ICP DAS

I-7063B **I-7063BD**

8-channel Isolated Digital Input and 3-channel DC SSR Output Module

I-7065B(D) **M-7065B(D)**

4-channel Isolated Digital Input and 5-channel DC SSR Output Module

Features

- **I-7063B(D)**
  - 8 Digital Input channels and 3 DC SSR Output channels
- **I-7065B(D) and M-7065B(D)**
  - 4 Digital Input channels and 5 DC SSR Output channels
- Form A DC Solid State Relay Output
- No Arcing, No Bounce, and No Switching Noise
- Sink- and Source-type for Digital Input
- Digital Input Channels can be used as 16-bit Counters
- Configurable Power-on Value Settings
- Configurable Safe Value Settings
- Dual Watchdog
- Wide Operating Temperature Range: -25 to +75°C

CE FC RoHS

Introduction

The I-7063B module provides 8 digital input channels and 3 DC SSR output channels, and the I-7065B provides 4 digital input channels and 5 DC SSR 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. In comparison to electromechanical relays, SSR technology provides a faster response time and greater electrical endurance. The integration of DC SSR technology also eliminates potential for arcing, bounce, and switching noise. The I-7063BD provides 11 LED indicators and the I-7065BD/M-7065BD provides 9 LED indicators that can be used to monitor the status of the digital input and SSR output. There are also options for configuring power-on and safe values. 4 kV ESD protection and 3750 V_{DC} intra-module isolation are also provided to enhance noise protection capabilities in industrial environments. The M-7065B supports both the Modbus RTU and DCON protocols, which can be configured via software.

System Specifications

| Model	I-7063B	I-7065B	M-7065B
	I-7063BD	I-7065BD	M-7065BD
Communication			
Interface	RS-485		
Bias Resistor	No (Usually supplied by the RS-485 Master. Alternatively, add a tM-SG4 or SG-785.)		
Format	(N, 8, 1), (N, 8, 2), (E, 8, 1), (O, 8, 1)		
Baud Rate	1200 to 115200 bps		
Protocol	DCON		Modbus RTU, DCON
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)		
LED Indicators/Display			
System LED Indicator	Yes, 1 as Power/Communication Indicator		
I/O LED Indicators	-	-	-
	Yes, 11 LEDs as Digital Input/Relay Output Indicators	Yes, 9 LEDs as Digital Input/Relay Output Indicators	Yes, 9 LEDs as Digital Input/Relay Output Indicators
7-segment LED Display	-		
Isolation			
Intra-module Isolation, Field-to-Logic	3750 V_{DC}		
EMS Protection			
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal		
	±8 kV Air for Random Point		
EFT (IEC 61000-4-4)	±2 kV for Power Line		
Surge (IEC 61000-4-5)	-		
Power			
Reverse Polarity Protection	Yes		
Input Range	+10 ~ +30 V_{DC}		
Consumption	0.5 W	0.6 W	0.6 W
	1.0 W	1.0 W	1.0 W
Mechanical			
Dimensions (L x W x H)	123 mm x 72 mm x 35 mm		
Installation	DIN-Rail or Wall Mounting		
Environment			
Operating Temperature	-25 to +75°C		
Storage Temperature	-40 to +85°C		
Humidity	10 to 95% RH, Non-condensing		

Applications

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

I/O Specifications

Model		I-7063B	I-7065B	M-7065B
		I-7063BD	I-7065BD	M-7065BD
DC Solid State Relay Output				
Channels		3	5	
Relay Type		DC-SSR (Form A)		
Form A DC-SSR	Operating Voltage Range	3 ~ 30 V_{DC}		
	Max. Load Current	1 A		
	Leakage Current	0.1 mA		
	Min. Operate Time	1 ms		
	Min. Release Time	1 ms		
	Dielectric Strength	3500 V_{DC}		
	Electrical Endurance	Long Life, No Arcing, No Bounce, No Switching Noise		
Power-on Value		Yes		
Safe Value		Yes		
Digital Input/Counter				
Channels		8	4	
Type	Dry Contact	-		
	Wet Contact	Sink/Source		
Wet Contact	ON Voltage Level	+1 V_{DC} Max.		
	OFF Voltage Level	+4 ~ 30 V_{DC}		
Dry Contact	ON Voltage Level	-		
	OFF Voltage Level	-		
	Effective Distance for Dry Contact	-		
Counters	Max. Count	65535 (16-bit)		
	Max. Input Frequency	100 Hz		
	Min. Pulse Width	5 ms		
Input Impedance		3 kΩ		
Channel-to-Channel Isolation		-		
Overvoltage Protection		±35 V_{DC}		

Internal I/O Structure

I-7063B(D)

I-7065B(D)/M-7065B(D)

Pin Assignments

I-7063B(D)

