

I-7060(D)



M-7060(D)



M-7060P



M-7060PD

4-ch Isolated (Wet) DI and 4-ch Signal Relay Module

Features

- 4 Sink- or Source-type Digital Inputs
- I-7060(D)/M-7060(D)
  - 2 Form A and 2 Form C Signal Relay Outputs
- M-7060P(D)
  - 2 Form A and 2 Form C Power Relay Output
- Digital Input Channels Can be Used as 16-bit Counters
- Configurable Power-on Value and Safe Value Settings
- Built-in Dual Watchdog

Introduction

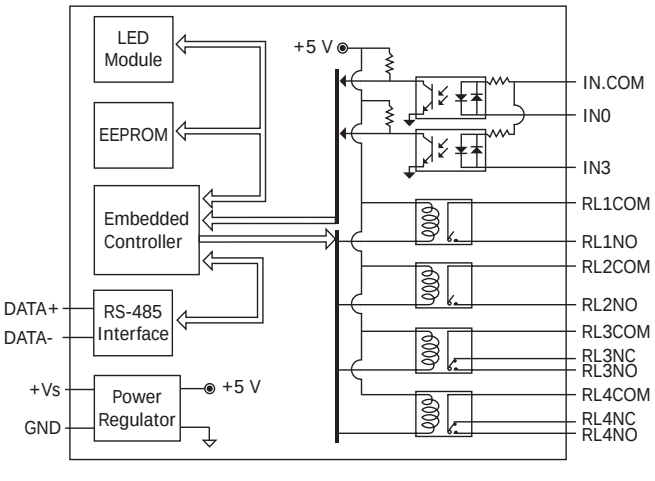
The 7060 series provides 4 digital input channels, 2 Form A and 2 Form C signal relay output channels, while the M-7060P provides 4 digital input channels, 2 Form A and 2 Form C power relay output channels. All digital input channels can be used as 16-bit counters. In addition, the digital input channels can be selected either as sink- or source-type via wire connections. The "D" versions of the 7060 series provide eight LED indicators that can be used to monitor the status of the digital input and relay output. The "M" versions of the 7060 series support both the Modbus RTU and DCON protocols, which can be configured via software. There are also options for configuring power-on and safe values. 4 kV ESD protection and 3750 VDC intra-module isolation are also provided to enhance noise protection capabilities in industrial environments. The 7060 series is the ideal solution for small signal switching applications, while the M-7060P is the perfect solution for high power applications.

System Specifications

Model	I-7060/M-7060 I-7060D/M-7060D	M-7060P M-7060PD
CPU Module		
Watchdog Timer	Module, Communication (Programmable)	
Display		
Type	7060D/60PD: I/O LED Indicator	
Isolation		
Intra-module Isolation	3750 VDC	
EMS Protection		
EFT (IEC 61000-4-4)	±2 kV for Power Line	±4 kV
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 7060D/60PD: 8 x Relay Output	
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	I-7000: DCON M-7000: Modbus RTU, DCON	
Power		
Reverse Polarity Protection	Yes	
Input Range	+10 ~ +30 VDC	
Consumption	1.0 W 1.4 W	1.4 W 1.8 W

Model	I-7060(D) M-7060(D)	M-7060P(D)
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	

Internal I/O Structure



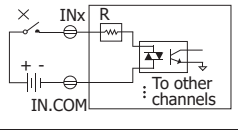
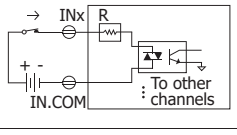
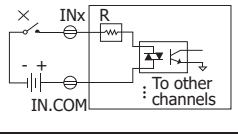
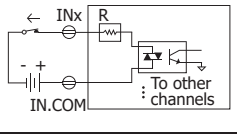
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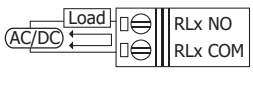
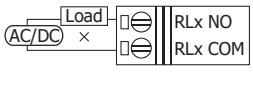
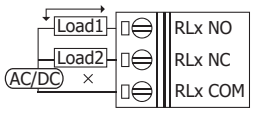
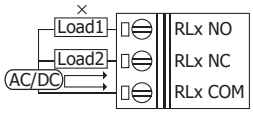
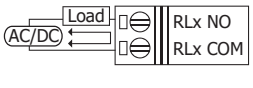
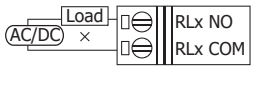
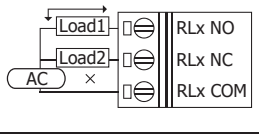
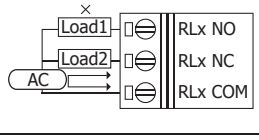
I/O Specifications

