

## Features

- I-7042/I-7042D
  - 13-channel Open Collector Output
  - 3750 Vrms Intra-module Isolation
- I-7043/I-7043D/M-7043/M-7043D
  - 16-channel Open Collector Output
  - Non-isolated for all channels
- Sink-type Digital Outputs
- Configurable Power-on Value Settings
- Configurable Safe Value Settings
- Dual Watchdog
- Wide Operating Temperature Range: -25 to +75°C



## Introduction

The I-7042 offers 13 channels digital output channels, each of which features Photocouple isolation and supports sink-type output using an open collector. There are also options to enable both power-on and safe values. The I-7042D has 13 LED indicators that can be used to monitor the status of DO channels. 3750 Vrms intra-module isolation is standard.

## System Specifications

Model	I-7042	I-7043	M-7043
	I-7042D	I-7043D	M-7043D
<b>Communication</b>			
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)		
<b>LED Indicators/Display</b>			
System LED Indicator	Yes, 1 as Power/Communication Indicator		
I/O LED Indicators	Yes, 13 LEDs as Digital Output Indicators	Yes, 16 LEDs as Digital Output Indicators	Yes, 16 LED as Digital Output Indicator
7-segment LED Display	-		
<b>Isolation</b>			
Intra-module Isolation, Field-to-Logic	3750 Vrms	-	
<b>EMS Protection</b>			
ESD (IEC 61000-4-2)	±2 kV Contact for each Terminal	-	
	±4 kV Air for Random Point	-	
EFT (IEC 61000-4-4)	±2 kV for Power Line	-	
Surge (IEC 61000-4-5)	-		
<b>Power</b>			
Reverse Polarity Protection	Yes		
Input Range	+10 ~ +30 Vdc		
Consumption	1.0 W	0.4 W	0.4 W
	1.7 W	1.1 W	1.1 W
<b>Mechanical</b>			
Dimensions (L x W x H)	123 mm x 72 mm x 35 mm		
Installation	DIN-Rail or Wall Mounting		
<b>Environment</b>			
Operating Temperature	-25 to +75°C		
Storage Temperature	-40 to +85°C		
Humidity	10 to 95% RH, Non-condensing		

The I-7043 offers 16 digital output channels, each of which are non-isolated and support sink-type output using an open collector. There are also options to enable both power-on and safe values. The I-7043D has 16 LED indicators that can be used to monitor the status of DO channels. The hardware specifications for the M-7043 are the same as the I-7043, and both support the Modbus RTU and DCON protocols, which can be configured via software.

## Applications

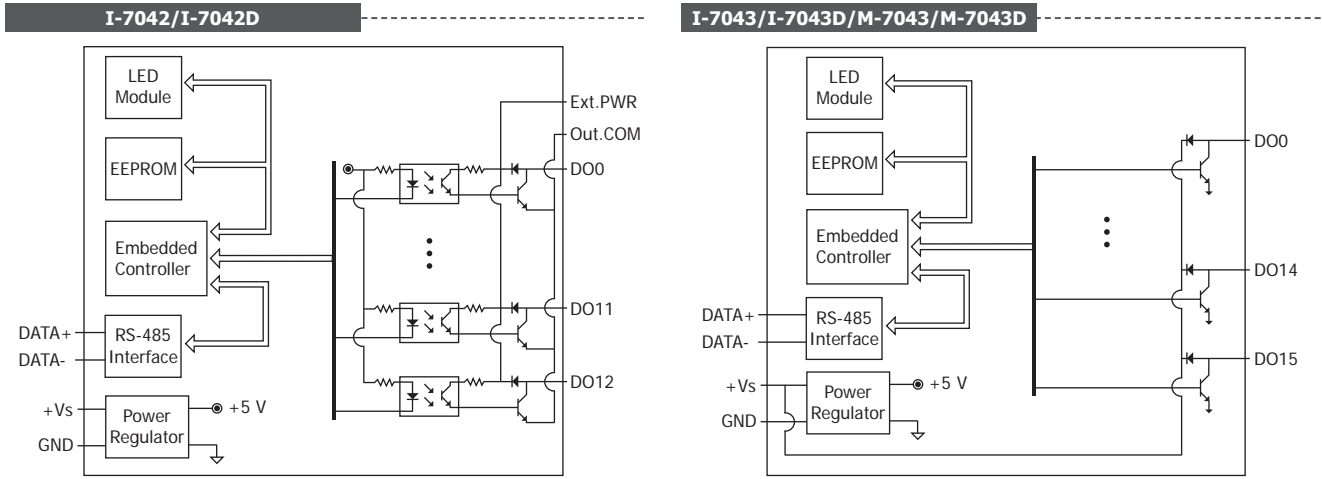
- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

