



Features

- I-7045(D)/M-7045(D)
 - Source-type Digital Output with Overload Protection
- I-7045(D)-NPN/M-7045(D)-NPN
 - Sink-type Digital Output with Overload Protection
- Configurable Power-on Value and Safe Value Settings
- Short Circuit Protection
- Overload and Overvoltage Protection
- Built-in Dual Watchdog



Introduction

All modules in the 7045 series offer 16 digital output channels, each of which features Photocoupler isolation. The I-7045(D)/M-7045(D) supports source-type output, while the I-7045(D)-NPN/M-7045(D)-NPN supports sink-type, and both are equipped with short circuit protection. There are options to enable both power-on and safe values, and 16 LED indicators that can be used to monitor the status of the digital output channels. 4 kV ESD protection, 4 kV EFT protection, 3 kV surge protection for power input and 3750 VDC Intra-module isolation are standard. The M-7045(D)/M-7045(D)-NPN has the same hardware specifications as the I-7045(D)/I-7045(D)-NPN, but provides additional support for the Modbus RTU protocol as well as the DCON protocol.

System Specifications

Model	I-7000 M-7000	7045	7045- NPN	7045D	7045D- NPN
CPU Module					
Watchdog Timer		Module, Communication (Programmable)			
Display					
Type		-		I/O LED Indicator	
Isolation					
Intra-module Isolation		3750 VDC			
EMS Protection					
EFT (IEC 61000-4-4)		±4 kV for 16 DO channels and Power, ±2 kV for the RS-485 Port			
ESD (IEC 61000-4-2)		±4 kV Contact for each Terminal ±8 kV Air for Random Point			
Surge (IEC 61000-4-5)		±3 kV for Power Line			
LED Indicators					
Status		1 x Power and Communication			
		-		16 x Digital Output	
COM Ports					
Ports		1 x RS-485			
Baud Rate		1200 ~ 115200 bps			
Data Format		(N, 8, 1)			
Protocol	I-7000	DCON			
	M-7000	Modbus RTU, DCON			
Power					
Reverse Polarity Protection		Yes			
Input Range		+10 ~ +30 VDC			
Consumption		0.6 W	0.4 W	1.5 W	1.2 W

Applications

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

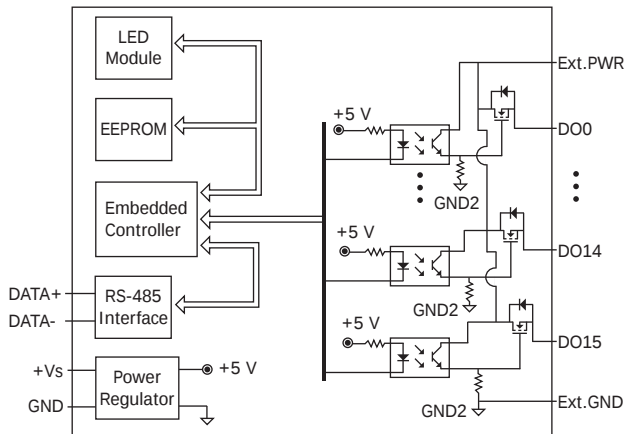
I/O Specifications

Model	I-7000 M-7000	7045 7045D	7045-NPN 7045D-NPN
Digital Output			
Channels	16		
Type	Open Source Open Collector		
Sink/Source (NPN/PNP)	Source Sink		
Load Voltage	+10 ~ +40 VDC +3.5 ~ 50 VDC		
Load Current	650 mA/Channel 700 mA/Channel		
Overvoltage Protection	47 VDC 60 VDC		
Overload Protection	1.4 A		
Short-circuit Protection	Yes		
Power on Value	Programmable		
Safe Value	Programmable		

