



M-7068(D)

M-7069(D)

4-channel Form A Relay Output and 4-channel Form C Relay Output Module

Features

- M-7068(D)
 - 4 Form A and 4 Form C Signal Relay Output
 - 2000 Vdc Intra-module Isolation
- M-7069(D)
 - 4 Form A and 4 Form C Power Relay Output
 - 3750 Vdc Intra-module Isolation
- Dual Watchdog
- 4 kV ESD Protection
- Configurable Power-on Value Settings
- Configurable Safe Value Settings
- Wide Operating Temperature Range: -25 ~ +75°C



Introduction

The M-7068 provides 4 Form A signal relay output channels and 4 Form C signal relay output channels, while the M-7069 provides 4 Form A power relay output channels and 4 Form C power relay output channels. Both include 8 LED indicators that can be used to monitor the relay output status, and options are provided that allow power-on and safe digital output values to be configured. 4 kV ESD, 4 kV EFT and 3 kV surge protection are also provided to enhance noise protection capabilities in industrial environments. The M-7068 is the ideal solution for small signal switching, while the M-7069 is the ideal solution for high power applications.

Applications

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

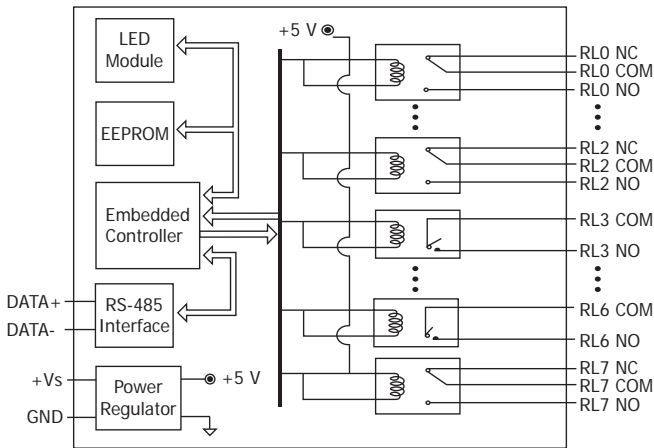
System Specifications

Model	M-7068	M-7068D	M-7069	M-7069D
Communication				
Interface	RS-485			
Format	(N, 8, 1), (N, 8, 2), (E, 8, 1), (O, 8, 1)			
Baud Rate	1200 ~ 115200 bps			
Protocol	Modbus RTU, DCON			
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)			
LED Indicators/Display				
System LED Indicator	Yes, 1 LED as Power/Communication Indicator			
I/O LED Indicators	-	Yes, 8 LEDs as Relay Output Indicators	-	Yes, 8 LEDs as Relay Output Indicators
7-Segment LED Display	-			
Isolation				
Intra-module Isolation, Field-to-Logic	2000 Vdc		3750 Vdc	
EMS Protection				
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal ±8 kV Air for Random Point			
EFT (IEC 61000-4-4)	±4 kV for 8 Relay and Power Line ±2 kV for RS-485 Port Line			
Surge (IEC 61000-4-5)	±3 kV for Power			
Power				
Reverse Polarity Protection	Yes			
Input Range	10 ~ 30 Vdc			
Consumption	1.6 W (Max.)	2.0 W (Max.)	2.1 W (Max.)	2.5 W (Max.)
Mechanical				
Dimensions (W x L x H)	72 mm x 123 mm x 35 mm			
Installation	DIN-Rail or Wall Mounting			
Environment				
Operating Temperature	-25 ~ +75°C			
Storage Temperature	-40 ~ +85°C			
Humidity	10 ~ 95% RH, Non-condensing			

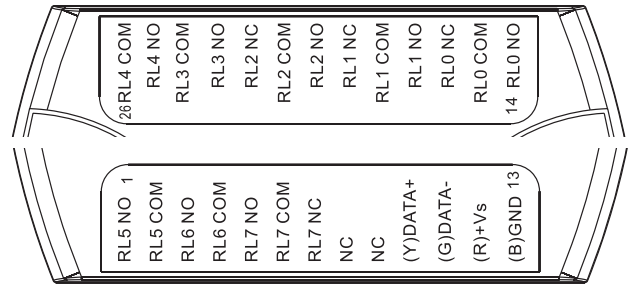
I/O Specifications

Model	M-7068	M-7068D	M-7069	M-7069D
Relay Output				
Channels	8 (Form A x 4, Form C x 4)			
Relay Type	Signal Relay		Power Relay	
Form A	Contact Rating	2 A @ 30 Vdc 0.24 A @ 220 Vdc 0.25 A @ 250 Vac		6 A @ 35 Vdc 6 A @ 240 Vac
	Min. Contact Load	10 mA @ 20 mV		100 mA @ ≥ 12 V
	Contact Material	Silver Nickel, Gold-covered		Silver Cadmium Alloy
	Operate Time	3 ms (typical)		5 ms (typical)
	Release Time	4 ms (typical)		1 ms (typical)
	Mechanical Endurance	10 ⁸ ops		30 X 10 ⁶ ops
Form C	Electrical Endurance	2 X 10 ⁵ ops		1 X 10 ⁵ ops
	Contact Rating	2 A @ 30 Vdc 0.24 A @ 220 Vdc 0.25 A @ 250 Vac		5 A @ 30 Vdc 5 A @ 250 Vac
	Min. Contact Load	10 mA @ 20 mV		10 mA @ ≥ 12 V
	Contact Material	Silver Nickel, Gold-covered		Silver Nickel Alloy
	Operate Time	3 ms (typical)		5 ms (typical)
	Release Time	4 ms (typical)		2 ms (typical)
Mechanical Endurance	10 ⁸ ops		15 X 10 ⁶ ops	
Electrical Endurance	2 X 10 ⁵ ops		1 X 10 ⁵ ops	
Surge Strength	2000 Vdc		4000 Vdc	
Power-on Value	Yes			
Safe Value	Yes			

Internal I/O Structure



Pin Assignments



Wire Connections

Relay Output	ON State Readback as 1	OFF State Readback as 0
Form A Relay in RL3 ~ RL6		
Form C Relay in RL0 ~ RL2 and RL7		

Ordering Information

M-7068 CR	4-channel Form A Signal Relay Output and 4-channel Form C Signal Relay Output Module (Gray Cover) (RoHS)
M-7068D CR	M-7068 with LED Display (Gray Cover) (RoHS)
M-7069 CR	4-channel Form A Power Relay Output and 4-channel Form C Power Relay Output Module (Gray Cover) (RoHS)
M-7069D CR	M-7069 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)
I-7514U CR	4-channel RS-485 Hub (RoHS)
SG-3000 Series	Signal Conditioning Modules for Thermocouple, RTD, DC Voltage, DC Current and Power Input transformers

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RS-485 Remote I/O Modules

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