M-7041-A5 M-7041D-A5

14-ch High Voltage (Wet, 68~150 VDC), Isolated DI Module

Features

- 150V High Voltage Digital Input
- Sink- or Source-type Digital Input
- Photocoupler Isolation
- All Channels Can be Used as 16-bit Counters
- Built-in Dual Watchdog

Introduction

The M-7041(D)-A5 provides 14 channels for high voltage digital input, each of which features photocoupler isolation. The input voltage level could be as high as 150V. In addition, either sink- or source-type digital input can be selected via wire connections, and all channels are able to be used as 16-bit counters. The M-7041D-A5 has 14 LED indicators for DI channel status monitoring. 4 kV ESD protection and 3750 VDC intra-module isolation are standard. The M-7041(D)-A5 support both the Modbus RTU and DCON protocols, which can be configured via software.

Applications

- All Types of ON/OFF Control
- Building Automation
- Industrial Automation
- Industrial Machinery
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

System Specifications

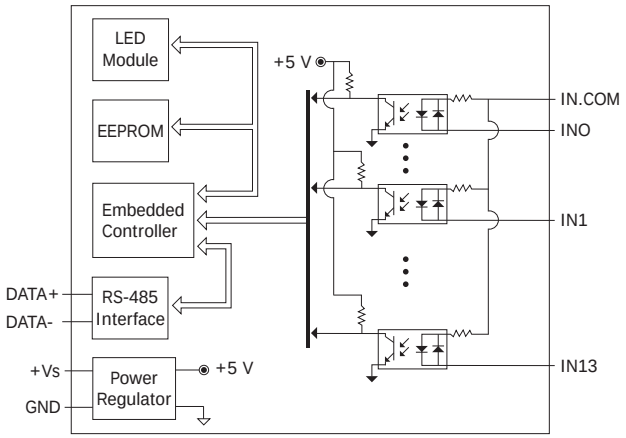
Model	M-7041-A5	M-7041D-A5
CPU Module		
Watchdog Timer	Module, Communication (Programmable)	
Display		
Type	-	I/O LED Indicator
Isolation		
Intra-module Isolation	3750 VDC	
EMS Protection		
EFT (IEC 61000-4-4)	±2 kV for Power Line	
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal ±8 kV Air for Random Point	
LED Indicators		
Status	1 x Power and Communication	
	-	14 x Digital Input
COM Ports		
Ports	1 x RS-485	
Baud Rate	1200 ~ 115200 bps	
Data Format	(N, 8, 1)	
Protocol	Modbus RTU, DCON	
Power		
Reverse Polarity Protection	Yes	
Input Range	+10 ~ +30 VDC	
Consumption	0.2 W	1.0 W

I/O Specifications

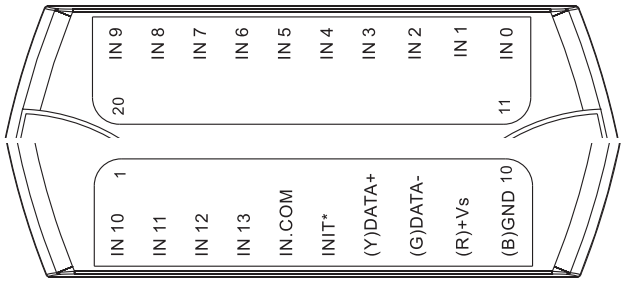
Model	M-7041-A5	M-7041D-A5
Digital Input/Counter		
Channels	14	
Type	Wet Contact	
Sink/Source (NPN/PNP)	Sink/Source	
ON Voltage Level	+68 ~ +150 VDC	
OFF Voltage Level	+48 VDC Max.	
Max. Counts	65535 (16-bit)	
Frequency	100 Hz	
Min. Pulse Width	5 ms	
Input Impedance	50 kΩ	

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

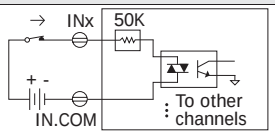
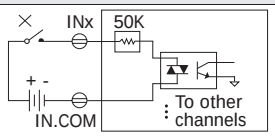
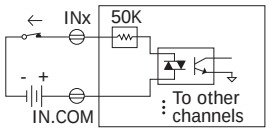
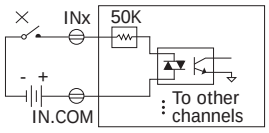
Internal I/O Structure



Pin Assignments



Wire Connections

Digital Input/Counter	ON State Readback as 1	OFF State Readback as 0
Sink	+68 ~ +150 VDC	OPEN or <48 VDC
		
Source	+68 ~ +150 VDC	OPEN or <48 VDC
		

Ordering Information

M-7041-A5-G CR	14-ch High Voltage (Wet, 68~150 VDC), Isolated DI Module using DCON and Modbus Protocols (Gray Cover) (RoHS)
M-7041D-A5-G CR	14-ch High Voltage (Wet, 68~150 VDC), Isolated DI Module with LED Display, using DCON and Modbus Protocols (Gray Cover) (RoHS)

Accessories

tM-7520U CR	Tiny Isolated RS-232 to RS-485 Converter (RoHS)
tM-7561 CR	Tiny USB to Isolated RS-485 Converter with CA-USB18 Cable (RoHS)
tM-SG4 CR	RS-485 Pull-high/Pull-low and Termination Resistor Module (RoHS)
I-7514U CR	Isolated 4-channel RS-485 Repeater/Hub/Splitter (Gray Cover) (RoHS)
SG-770 CR	7/14 channel Surge Protector (RoHS)
SG-3000 Series	Signal Conditioning Modules for Thermocouple, RTD, DC Voltage, DC Current and Power Input Transformers