



M-7055U **M-7055UD**

8-ch Isolated (Dry, Wet) DI and
8-ch Isolated (Sink/Source, 3.5~80 VDC) DO Module

Features

- 8 Digital Inputs and 8 Digital Outputs
- Sink- or Source-type Digital Input/Output
- Digital Input Channels Can be Used as 16-bit Counters
- Configurable Power-on Value and Safe Value Settings
- Built-in Dual Watchdog

Introduction

The M-7055U module provides 8 isolated channels for Digital Input and 8 isolated channels for Digital Output. Digital Input and Digital Output can be selected as either sink- or source-type via wire connection. All Digital Input channels are also able to be used as 16-bit counters. There are options to enable both power-on and safe values. The M-7055UD has 16 LED indicators that can be used to monitor the status of the Digital Input and Digital Output channels. The M-7055U(D) also provides ±8 kV ESD, ±4 kV EFT and ±2 kV surge protection, as well as 2000 VDC intra-module isolation to enhance noise protection capabilities in harsh industrial environments.

System Specifications

Model	M-7055U	M-7055UD
CPU Module		
Watchdog Timer	Module, Communication (Programmable)	
Display		
Type	-	I/O LED Indicator
Isolation		
Intra-module Isolation	2000 VDC	
EMS Protection		
EFT (IEC 61000-4-4)	±4 kV for Power Line	
ESD (IEC 61000-4-2)	±8 kV Contact for Each Terminal ±15 kV Air for Random Point	
Surge (IEC 61000-4-5)	±2 kV for Power	
LED Indicators		
Status	1 x Power and Communication	
	-	8 x DI, 8 x DO
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 ~ +48 VDC	
Consumption	0.9 W (Max.)	1.0 W (Max.)
Mechanical		
Dimensions (mm)	72 x 123 x 35 (W x L x H)	
Installation	DIN-Rail Mounting	

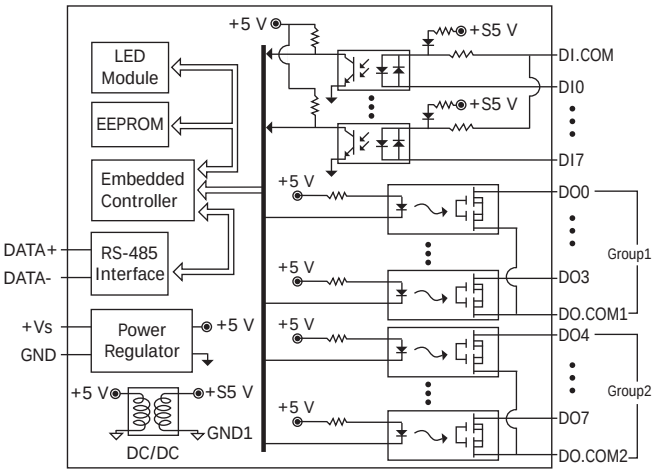
I/O Specifications

Model	M-7055U	M-7055UD
Digital Input/Counter		
Channels	8	
Type	Dry Contact, Wet Contact	
Sink/Source (NPN/PNP)	Sink/Source	
ON Voltage Level	Dry: Close to GND Wet: +10 ~ +50 VDC	
OFF Voltage Level	Dry:Open Wet: +4 VDC Max.	
Max. Counts	65535 (16-bit)	
Frequency	100 Hz	
Min. Pulse Width	5 ms	
Input Impedance	10 kΩ	
Overvoltage Protection	±70 VDC	
Digital Output		
Channels	8	
Type	Push-Pull	
Sink/Source (NPN/PNP)	Sink/Source	
Load Voltage	+3.5 ~ +80 VDC	
Load Current	500 mA/Channel	
Power on Value	Programmable	
Safe Value	Programmable	

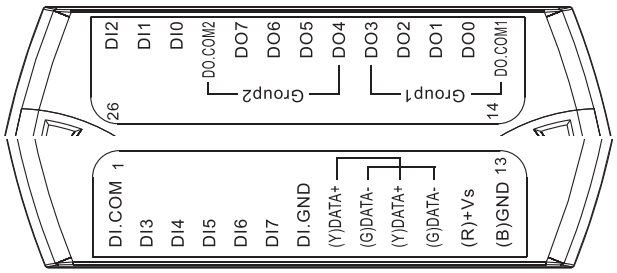
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-40 ~ +85°C
Humidity	10 ~ 95% RH, Non-condensing

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Internal I/O Structure



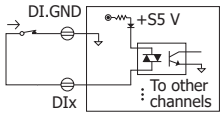
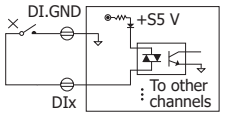
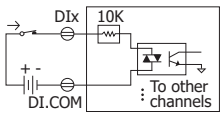
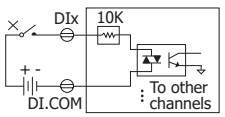
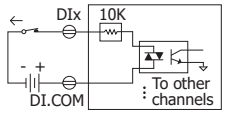
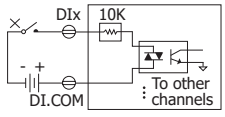
Pin Assignments

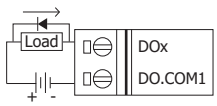
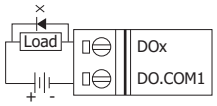
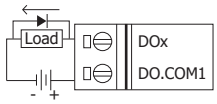
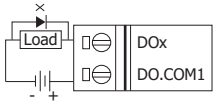
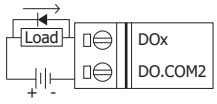
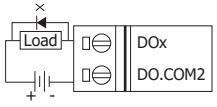
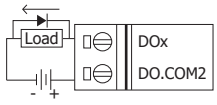
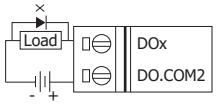


Applications

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

Wire Connections

Input Type	ON State Readback as 1	OFF State Readback as 0
Dry Contact	Close to GND	Open
		
Wet Contact (Sink)	+10 ~ +50 VDC	+4 VDC Max.
		
Wet Contact (Source)	+10 ~ +50 VDC	+4 VDC Max.
		

DO Group1	ON State Readback as 1	OFF State Readback as 0
DO0 ~ DO3 (Sink)		
DO0 ~ DO3 (Source)		
DO Group2	**ON State Readback as 1**	**OFF State Readback as 0**
DO4 ~ DO7 (Sink)		
DO4 ~ DO7 (Source)		

Ordering Information

M-7055U CR	8-ch Isolated (Dry, Wet) DI and 8-ch Isolated (Sink/Source, 3.5~80 VDC) DO Module using DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7055UD CR	8-ch Isolated (Dry, Wet) DI and 8-ch Isolated (Sink/Source, 3.5~80 VDC) DO 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-3000 Series** 	Signal Conditioning Modules for Thermocouple, RTD, DC Voltage, DC Current and Power Input Transformers

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