ICP DAS

I-7063A   I-7063AD
8-channel Isolated Digital Input and 3-channel AC SSR Output Module

I-7065A   I-7065AD
4-channel Isolated Digital Input and 5-channel AC SSR Output Module

Features

- **I-7063A(D)**
  - ☐ 8 Digital Input channels and 3 AC SSR Output channels
- **I-7065A(D)**
  - ☐ 4 Digital Input channels and 5 AC SSR Output channels
- Form A AC 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-7063A module provides 8 digital input channels and 3 AC SSR(Solid State Relay) output channels, and the I-7065A provides 4 digital input channels and 5 AC 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 AC SSR technology also eliminates potential for arcing, bounce, and switching noise. The I-7063AD provides 11 LED indicators and the I-7065AD 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.

System Specifications

| Model	I-7063A	I-7063AD	I-7065A	I-7065AD
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			
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 as Digital Input/Relay Output Indicators	-	Yes, 9 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	1.0 W	0.6 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-7063A	I-7063AD	I-7065A	I-7065AD
AC Solid State Relay Output					
Channels		3		5	
Relay Type		AC-SSR (Form A)			
Form A AC-SSR	Operating Voltage Range	24 ~ 265 V_{AC}			
	Max. Load Current	1 A			
	Leakage Current	1.5 mA			
	Min. Operate Time	1/2 cycle + 1 ms			
	Min. Release Time	1/2 cycle + 1 ms			
	Dielectric Strength	2500 V_{AC}			
	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-7063A(D)

I-7065A(D)

■ Pin Assignments

I-7063A(D)

| IN 5 | IN 6 | IN 7 | IN 8 | SSR3 + | SSR3 - | SSR2 + | SSR2 - | SSR1 + | SSR1 - |
| 20 | | | | | | | | | 11 |

| 1 | | | | | | | | | 10 |
| IN 4 | IN 3 | IN 2 | IN 1 | IN.COM | INIT* | (Y)DATA+ | (G)DATA- | (R)+Vs | (B)GND |

I-7065A(D)

| SSR5+ | SSR5- | SSR4+ | SSR4- | SSR3+ | SSR3- | SSR2+ | SSR2- | SSR1+ | SSR1- |
| 20 | | | | | | | | | 11 |

| 1 | | | | | | | | | 10 |
| IN4 | IN3 | IN2 | IN1 | IN.COM | INIT* | (Y)DATA+ | (G)DATA- | (R)+Vs | (B)GND |
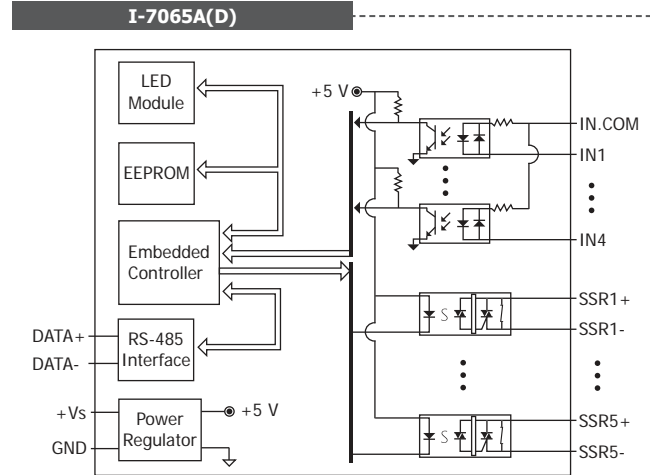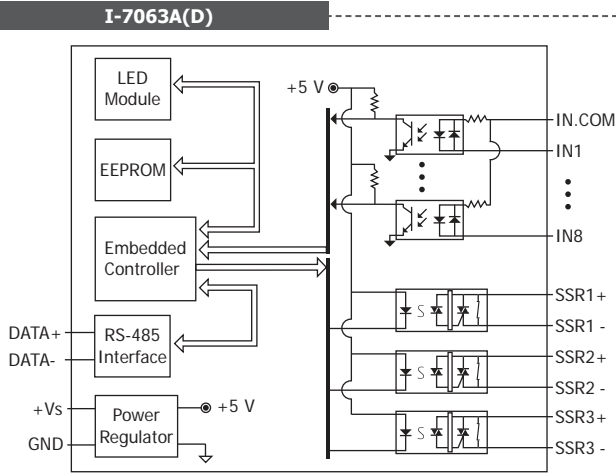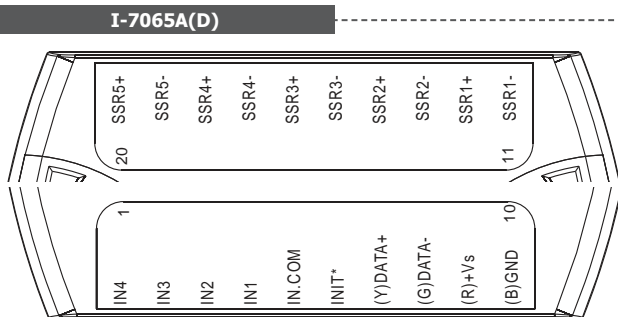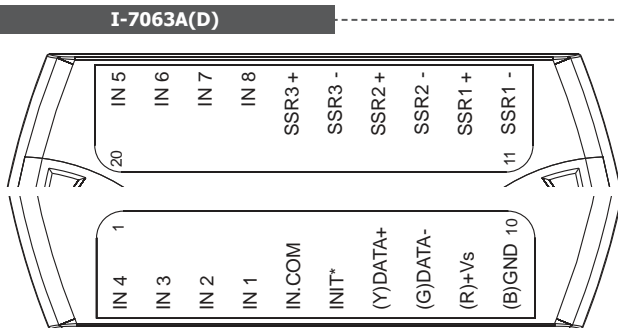
■ Wire Connections

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
AC-SSR Output		

■ Ordering Information

I-7063A CR	8-channel Isolated Digital Input and 3-channel AC SSR Output Module using the DCON Protocol (Blue Cover) (RoHS)
I-7063AD CR	I-7063A with LED Display (Blue Cover) (ROSH)
I-7065A CR	4-channel Isolated Digital Input and 5-channel AC SSR Output Module using the DCON Protocol (Blue Cover) (RoHS)
I-7065AD CR	I-7065A with LED Display (Blue Cover) (ROSH)

■ 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 Bias 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 Input Transformers	