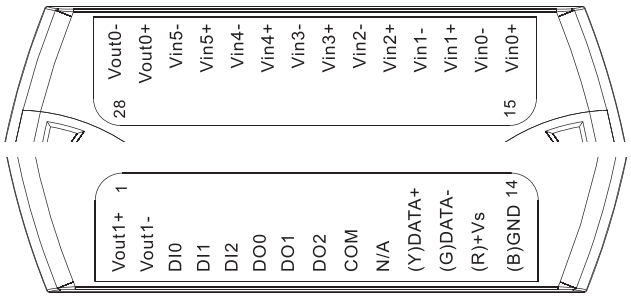
I/O Specifications

Digital Input/Counter	
Channels	3
Type	Dry Contact
Sink/Source (NPN/PNP)	Source
ON Voltage Level	Close to GND
OFF Voltage Level	Open
Max. Counts	65535 (16-bit)
Frequency	50 Hz
Min. Pulse Width	5 ms
Digital Output	
Channels	3
Type	Open Collector
Sink/Source (NPN/PNP)	Sink
Load Voltage	+3.5 ~ +50 VDC
Load Current	700 mA/Channel
Overvoltage Protection	60 VDC
Overload Protection	1.4 A
Short-circuit Protection	Yes
Power on Value	Programmable
Safe Value	Programmable

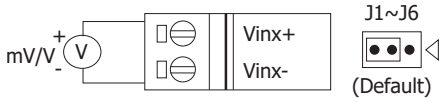
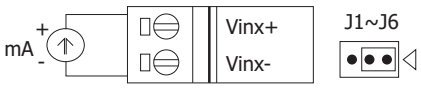
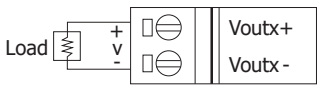
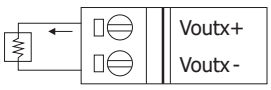
Internal I/O Structure

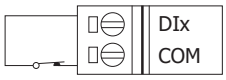
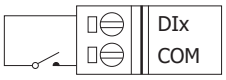
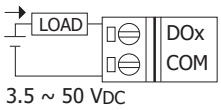
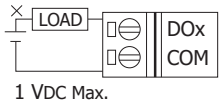


Pin Assignments



Wire Connections

Voltage Input		Current Input	
			
Voltage Output		**Current Output**	
	Old Version: JP3/JP4  New Version for PCB V1.20 and later: J7/J8  (Default)		Old Version: JP3/JP4  New Version for PCB V1.20 and later: J7/J8 

Digital Input/ Counter	ON State Readback as 1	OFF State Readback as 0	Digital Output	ON State Readback as 1	OFF State Readback as 0
Dry Contact (Source)			Open Collector (Sink)	 3.5 ~ 50 VDC	 1 VDC Max.

Ordering Information

M-7026-G CR	6-ch AI, 2-ch AO, 3-ch DI and 3-ch DO Module using DCON and Modbus Protocols (Gray Cover) (RoHS)

Accessories

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

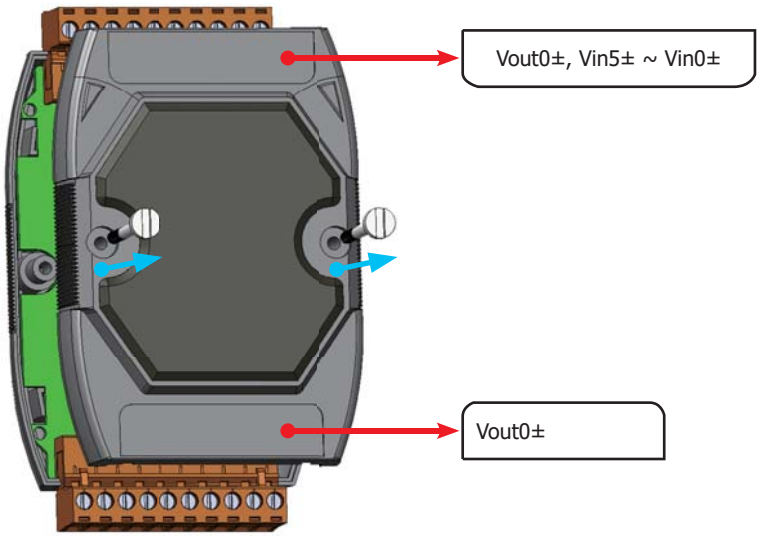
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Jumper

Notice:

1. Remove the top cover of the module before adjusting the jumper. Additionally, some modules may have two screws on the back cover.

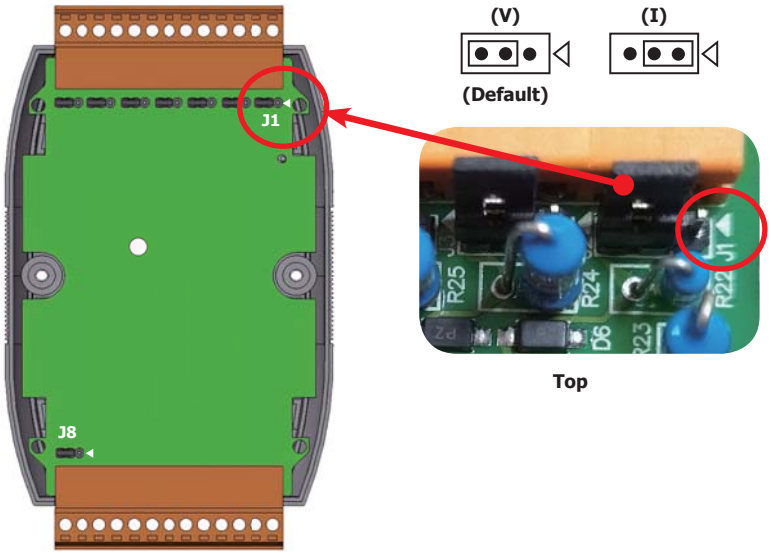
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2. Users can locate the Jx/JPx jumpers on the board by checking the I/O labels on the cover.

Channel	Vout0±	Vin5±	Vin4±	Vin3±	Vin2±	Vin1±	Vin0±
Jumper	J7	J6	J5	J4	J3	J2	J1

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Top

Channel	Vout1±
Jumper	J8

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