



Features

- 4 Digital Inputs and 4 Relay Outputs
- Both Form A and Form C Power Relay
- Source and Sink type for DI
- DI Channels Can Be Used As 16-bit Counters
- Configurable Power-on Value Settings
- Configurable Safe Value Settings
- Dual Watchdog
- Wide Operating Temperature Range: -25 ~ +75°C



Introduction

The I-7060 offers 4-channel digital inputs, 2-channel Form A power relay outputs and 2-channel Form C power relay outputs at the same time. Moreover, you can choose either sink type or source type of digital input via wire connections. All Input channels are able to be used as 16-bit counters. I-7060D also has 8 LED indicators for power relay outputs and digital inputs status monitoring. The hardware specifications for the M-7060 are the same as the I-7060 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.

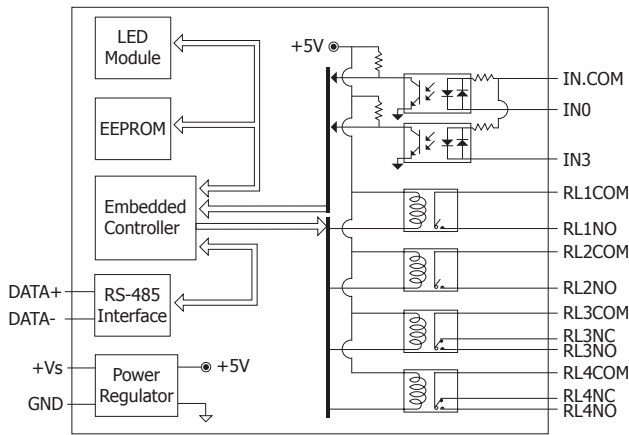
System Specifications

Models	I-7060	I-7060D	M-7060	M-7060D
			M-7060P	M-7060PD
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 Vrms			
EMS Protection				
ESD (IEC 61000-4-2)	+/-4 kV			
EFT (IEC 61000-4-4)	+/-2 kV			
Power				
Reverse Polarity Protection	Yes			
Input Range	10 ~ 30 Vdc			
Consumption	1.3 W	1.9 W	1.3 W	1.9 W
			1.4 W (P)	1.4 W (PD)
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			

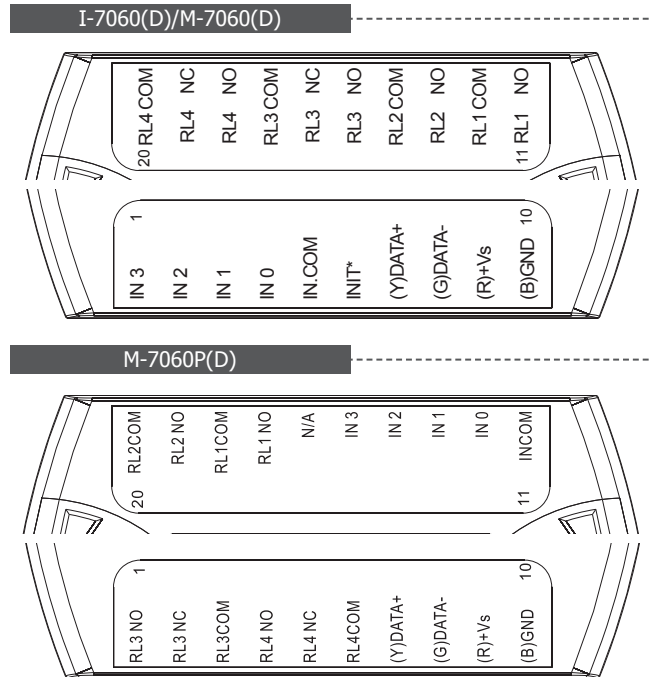
I/O Specifications

Models	I-7060	I-7060D	M-7060P	M-7060PD
Relay Output				
Channels	4			
Type	Power Relay (Form A x 2, Form C x 2)			
Contact Rating	0.6 A @ 125 V _{AC} 2 A @ 30 V _{DC}		Form A: 16 A@250 V _{AC} 10A @ 30 V _{DC} Form C: 10 A(NO)/6 A(NC) @ 250 V _{AC}	
Surge Strength	500 V _{DC}		2500 V _{DC}	
Operate Time	3 ms		6 ms	
Release Time	2 ms		3 ms	
Mechanical Endurance	10 ⁸ ops.			
Electrical Endurance	5 x 10 ⁵ ops.			
Power-on Value	Yes			
Safe Value	Yes			
Digital Input/Counter				
Channels	4			
Contact	Wet			
Sink/Source (NPN/PNP)	Sink/Source			
On Voltage Level	+1 V _{DC} Max.		+10 ~50 V _{DC}	
Off Voltage Level	+4 ~ 30 V _{DC}		+4 V _{DC} Max.	
Counters	Max. Count	65535 (16-bit)		
	Max. Input Frequency	100 Hz		
	Min. Pulse Width	5 ms		
Input Impedance	3 kΩ		10 kΩ	
Overvoltage Protection	+/-35 V _{DC}		+/-70 V _{DC}	

Internal I/O Structure



Pin Assignments



Wire Connections

Digital Input/Counter	ON State Readback as 1	OFF State Readback as 0
	OPEN or <1 V _{dc}	+4 ~ +30 V _{dc}
Sink		
	OPEN or <1 V _{dc}	+4 ~ +30 V _{dc}
Source		

Output Type	ON State Readback as 1	OFF State Readback as 0
Relay Output in RL1 and RL2		
Relay Output in RL3 and RL4		

Ordering Information

I-7060 CR	4-channel Isolated DI and 4-channel Relay Output Module with DCON Protocol (Blue Cover) (RoHS)
I-7060-G CR	4-channel Isolated DI and 4-channel Relay Output Module with DCON Protocol (Gray Cover) (RoHS)
I-7060D CR	I-7060 with LED Display (Blue Cover) (RoHS)
I-7060D-G CR	I-7060 with LED Display (Gray Cover) (RoHS)
M-7060-G CR	4-channel Isolated DI and 4-channel Relay Output Module with DCON and Modbus Protocol (Gray Cover) (RoHS)
M-7060D-G CR	M-7060 with LED Display (Gray Cover) (RoHS)
M-7060P-G CR	4-channel Isolated DI and 4-channel Relay Output Module with DCON and Modbus Protocol (Gray Cover) (RoHS)
M-7060PD-G CR	I-7060P 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