

M-7054(D) M-7054P(D)

16-ch Isolated Universal DI/DO Module

Features

- 16 Universal Digital Inputs or Outputs
- M-7054(D)
  - 100 mA Load Current per Channel
- M-7054P(D)
  - 500 mA Load Current per Channel with Short Circuit Protection
- Digital Input Channels Can be Used as 16-bit Counters
- Configurable Power-on Value and Safe Value Settings

Introduction

The M-7054(P) provides 16 channels for universal Digital Input/Output, which can be selected via wire connections. The Digital Input channels are dry contact and can be used as 16-bit counters, while the Digital Output channels are sink type with short circuit protection and options for configuring power-on and safe Digital Output values. The M-7054(P) also provides ±8 kV ESD, ±4 kV EFT and ±3 kV surge protection and 3750 VDCintra-module isolation to enhance noise protection capabilities in industrial environments.

System Specifications

Model	M-7054	M-7054D	M-7054P	M-7054PD
CPU Module				
Watchdog Timer	Module, Communication (Programmable)			
Display				
Type	7054D/PD: I/O LED Indicator			
Isolation				
Intra-module Isolation	3750 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 Contact for Each Terminal	
	±8 kV Air for Random Point		±16 kV Air for Random Point	
Surge (IEC 61000-4-5)	-		±3 kV for Power	
LED Indicators				
Status	1 x Power and Communication			
	7054D/PD: 16 x DIO			
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	1.2 W	1.3 W	1.2 W	1.3 W
Mechanical				
Dimensions (mm)	72 x 123 x 35 (W x L x H)			
Installation	DIN-Rail Mounting			

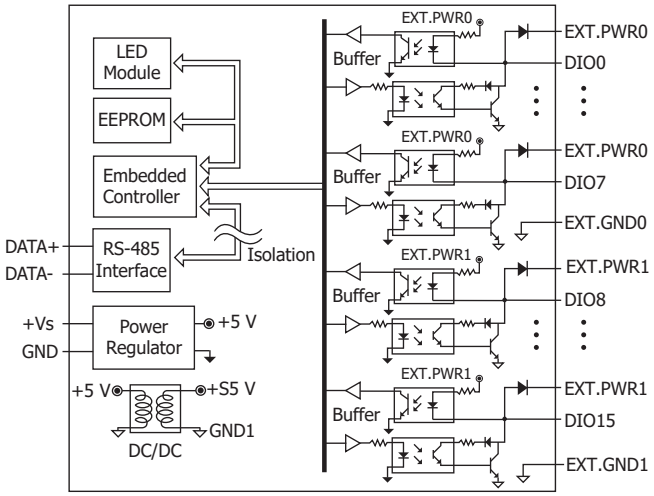
I/O Specifications

Model	M-7054 M-7054D	M-7054P M-7054PD
Digital Input/Counter		
Channels	16-channel Isolated Universal Digital Input/Output (Configurable via Wire Connection)	
Type	Dry Contact	
Sink/Source (NPN/PNP)	Source	
ON Voltage Level	Close to GND	
OFF Voltage Level	Open	
Max. Counts	65535 (16-bit)	
Frequency	100 Hz	
Min. Pulse Width	10 ms	
Overvoltage Protection	±35 VDC	±60 VDC
Digital Output		
Channels	16-channel Isolated Universal Digital Input/Output (Configurable via Wire Connection)	
Type	Open Collector	
Sink/Source (NPN/PNP)	Sink	
Load Voltage	+5 ~ +30 VDC	+5 ~ +50 VDC
Load Current	100 mA	500 mA
Overvoltage Protection	-	60 VDC
Overload Protection	-	Yes
Short-circuit Protection	-	Yes
Power on Value	Programmable	
Safe Value	Programmable	

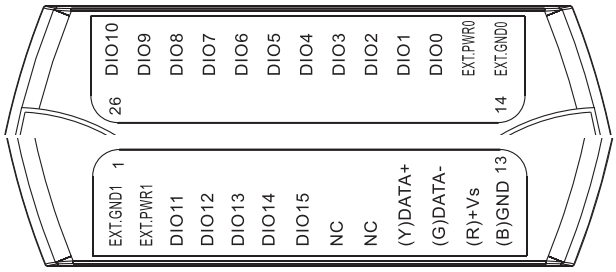
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-40 ~ +85°C
Humidity	10 ~ 95% RH, Non-condensing

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Internal I/O Structure



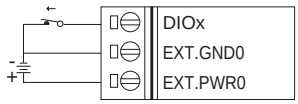
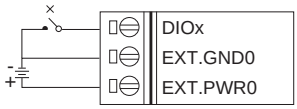
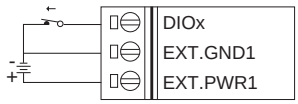
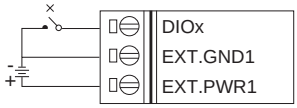
Pin Assignments

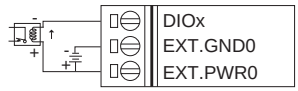
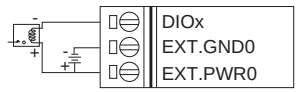
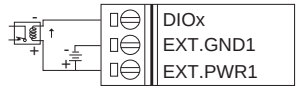
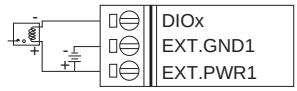


Applications

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

Wire Connections

Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
	Close to GND	Open
Dry Contact DIO0 ~ DIO7		
Dry Contact DIO8 ~ DIO15		

Output Type	ON State Readback as 1	OFF State Readback as 0
Drive Relay DIO0 ~ DIO7		
Drive Relay DIO8 ~ DIO15		

Ordering Information

M-7054-G CR	16-ch Isolated Universal DI/DO Module (100 mA Max.), using DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7054D-G CR	16-ch Isolated Universal DI/DO Module (100 mA Max.) with LED Display, using DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7054P-G CR	16-ch Isolated Universal DI/DO Module (500 mA Max.), using DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7054PD-G CR	16-ch Isolated Universal DI/DO Module (500 mA Max.), 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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