ICP DAS

Tiny RS-485 Remote I/O Modules

tM-C8

8-channel Isolated Digital Output Module

Digital Output

Features

- Sink-type Digital Outputs
- Photocouple Isolation
- Dual Watchdog
- Configurable Power-on Value Settings
- Configurable Safe Value Settings
- Cost-effective
- Wide Operating Temperature Range: -25 °C ~ +75 °C

CE FC RoHS

Introduction

The tM-C8 provides 8 channels for digital output, each of which features photocouple isolation. The tM-C8 supports sink-type output with short circuit protection and there are options for configuring power-on and safe digital output values. 4 kV ESD protection and 3750 V_{DC} 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

Pin Assignments

DO.PWR DO.GND DO7 DO6 DO5 DO4 DO3 DO2 DO1 DO0

DATA+ DATA- DATA+ DATA- +Vs GND F.G.

System Specifications

Communication	
Interface	RS-485
Format	(N, 8, 1), (N, 8, 2), (O, 8, 1), (E, 8, 1)
Baud Rate	1200 ~ 115200 bps
Protocol	DCON, Modbus/RTU, Modbus/ASCII
Dual Watchdog	Yes, Module (2.3 seconds), Communication (Programmable)
LED Indicators	
Power	1 LED as Power Indicator
Isolation	
Intra-module Isolation, Field-to-Logic	3750 V_{DC}
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 Power
Power Requirements	
Reverse Polarity Protection	Yes
Powered from Terminal Block	Yes, 10 ~ 30 V_{DC}
Consumption	0.5 W Max.
Mechanical	
Dimensions (W x L x H)	52 mm x 98 mm x 27 mm
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +75 °C
Humidity	10 ~ 95% RH, Non-condensing
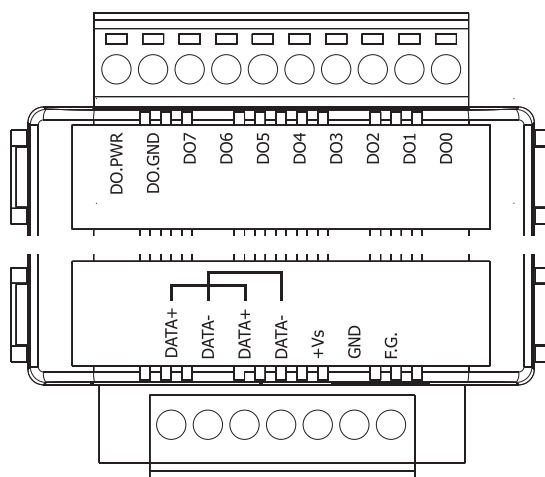
I/O Specifications

Digital Output	
Output Channels	8
Type	Isolated Open Collector (Sink)
Max Load Current	700 mA/channel
Load Voltage	3.5 V_{DC} ~ 50 V_{DC}
Overvoltage Protection	60 V_{DC}
Overload Protection	1.4 A
Short Circuit Protection	Yes
Power-on Value	Yes, Programmable
Safe Value	Yes, Programmable

Wire Connections

Output Type	ON State Readback as 1	OFF State Readback as 0
	Relay ON	Relay OFF
Drive Relay	DO.PWR / DOx / DO.GND	DO.PWR / DOx / DO.GND
Resistance Load	DO.PWR / DOx / DO.GND	DO.PWR / DOx / DO.GND

Block Diagram

Dimensions (Units: mm)

| Left Side View | Front View | Right Side View | Rear View | Bottom View |

Top View
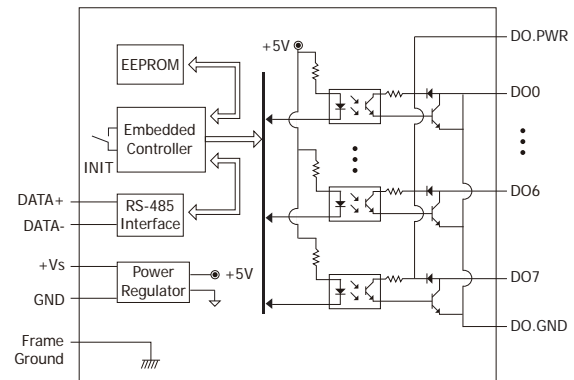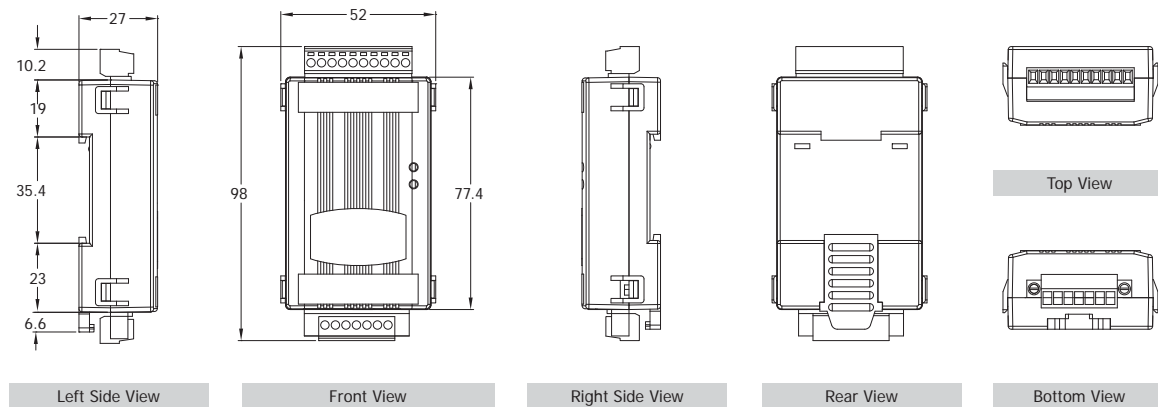
Ordering Information

tM-C8 CR	8-channel Isolation Digital Output Module (RoHS)

Related Products

tM-7561 CR	Isolated USB to RS-485 Converter (RoHS)
tM-7520U CR	Isolated RS-232 to RS-485 Converter (RoHS)

tM-7510U CR	Isolated RS-485 Repeater (RoHS)
MDR-20-24 CR	24W Single Output Industrial DIN Rail Power Supply (RoHS)