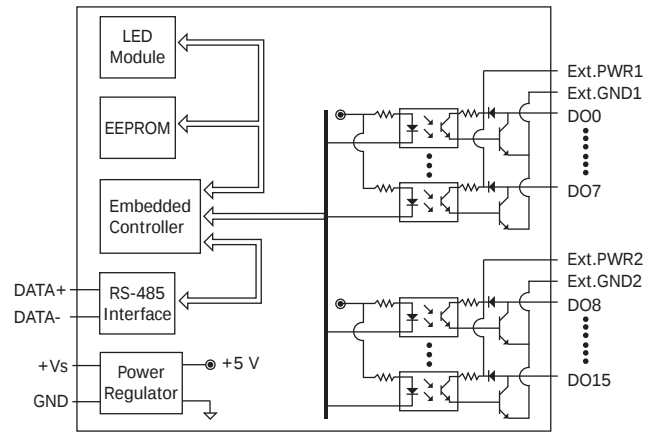
Mechanical	
Dimensions (mm)	72 x 123 x 35 (W x L x H)
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-40 ~ +85°C
Humidity	10 ~ 95% RH, Non-condensing

I-7045(D)/M-7045(D)

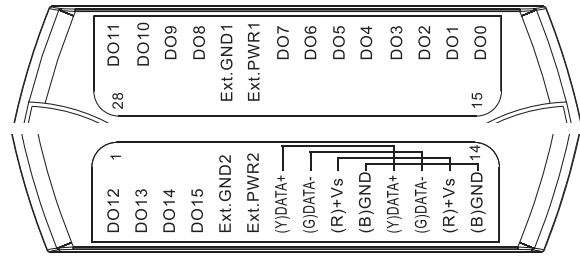
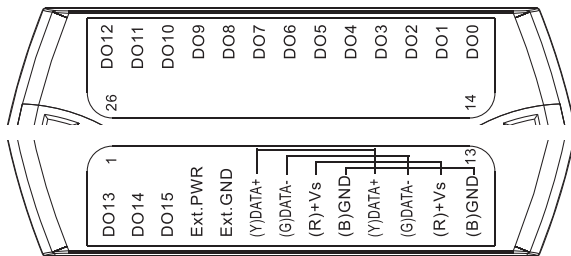
Internal I/O Structure



I-7045(D)-NPN/M-7045(D)-NPN



Pin Assignments



Wire Connections

Output Type	I-7045(D)/M-7045(D)		I-7045(D)-NPN/M-7045(D)-NPN	
	ON State Readback as 1	OFF State Readback as 0	ON State Readback as 1	OFF State Readback as 0
Digital Output (Resistance Load)				
Digital Output (Inductive Load)				

Ordering Information

I-7045 CR	16-ch Isolated (Source, PNP, 10~40 VDC) DO Module using DCON Protocol (Blue Cover) (RoHS)
I-7045-G CR	16-ch Isolated (Source, PNP, 10~40 VDC) DO Module using DCON Protocol (Gray Cover) (RoHS)
M-7045-G CR	16-ch Isolated (Source, PNP, 10~40 VDC) DO Module using DCON and Modbus Protocols (Gray Cover) (RoHS)
I-7045D CR	16-ch Isolated (Source, PNP, 10~40 VDC) DO Module with LED Display using DCON Protocol (Blue Cover) (RoHS)
I-7045D-G CR	16-ch Isolated (Source, PNP, 10~40 VDC) DO Module with LED Display using DCON Protocol (Gray Cover) (RoHS)
M-7045D-G CR	16-ch Isolated (Source, PNP, 10~40 VDC) DO Module with LED Display, using DCON and Modbus Protocols (Gray Cover) (RoHS)
I-7045-NPN-G CR	16-ch Isolated (Sink, NPN, 3.5~50 VDC) DO Module using DCON Protocol (Gray Cover) (RoHS)
I-7045D-NPN-G CR	16-ch Isolated (Sink, NPN, 3.5~50 VDC) DO Module with LED Display using DCON Protocol (Gray Cover) (RoHS)
M-7045-NPN-G CR	16-ch Isolated (Sink, NPN, 3.5~50 VDC) DO Module using DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7045D-NPN-G CR	16-ch Isolated (Sink, NPN, 3.5~50 VDC) DO Module with LED Display, using DCON and Modbus Protocols (Gray Cover) (RoHS)

Accessories

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