



## tM-P8

8-channel Isolated Digital Input Module

### Introduction

The tM-P8 offers 8 channels for digital input, each of which features photocouple isolation. In addition input can be either sink type or source type using wire connections and all channels can be used as 16-bit counters. 4 kV ESD protection and 3750 V<sub>dc</sub> intra-module isolation are also provided.

### Applications

- All kinds of On/Off Control
- Industry Automation
- Industrial Machinery
- Building Automation
- Food & Beverage Systems
- Semiconductor Fabrication
- Control Systems

### 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 <sub>dc</sub>
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 <sub>dc</sub>
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

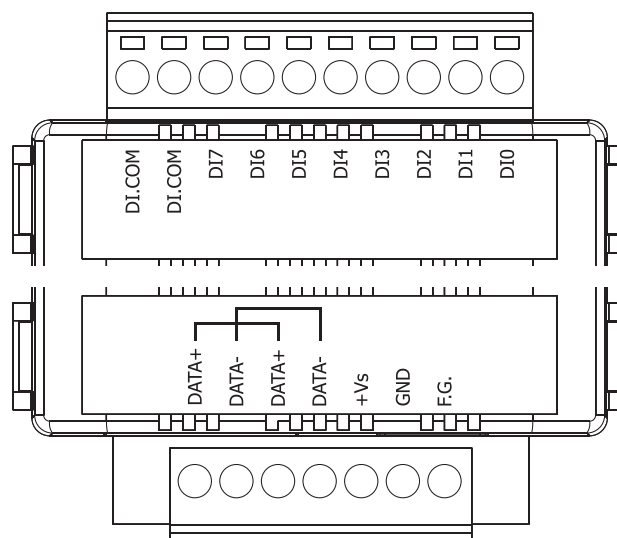
### Digital Input

#### Features

- Sink and Source Type Digital Inputs
- Photocouple Isolation
- All Channels Can Be Used As 16-bit Counters
- Dual Watchdog
- Cost-effective
- Wide Operating Temperature Range: -25 °C ~ +75 °C



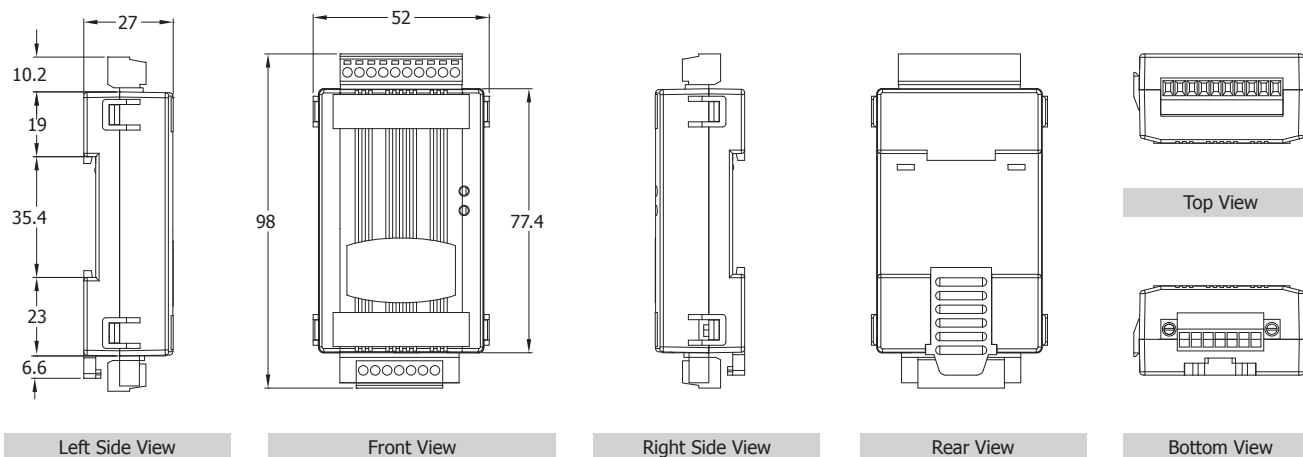
### Pin Assignments



### I/O Specifications

Digital Input/Counter		
Input Channels		8
Type		Wet Contact (Sink, Source)
On Voltage Level		+3.5 V <sub>dc</sub> ~ 50 V <sub>dc</sub>
Off Voltage Level		+1 V <sub>dc</sub> max.
Input Impedance		10 KΩ, 0.66 W
Counters	Channels	8
	Max. Count	65535 (16-bit)
	Max. Input Frequency	100 Hz
	Min. Pulse Width	5 ms
Overvoltage Protection		70 V <sub>dc</sub>

## Dimensions (Unit: mm)



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Tiny RS-485 Remote I/O Modules

## Wire Connection

Digital Input/Counter	ON State Readback as 1	OFF State Readback as 0
	+3.5 ~ +50 V <sub>DC</sub>	OPEN or <1 V <sub>DC</sub>
Sink		
	+3.5 ~ +50 V <sub>DC</sub>	OPEN or <1 V <sub>DC</sub>
Source		

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tM Series

## Ordering Information

tM-P8 CR	8-channel Isolation Digital Output Module (RoHS)
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## Related Products

	tM-7561 CR	Isolated USB to RS-485 Converter (RoHS)		tM-7510U CR	Isolated RS-485 Repeater (RoHS)
	tM-7520U CR	Isolated RS-232 to RS-485 Converter (RoHS)		MDR-20-24 CR	24W Single Output Industrial DIN Rail Power Supply (RoHS)

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