I-7065B(D)/M-7065B(D)
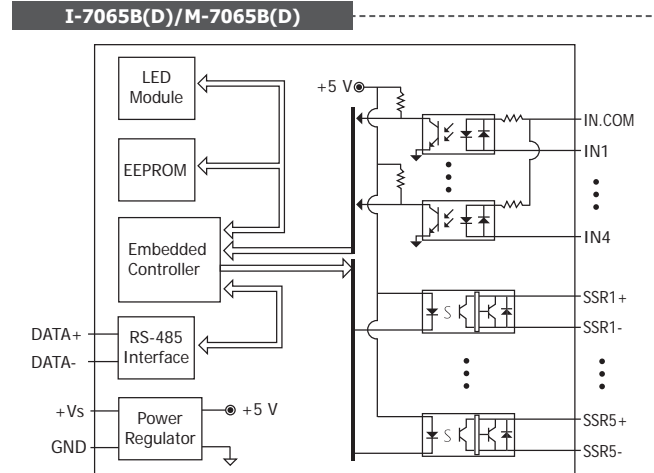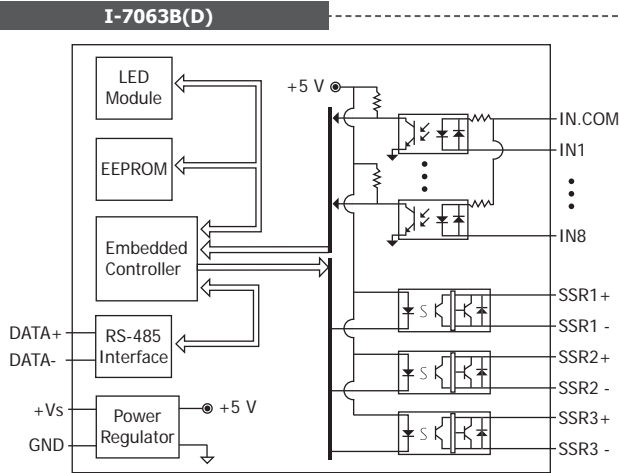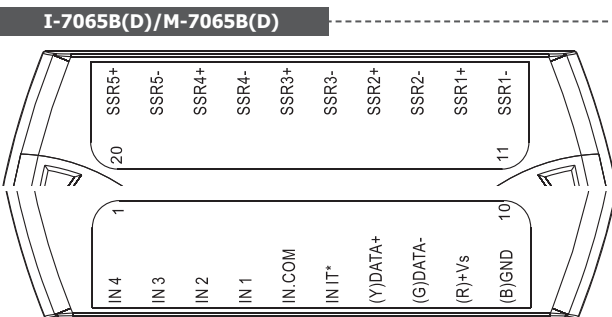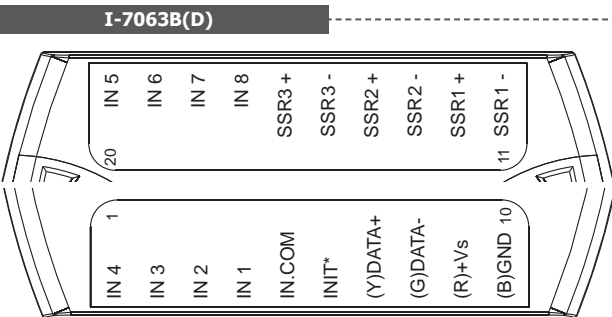
Wire Connections

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

Output Type	ON State Readback as 1	OFF State Readback as 0
Relay Output		

Ordering Information

I-7063B CR	8-channel Isolated Digital Input and 3-channel DC SSR Output Module using the DCON Protocol (Blue Cover) (RoHS)
I-7063BD CR	I-7063B with LED Display (Blue Cover) (ROSH)
I-7065B CR	4-channel Isolated Digital Input and 5-channel DC SSR Output Module using the DCON Protocol (Blue Cover) (RoHS)
I-7065BD CR	I-7065B with LED Display (Blue Cover) (ROSH)
M-7065B-G CR	4-channel Isolated Digital Input and 5-channel DC SSR Output Module using the DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7065BD-G CR	M-7065B-G with LED Display (Gray Cover) (ROSH)

Accessories

	tM-7520U CR	RS-232 to RS-485 Converter (RoHS)		I-7514U CR	4-channel RS-485 Hub (RoHS)
	tM-7561 CR	USB to RS-485 Converter (RoHS)		SG-770 CR	7-channel Differential or 14-channel Single-ended Surge Protector (RoHS)
	tM-SG4 CR	RS-485 Bias and Termination Resistor Module (RoHS)		SG-3000 Series	Signal Conditioning Modules for Thermocouple, RTD, DC Voltage, DC Current and Power Input Transformers