Backplane Systems Technology Pty Ltd
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Proudly Australian-Owned Since 1989

tM-P8 tM-PDW8

8-channel Isolated Digital Input Module

Features

- tM-P8
  - Wet Contact Source- or Sink-type Digital Inputs
- tM-PDW8
  - Dry Contact Source-type Digital Inputs
  - Wet Contact Source- or Sink-type Digital Inputs
- photocoupler isolation
- Dry Contact and Wet Contact Selectable via Wire Connections
- All Channels Can Be Used As 16-bit Counters
- Dual Watchdog
- Cost-effective
- Wide Operating Temperature Range: -25 ~ +75°C

Introduction

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

The tM-PDW8 offers 8 channels for digital input, catering for both dry and wet contact, with an effective distance for dry contact of up to 500 meters. All channels not only feature Photocoupler isolation, but can also be used as 16-bit counters. 4 kV ESD protection and 3750 VDC intra-module isolation are also provided.

Applications

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

System Specifications

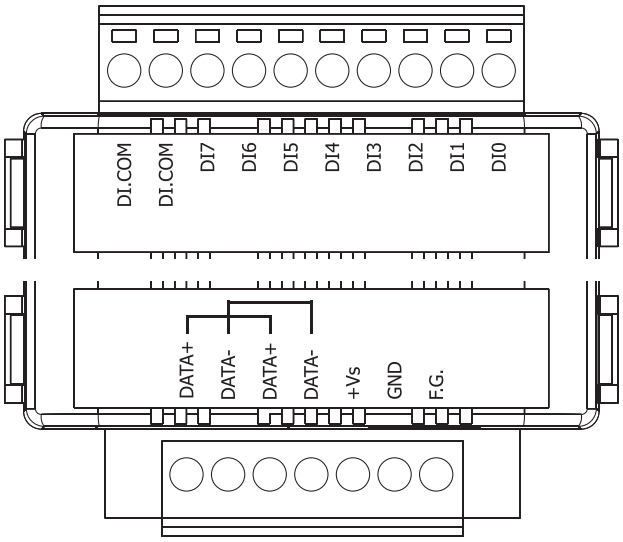
Model	tM-P8	tM-PDW8
Communication		
Interface	RS-485	
Format	(N, 8, 1), (N, 8, 2), (O, 8, 1), (E, 8, 1)	
Baud Rate	1200 ~ 115200 bps	
Protocol	DCON, Modbus/RTU, Modbus/ASCII	
Dual Watchdog	Yes, Module (2.3 seconds), Communication (Programmable)	
LED Indicators		
Power	1 LED as Power Indicator	
Isolation		
Intra-module Isolation, Field-to-Logic	3750 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 Power	
Power Requirements		
Reverse Polarity Protection	Yes	
Powered from Terminal Block	Yes, 10 ~ 30 VDC	
Consumption	0.2 W Max.	0.43 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

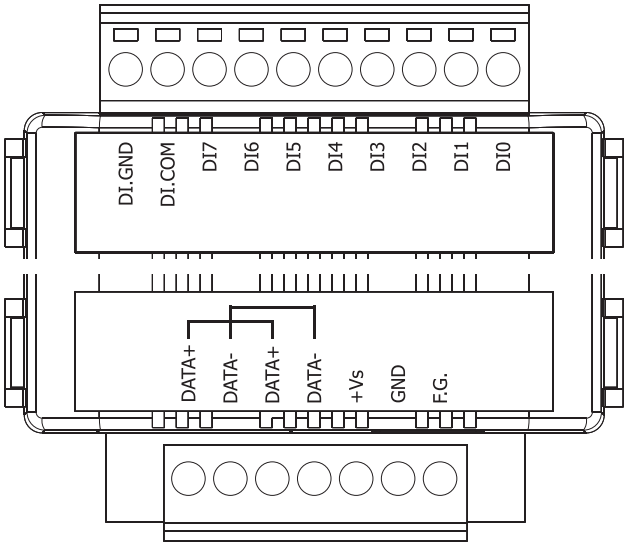
Model		tM-P8	tM-PDW8
Digital Input/Counter			
Channels		8	
Type		Wet Contact (Sink, Source)	Wet Contact (Sink, Source) + Dry Contact(Source)
Wet Contact	ON Voltage Level	+3.5 VDC ~ 50 VDC	
	OFF Voltage Level	+1 VDC Max.	
Dry Contact	ON Voltage Level	-	Close to GND
	OFF Voltage Level	-	Open
Counters	Max. Count	65535 (16-bit)	
	Max. Input Frequency	100 Hz	
	Min. Pulse Width	5 ms	
Input Impedance		10 kΩ, 0.5 W	
Overvoltage Protection		±70 VDC	

