

tM-R5

5-channel Power Relay Module

Features

- Relay Outputs
- Configurable Power-on Value and Safe Value Settings
- Dual Watchdog

Introduction

The tM-R5 provides 5 channels for relay output. All output channels are Form A-type relays and there are options for configuring power-on and safe digital output values. 4 kV ESD protection and 3750 VDC intra-module isolation are also provided.

Applications

- All Kinds of On/Off Control
- Industrial Automation
- Industrial Machinery
- Building Automation
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

System Specifications

CPU Module	
Watchdog Timer	Module, Communication (Programmable)
Isolation	
Intra-module Isolation	3750 VDC
EMS Protection	
EFT (IEC 61000-4-4)	±4 kV for Power
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
COM Ports	
Ports	1 x RS-485
Baud Rate	1200 ~ 115200 bps

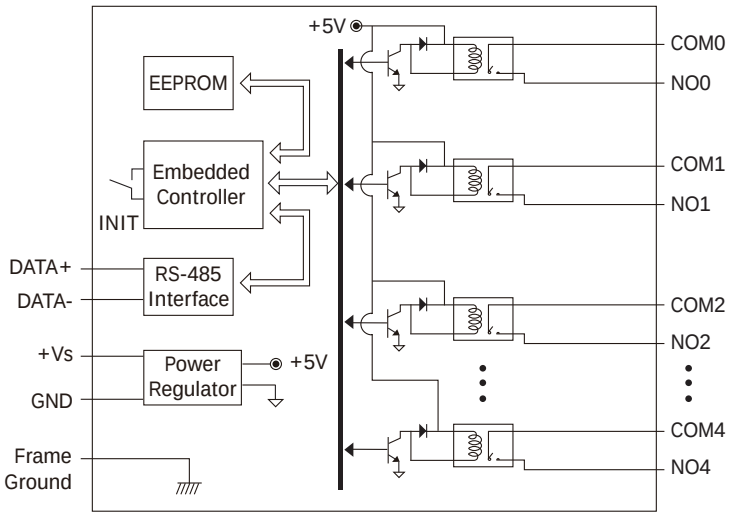
Data Format	(N, 8, 1), (N, 8, 2), (O, 8, 1), (E, 8, 1)
Protocol	DCON, Modbus RTU, Modbus ASCII
Power	
Reverse Polarity Protection	Yes
Consumption	1.0 W max.
Powered from Terminal Block	10 ~ 30 VDC
Mechanical	
Dimensions (mm)	52 x 98 x 27 (W x L x H)
Installation	DIN-Rail Mounting
Environmental	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +75 °C
Humidity	10 ~ 95% RH, Non-condensing

I/O Specifications

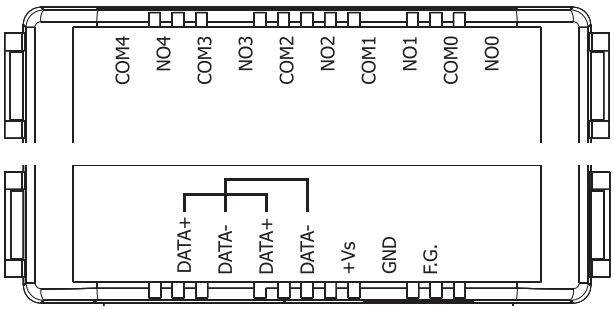
Relay Output		
Channels	5	
Type	Power Relay, Form A (SPST N.O.)	
Operate Time	6 ms	
Release Time	3 ms	
Electrical Endurance	VDE: 5 A @250 VAC 30,000 ops (10 ops/minute) at 75°C 5 A @30 VDC 70,000 ops (10 ops/minute) at 75°C	UL: 5 A @250 VAC/30 VDC 6,000 ops 3 A @250 VAC/30 VDC 100,000 ops 5 A @30 VDC 70,000 ops (10 ops/minute) at 75°C
Mechanical Endurance	20,000,000 ops at no load (300 ops/minute)	
Power on Value	Programmable	
Safe Value	Programmable	

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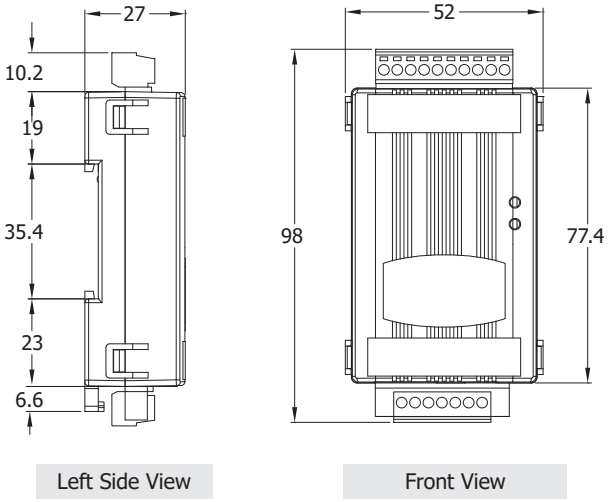
Internal I/O Structure



Pin Assignments



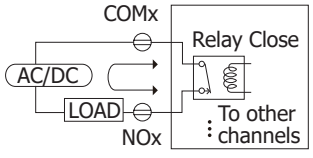
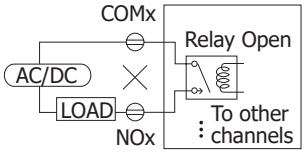
Dimensions (Units: mm)



Left Side View

Front View

Wire Connections

Power Relay	ON State Readback as 1	OFF State Readback as 0
Relay Output		

Ordering Information

tM-R5 CR	5-channel Power Relay Module (RoHS)

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