



I-7052(D)

M-7052(D)

8-channel Isolated DI Module

Features

- Differential Digital Inputs
- Sink- or Source-type Input
- Photocouple Isolation
- All Channels Can Be Used As 16-bit Counters
- Channel-to-Channel Isolation
- 4 kV ESD Protection
- 5000 V_{rms} Isolation Voltage
- Dual Watchdog
- Wide Operating Temperature Range: -25 ~ +75°C



Introduction

The I-7052 offers 6 fully independent channels and 2 common ground channels for digital input. The differential inputs feature channel-to-channel Photocouple isolation. In addition, you can choose either sink- or source-type input via wire connections. All channels are able to be used as 16-bit counters. The I-7052D has 8 LED indicators for DI channel status monitoring. 4 kV ESD protection and 5000 V_{rms} intra-module isolation are standard. The hardware specifications for the M-7052 are the same as the I-7052 and both support the Modbus RTU and DCON protocols which can be configured via software.

Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment.

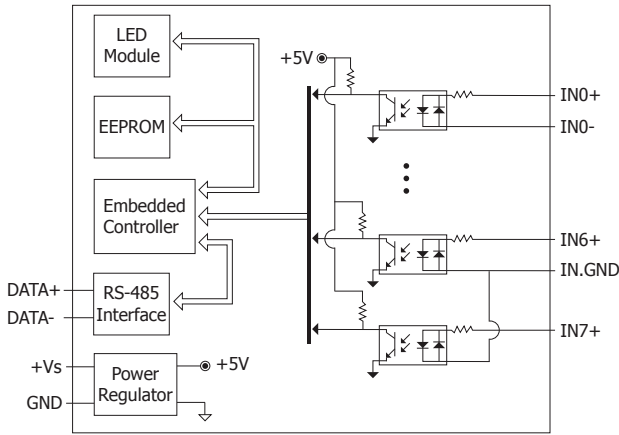
System Specifications

Models	I-7052	I-7052D	M-7052	M-7052D
Communication				
Interface	RS-485			
Format	(N, 8, 1) (N, 8, 2) (E, 8, 1) (O, 8, 1)			
Baud Rate	1200 ~ 115200 bps			
Protocol	DCON		Modbus RTU, DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)			
LED Indicator/Display				
System LED Indicator	Yes, 1 LED as Power/Communication Indicator			
I/O LED Indicator	-	Yes	-	Yes
7-Segment LED Display	-			
Isolation				
Intra-Module Isolation, Field-to-Logic	3750 V _{rms}			
EMS Protection				
ESD (IEC 61000-4-2)	4 kV Contact for Each Terminal			
	8 kV Air for Random Point			
EFT (IEC 61000-4-4)	+/-4 kV for Power			
Power				
Reverse Polarity Protection	Yes			
Input Range	10 ~ 30 V _{dc}			
Consumption	0.2 W	0.6 W	0.2 W	0.6 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			

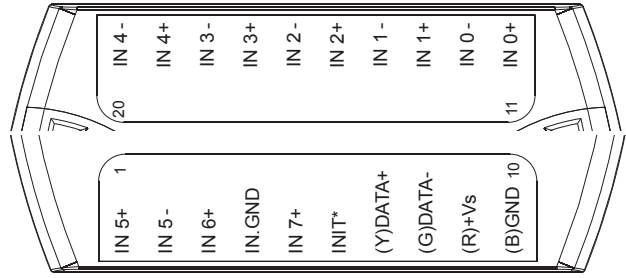
I/O Specifications

Models	I-7052	I-7052D	M-7052	M-7052D
Digital Input/Counter				
Channels	8			
Contact	Wet			
Sink/Source (NPN/PNP)	Sink/Source			
Wet Contact	On Voltage Level	+4 ~ 30 V _{dc}		
	Off Voltage Level	+1 V _{dc} Max.		
Dry Contact	On Voltage Level	-		
	Off Voltage Level	-		
Counters	Max. Count	65535 (16-bit)		
	Max. Input Frequency	100 Hz		
	Min. Pulse Width	5 ms		
Input Impedance	3 KΩ			
Channel to Channel Isolation	Yes, +/-2 kV for differential only.			
Overvoltage Protection	+/-35 V _{dc}			

Internal I/O Structure



Pin Assignments



Wire Connections

Digital Input/Counter	ON State Readback as 1 +4 ~ +30 Vdc	OFF State Readback as 0 Open or +1 Vdc Max.
Channel 0 to 5 Wet Contact (Sink)		
Channel 0 to 5 Wet Contact (Source)		
Channel 6 to 7 Wet Contact (Sink)		

Ordering Information

I-7052 CR	8-channel Isolated DI Module with DCON Protocol (Blue Cover) (RoHS)
I-7052D CR	I-7052 with LED Display (Blue Cover) (RoHS)
I-7052D-G CR	I-7052 with LED Display (Gray Cover) (RoHS)
M-7052-G CR	8-channel Isolated DI Module with DCON and Modbus Protocol (Gray Cover) (RoHS)
M-7052D-G CR	M-7052 with LED Display (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 Pull-high/Pull-low 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 Inputs