



I-7042



I-7042D

13-channel Isolated Digital Output Module



I-7043(D)



M-7043(D)

16-channel Non-isolated Digital Output Module

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 |
| 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, 13 LEDs as Digital Output Indicators | Yes, 16 LEDs as Digital Output Indicators | Yes, 16 LED as Digital Output Indicator |
| 7-segment LED Display | - | | |
| Isolation | | | |
| Intra-module Isolation, Field-to-Logic | 3750 Vrms | - | |
| EMS Protection | | | |
| 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) | - | | |
| Power | | | |
| 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 |
| 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 | | |

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

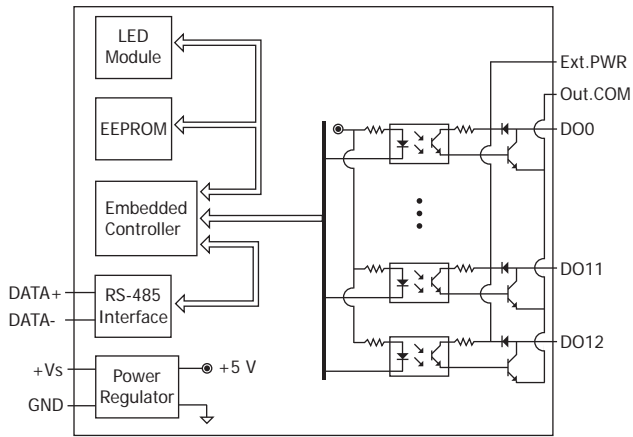
- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

I/O Specifications

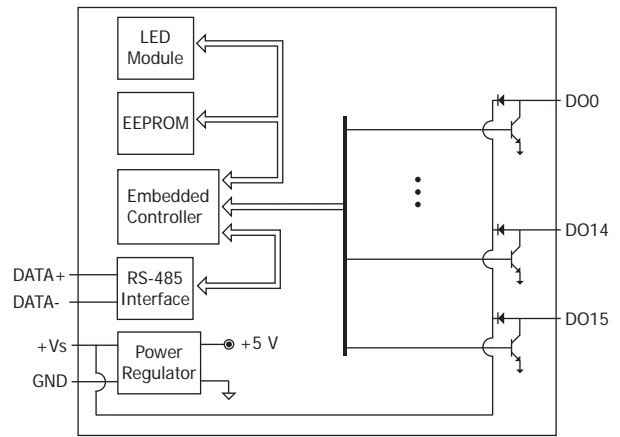
| Model | I-7042 | I-7043 | M-7043 |
|------------------------|----------------|--------------|---------|
| | I-7042D | I-7043D | M-7043D |
| Digital Output | | | |
| Channels | 13 | 16 | |
| Type | Open Collector | | |
| Sink/Source (NPN/PNP) | Sink | | |
| Load Voltage | +3.5 ~ 30 Vdc | +10 ~ 30 Vdc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

Internal I/O Structure

I-7042/I-7042D

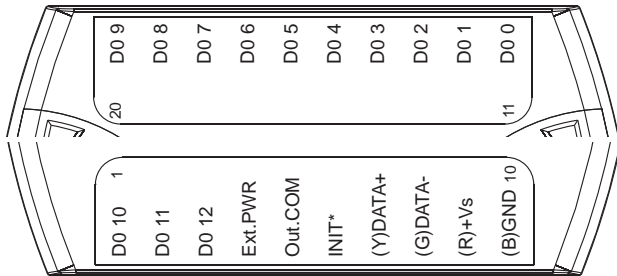


I-7043/I-7043D/M-7043/M-7043D

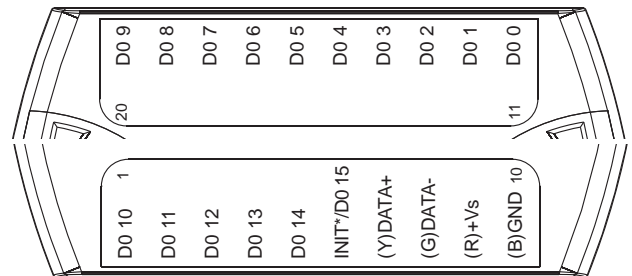


Pin Assignments

I-7042/I-7042D



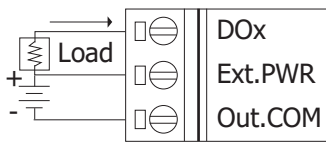
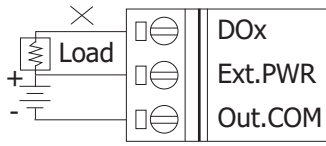
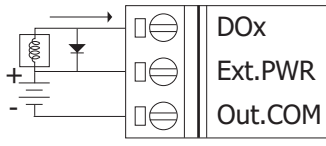
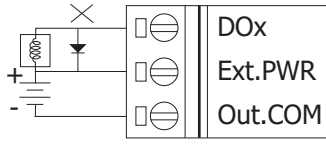
I-7043/I-7043D/M-7043/M-7043D



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 | | |







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

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