

Tiny Wi-Fi Digital I/O Controller



tWF-PD4R3 tWF-PD8 tWF-R6
tWF-PD4SR2A tWF-PD4SR2D

Introduction

The tWF series I/O controller have WLAN connection complies with the IEEE802.11b/g/n standards. With the popularity of 802.11 network infrastructure, the tWF series I/O controller make an easy way to incorporate wireless connectivity into monitoring and control systems. They also support Modbus TCP protocol and the network encryption configuration, which makes perfect integration to SCADA software, HMI Modbus APP and offer easy and safe access for users from anytime and anywhere.

System Specifications

Communication	
Interface	Wi-Fi 2.4G
Standard	IEEE 802.11 b/g/n
Encryption	WEP, WPA/WPA2-PSK
Mode	Access Point (AP) & Station (STA)
IP Configuration	DHCP Server (AP, 1 client), DHCP Client, Static IP (STA)
Service	TCP, HTTP, Modbus TCP
LED Indicators	
Power	One 2 colors LED, Blue for System status, Red for Connective status/Locator
Isolation	
Intra-module Isolation, Field-to-Logic	3000 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 Power Jack	9 ~ 48 VDC
Consumption	0.7 W Max.
Mechanical	
Dimensions (W x L x H)	52 mm x 97 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

Features

- Wi-Fi communication remote I/O controller.
- Both Access Point (AP) & Station (STA) mode support
- PC utility, Android APP, Web browser support (HTML)
- MODBUS TCP support
- Wide power supply range
- Wide operating temperature range
- Photo couple Isolation input, Relay or SSR Isolation output
- Digital input 32-bit counter



Applications

- Building Automation
- Security Automation
- Machine Automation
- Factory Automation
- Remote Diagnosis
- Remote Maintenance
- Testing Equipment

Software Utility

OS	Access Point(AP)	Station(STA)
Windows	Utility	IP Scanner (1) & Utility
Android	APP	IP Scanner (1) & APP
Web Browser	Yes	Yes
Modbus TCP	Yes (2)	Yes (2)

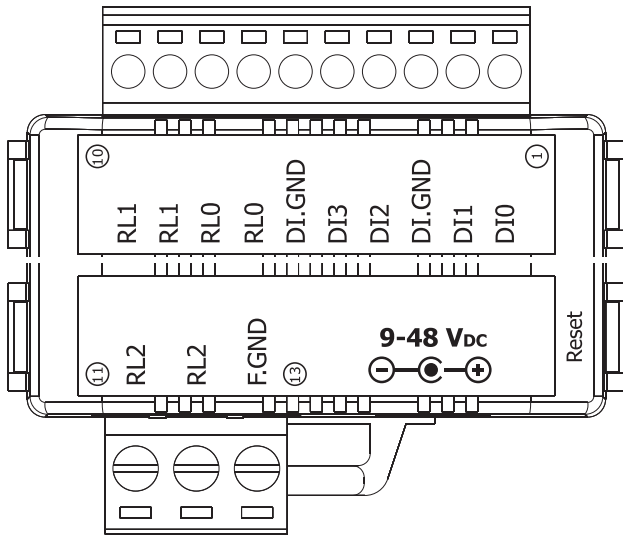
- (1) Free IP Scanner
(2) PC or Android Freeware