Model	I-7060(D) M-7060(D)	M-7060P(D)
Digital Input/Counter		
Channels	4	
Type	Wet Contact	
Sink/Source (NPN/PNP)	Sink/Source	
ON Voltage Level	+1 VDC Max.	+4 VDC Max.
OFF Voltage Level	+4 ~ +30 VDC	+10 ~ +50 VDC
Max. Counts	65535 (16-bit)	
Frequency	100 Hz	
Min. Pulse Width	5 ms	
Input Impedance	3 kΩ	10 kΩ
Overvoltage Protection	±35 VDC	±70 VDC

Model	I-7060(D) M-7060(D)	M-7060P(D)
Relay Output		
Channels	4 (2 x Form A, 2 x Form C)	
Type	Signal Relay	Power Relay
Contact Material	Gold-plated silver	Silver Tin Alloy
Contact Rating	Form A / Form C: 0.6 A @ 125 VAC 2 A @ 30 VDC	Form A: 16 A @ 250 VAC 10 A @ 30 VDC Form C: NO: 10 A @ 250 VAC NC: 6 A @ 250 VAC
Operate Time	3 ms	10 ms
Release Time	2 ms	5 ms
Electrical Endurance	5 x 10^5 ops.	1 x 10^7 ops.
Mechanical Endurance	1 x 10^8 ops.	1 × 10^5 ops.
Power on Value	Programmable	
Safe Value	Programmable	

Wire Connections

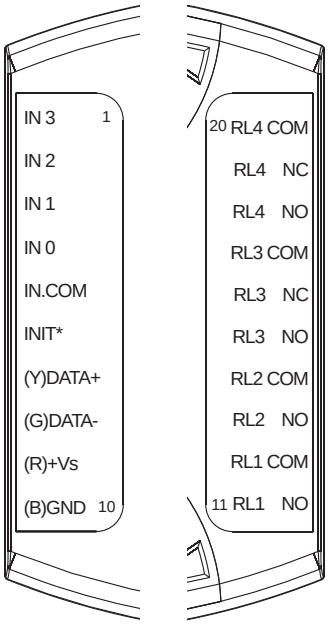
DI/Counter	ON State Readback as 1	OFF State Readback as 0
7060(D)	OPEN or <1 VDC	+4 ~ +30 VDC
M-7060P(D)	OPEN or <4 VDC	+10 ~ +50 VDC
Sink		
Source		

Relay Output	ON State Readback as 1	OFF State Readback as 0
I-7060(D), M-7060(D)		
RL1 and RL2		
RL3 and RL4		
M-7060P(D)		
RL1 and RL2		
RL3 and RL4		

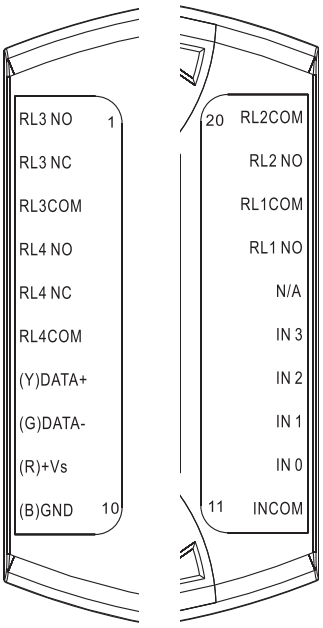
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Pin Assignments

I-7060(D)/M-7060(D)



M-7060P(D)



Ordering Information

I-7060 CR	4-ch Isolated (Wet, 4~30 VDC) DI and 4-ch Signal Relay Module using DCON Protocol (Blue Cover) (RoHS)
I-7060D CR	4-ch Isolated (Wet, 4~30 VDC) DI and 4-ch Signal Relay Module with LED Display using DCON Protocol (Blue Cover) (RoHS)
I-7060-G CR	4-ch Isolated (Wet, 4~30 VDC) DI and 4-ch Signal Relay Module using DCON Protocol (Gray Cover) (RoHS)
I-7060D-G CR	4-ch Isolated (Wet, 4~30 VDC) DI and 4-ch Signal Relay Module with LED Display using DCON Protocol (Gray Cover) (RoHS)
M-7060-G CR	4-ch Isolated (Wet, 4~30 VDC) DI and 4-ch Signal Relay Module using DCON Protocol (Gray Cover) (RoHS)
M-7060D-G CR	4-ch Isolated (Wet, 4~30 VDC) DI and 4-ch Signal Relay Module with LED Display using DCON Protocol (Gray Cover) (RoHS)
M-7060P-G CR	4-ch Isolated (Wet, 10~50 VDC) DI and 4-ch Power Relay Module using DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7060PD-G CR	4-ch Isolated (Wet, 10~50 VDC) DI and 4-ch Power Relay 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)
tM-7561 CR 	Tiny USB to Isolated RS-485 Converter with CA-USB18 Cable (RoHS)
tM-SG4 CR 	RS-485 Pull-high/Pull-low and Termination Resistor Module (RoHS)

I-7514U-G CR 	Isolated 4-channel RS-485 Repeater/Hub/ Splitter (Gray Cover) (RoHS)
SG-770 CR 	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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