Pin Assignments

tM-P8

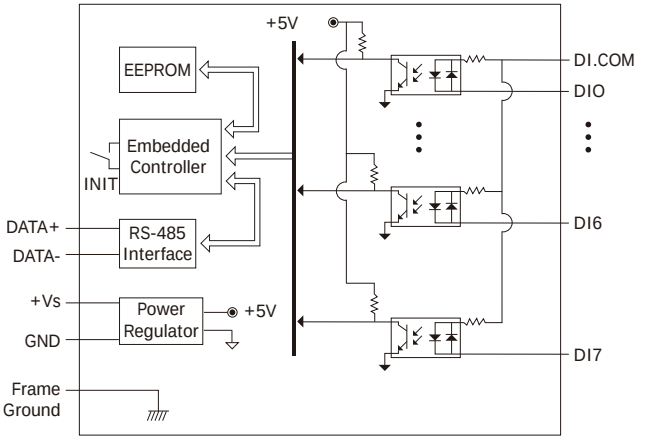


tM-PDW8

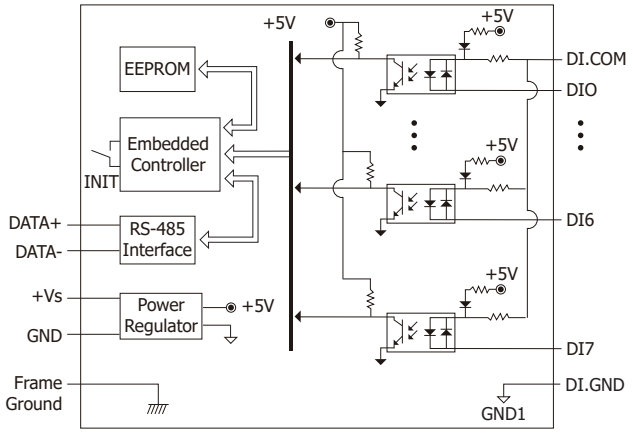


Block Diagram

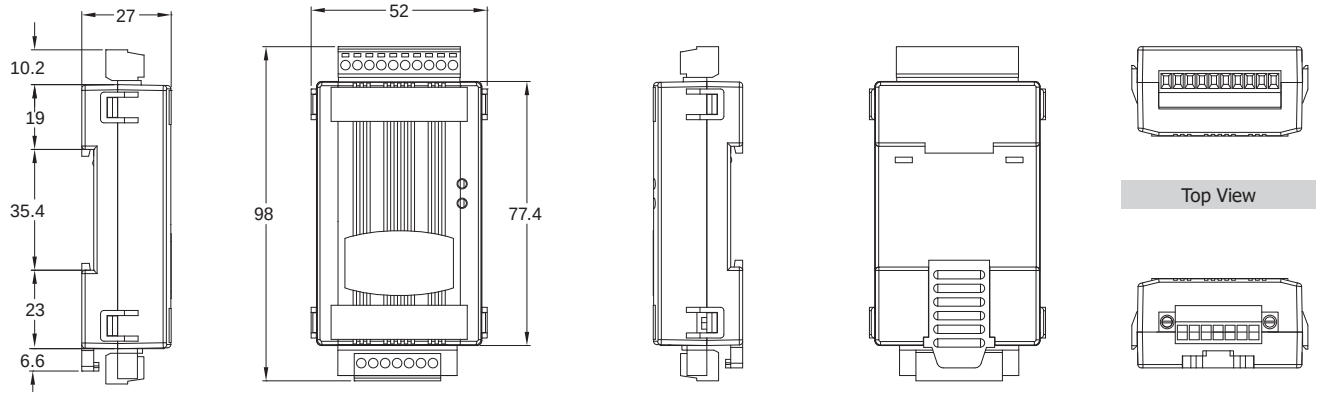
tM-P8



tM-PDW8



Dimensions (Units: mm)



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

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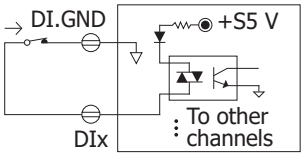
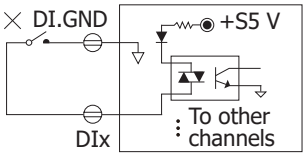
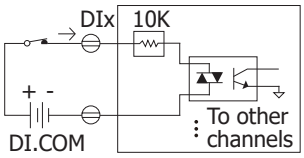
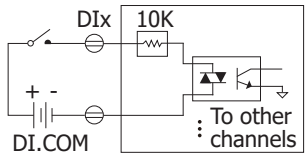
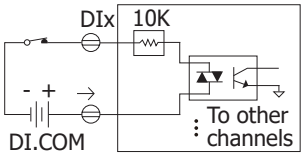
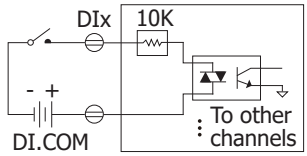
Wire Connections

Model	tM-PDW8	
Input Type	**ON State Readback as 1**	**OFF State Readback as 0**
Dry Contact	Close to GND	Open
		
Model	**tM-P8 / tM-PDW8**	
Input Type	**ON State Readback as 1**	**OFF State Readback as 0**
Wet Contact (Sink)	+3.5 ~ +50 VDC	OPEN or <1 VDC
		
Wet Contact (Source)	+3.5 ~ +50 VDC	OPEN or <1 VDC
		

Ordering Information

tM-P8 CR	8-channel Isolation Digital Input(Wet Contact) Module (RoHS)
tM-PDW8 CR	8-channel Isolation Digital Input(Wet Contact+Dry Contact) 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)	