## I/O Specifications

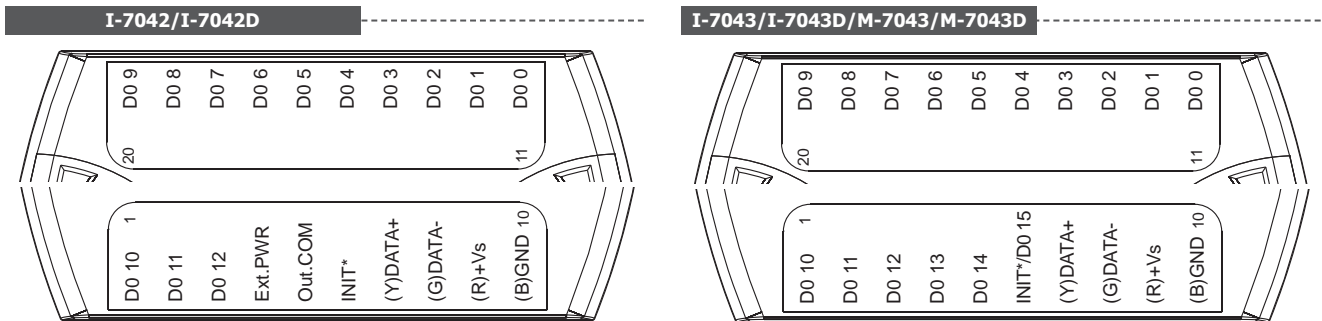
Model	I-7042	I-7043	M-7043
	I-7042D	I-7043D	M-7043D
<b>Digital Output</b>			
Channels	13	16	
Type	Open Collector		
Sink/Source (NPN/PNP)	Sink		
Load Voltage	+3.5 ~ 30 Vdc	+10 ~ 30 Vdc	
Max. Load Current	100 mA/Channel		
Overvoltage Protection	-		
Overload Protection	-		
Power-on Value	Yes		
Safe Value	Yes		

I-7042/I-7042D/I-7043/I-7043D/M-7043/M-7043D

### Internal I/O Structure



### Pin Assignments



### Wire Connections

I-7043/I-7043D/M-7043/M-7043D		
Output Type	ON State Readback as 1	OFF State Readback as 0
Open Collector Output (Resistance Load) DO0 ~ DO14		
Open Collector Output (Inductive Load) DO0 ~ DO14		
I-7043/I-7043D/M-7043/M-7043D		
Output Type	ON State Readback as 1	OFF State Readback as 0
Open Collector Output (Resistance Load) DO15		
Open Collector Output (Inductive Load) DO15		

I-7042/I-7042D/I-7043/I-7043D/M-7043/M-7043D

### Wire Connections

I-7042/I-7042D		
Output Type	ON State Readback as 1	OFF State Readback as 0
Open Collector Output (Resistance Load)		
Open Collector Output (Inductive Load)		

### Ordering Information

<b>I-7042 CR</b>	13-channel Isolated Digital Output Module using the DCON Protocol (Blue Cover) (RoHS)
<b>I-7042D CR</b>	I-7042 with LED Display (Blue Cover) (RoHS)
<b>I-7043 CR</b>	16-channel Non-isolated Digital Output Module using the DCON Protocol (Blue Cover) (RoHS)
<b>I-7043D CR</b>	I-7043 with LED Display (Blue Cover) (RoHS)
<b>I-7043D-G CR</b>	I-7043 with LED Display (Gray Cover) (RoHS)
<b>M-7043 CR</b>	16-channel Non-isolated Digital Output Module using the DCON and Modbus Protocol (Gray Cover) (RoHS)
<b>M-7043D-CR</b>	M-7043-G 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 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

I-7042/I-7042D/I-7043/I-7043D/M-7043/M-7043D