I/O Specifications

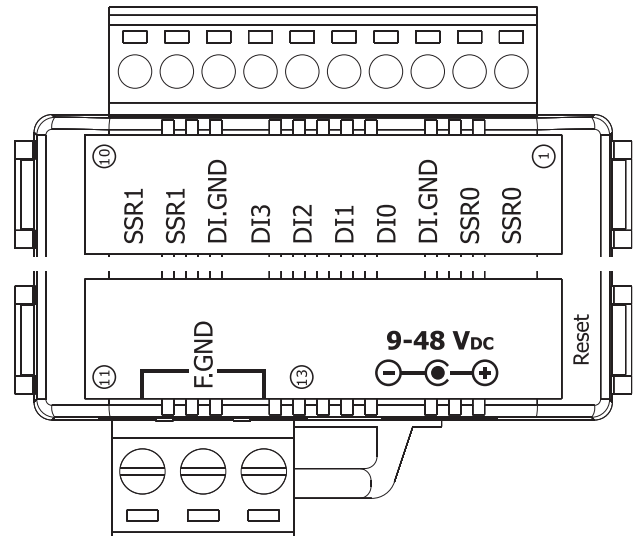
Model	tWF-PD4R3	tWF-PD4SR2A/D	tWF-PD8	tWF-R6
Digital Input				
Channels	4	4	8	-
Input Type	Dry Contact: Sink			-
Dry Contact Level	Off Voltage Level: Open On Voltage Level: Close to GND			-
Counters	Channels	4	4	8
	Max. Counts	32-bit (4294967295)		
	Max. Input Frequency	20 HZ		
Photo-Isolation	3750 VDC			-
Digital Output				
		AC	DC	
Channels	3	2	-	6
Output Type	Form A Relay	SSR	SSR	-
Contact Rating (Resistive Load)	DC 30V/5A AC 250V/5A	AC 240V 1.5A	DC 3~30V 1A	-
Relay/SSD Operate Time	5 ms (Max.)	2 ms	-	5 ms (Max.)
Relay/SSD Release Time	5 ms (Max.)	2 ms	-	5 ms (Max.)

