



tM-R5

5-channel Power Relay Module

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.

System Specifications

CPU Module	
Watchdog Timer	Yes, Module (2.3 seconds), Communication (Programmable)
Isolation	
Intra-module Isolation	3750 VDC
EMS Protection	
EFT (IEC 61000-4-4)	±4 kV for Power
EFT (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	Yes, 10 ~ 30 Vdc
Mechanical	
Dimensions (W x L x H)	52 mm x 98 mm x 27 mm
Installation	DIN-Rail Mounting
Environmental	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +75 °C
Humidity	10 ~ 95% RH, Non-condensing

Features

- Relay Outputs
- Dual Watchdog
- Configurable Power-on Value Settings
- Configurable Safe Value Settings
- Cost-effective



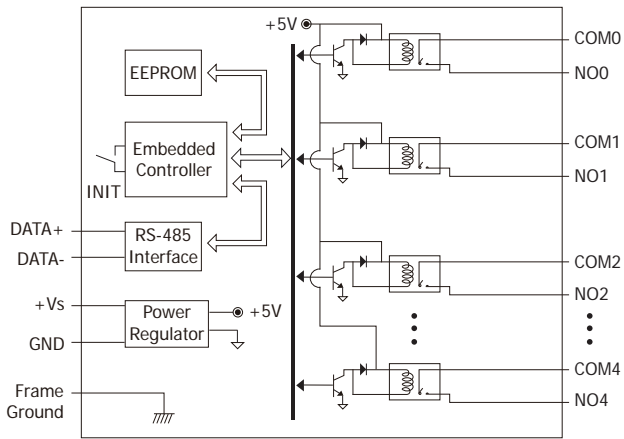
Applications

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

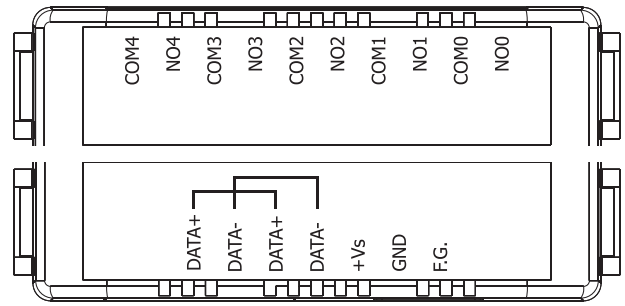
I/O Specifications

Digital Input/Counter	
Channels	3
Type	Wet Contact, Sink/Source
ON Voltage Level	+3.5 ~ +50 VDC
OFF Voltage Level	+1 VDC Max.
Max. Counts	65535 (16-bit)
Frequency	100 Hz
Min. Pulse Width	5 ms
Input Impedance	10 kΩ, 0.66 W
Overvoltage Protection	70 VDC
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)
Surge Strength	250 VAC or 30 VDC
Power on Value	Yes, Programmable
Safe Value	Yes, Programmable

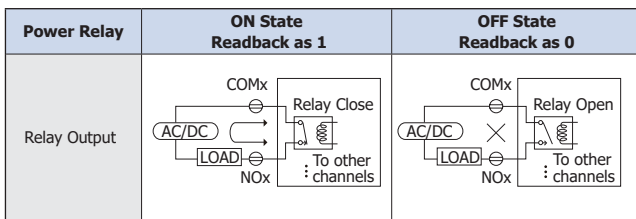
Internal I/O Structure



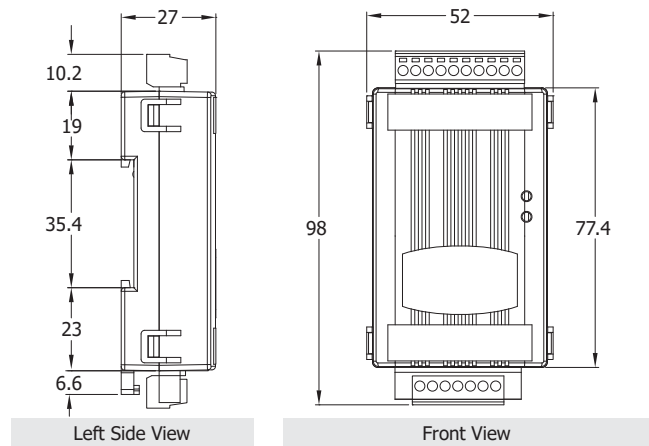
Pin Assignments



Wire Connections



Dimensions (Units: mm)



Ordering Information

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