



M-7046 **M-7046D**

15-ch Isolated (Wet, 3.5~50 VDC) DI Module

Features

- Sink- or Source-type Digital Input
- Photocoupler Isolation
- All Channels Can be Used as 16-bit Counters
- Built-in Dual Watchdog

Introduction

The M-7046 is a 15-channel Digital Input module. Each channel features photocoupler isolation and can be used as a 16-bit counter. In addition, the Digital Input type can be selected as either sink or source via wire connections. The M-7046D module includes 15 LED indicators that can be used to monitor the status of the DI channels. 8 kV ESD protection and 5000 VDC intra-module isolation are also provided to enhance noise protection capabilities in industrial environments, making the M-7046(D) module an ideal solution for Digital Input applications.

Applications

- All Types of ON/OFF Control
- Building Automation
- Industrial Automation
- Industrial Machinery
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

System Specifications

Model	M-7046	M-7046D
CPU Module		
Watchdog Timer	Module, Communication (Programmable)	
Display		
Type	-	I/O LED Indicator
Isolation		
Intra-module Isolation	5000 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)	±3 kV for Power	
LED Indicators		
Status	1 x Power and Communication	
	-	15 x Digital Input
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	
Power		
Reverse Polarity Protection	Yes	
Input Range	+10 ~ +30 VDC	
Consumption	0.2 W	0.3 W

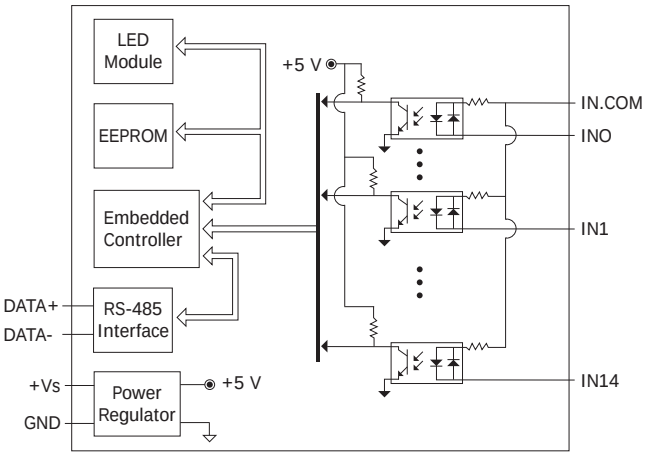
I/O Specifications

Model	M-7046	M-7046D
Digital Input/Counter		
Channels	15	
Type	Wet Contact	
Sink/Source (NPN/PNP)	Sink/Source	
ON Voltage Level	+3.5 ~ +50 VDC	
OFF Voltage Level	+1 VDC Max.	
Max. Counts	65535 (16-bit)	
Frequency	100 Hz	
Min. Pulse Width	5 ms	
Input Impedance	10 kΩ	
Overvoltage Protection	±70 VDC	

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

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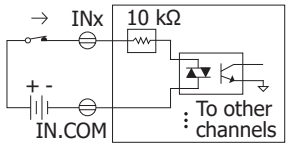
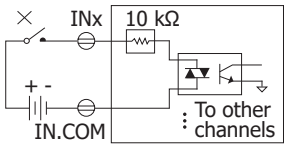
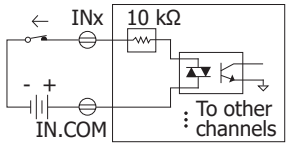
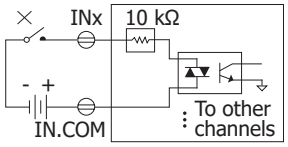
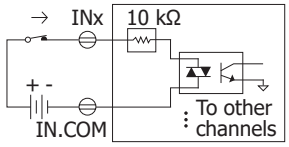
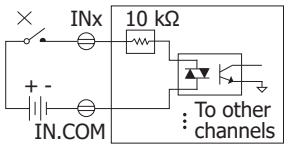
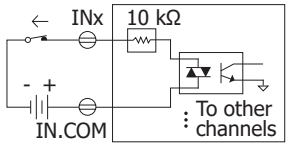
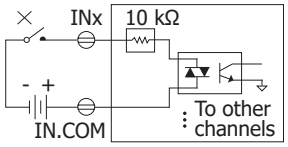
Internal I/O Structure



Pin Assignments



Wire Connections

Digital Input/Counter		Jumper	ON State Readback as 1	OFF State Readback as 0
		INIT* / IN14 Mode	+3.5 ~ +50 VDC	OPEN or +1 VDC Max.
IN0 ~ IN13	Sink	-		
	Source			
IN14	Sink	JP2 IN14 Mode (Default)		
	Source	JP2 INIT* Mode		

Ordering Information

M-7046-G CR	15-ch Isolated (Wet, 3.5~50 VDC) DI Module using DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7046D-G CR	15-ch Isolated (Wet, 3.5~50 VDC) DI Module with LED Display, using DCON and Modbus Protocols (Gray Cover) (RoHS)

Accessories

tM-7520U CR	Tiny Isolated RS-232 to RS-485 Converter (RoHS)	**I-7514U-G CR**	Isolated 4-channel RS-485 Repeater/Hub/ Splitter (Gray Cover) (RoHS)
tM-7561 CR	Tiny USB to Isolated RS-485 Converter with CA-USB18 Cable (RoHS)	**SG-770 CR**	7/14 channel Surge Protector (RoHS)
tM-SG4 CR	RS-485 Pull-high/Pull-low and Termination Resistor Module (RoHS)	**SG-3000 Series**	Signal Conditioning Modules for Thermocouple, RTD, DC Voltage, DC Current and Power Input Transformers

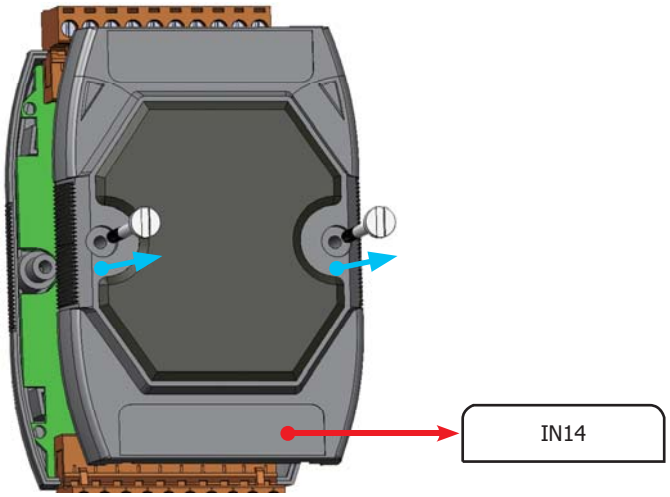
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Jumper

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	IN.COM	IN14
Jumper	JP2	

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