Pin Assignments

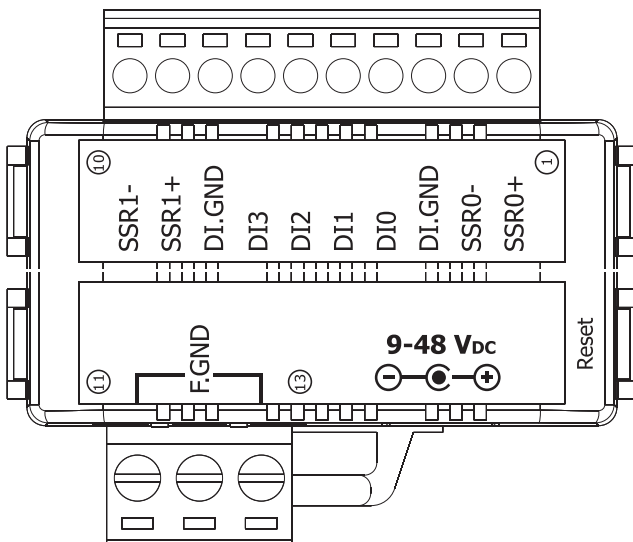
tWF-PD4R3



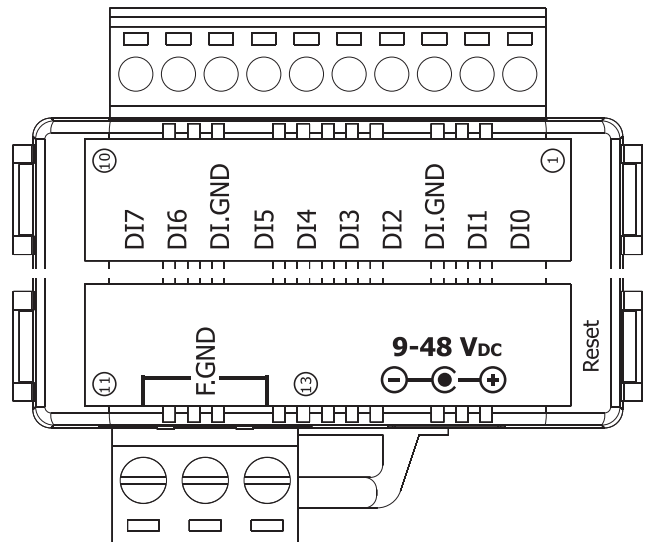
tWF-PD4SR2A



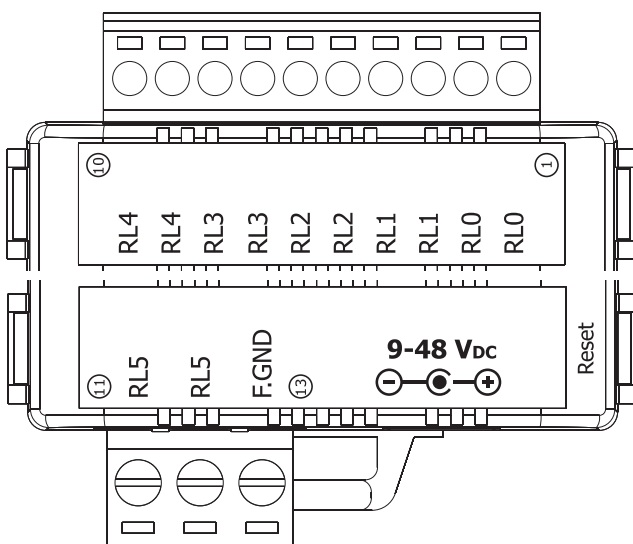
tWF-PD4SR2D



tWF-PD8



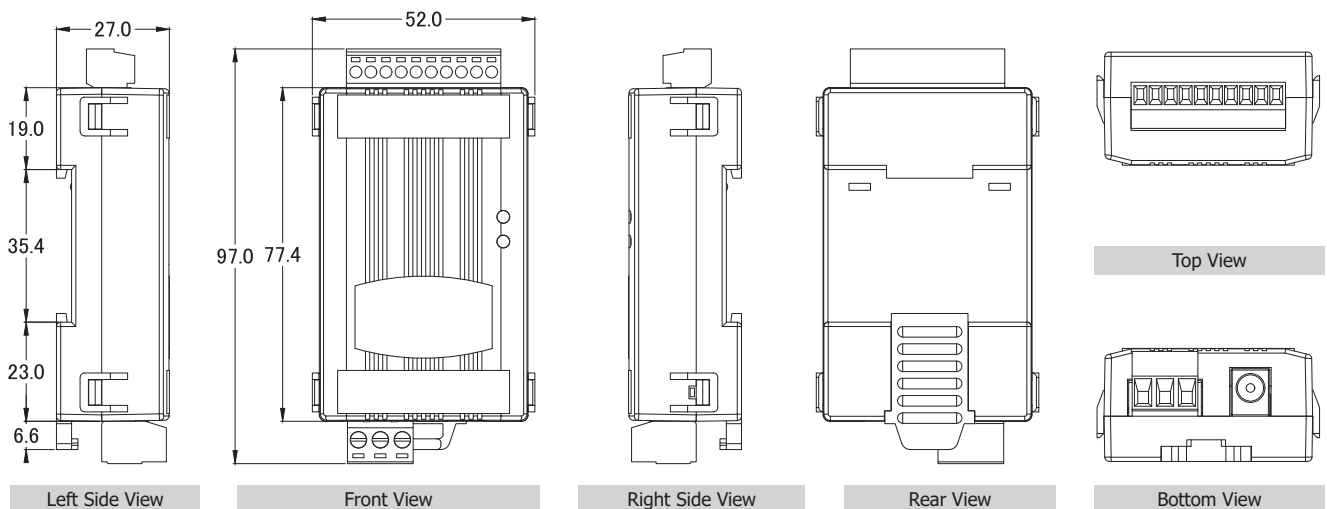
tWF-R6



Wire Connections

Digital Input wiring		
Digital Input/Counter	ON State	OFF State
	Close to GND	OPEN
Dry Contact		
Digital Output Relay wiring		
	ON State	OFF State
Form A Relay		
Digital Output SSR (AC) wiring		
	ON State	OFF State
Form A SSR (AC)		
Digital Output SSR (DC) wiring		
	ON State	OFF State
Form A SSR (DC)		

Dimensions (Units: mm)



Ordering Information

tWF-PD4R3 CR	4-channel Isolated Dry Digital Input, 3-channel Relay Output Module (RoHS)
tWF-PD4SR2A CR	4-channel Isolated Dry Digital Input, 2-channel AC SSR Output Module (RoHS)
tWF-PD4SR2D CR	4-channel Isolated Dry Digital Input, 2-channel DC SSR Output Module (RoHS)
tWF-PD8 CR	8-channel Isolated Dry Digital Input Module (RoHS)
tWF-R6 CR	6-channel Relay Output Module (RoHS)