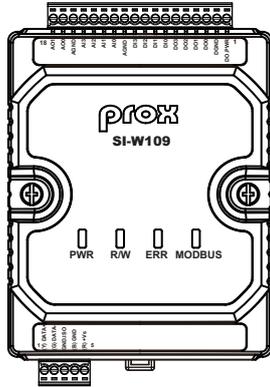


SI-W109

Quick Reference Guide



Ver. Q2

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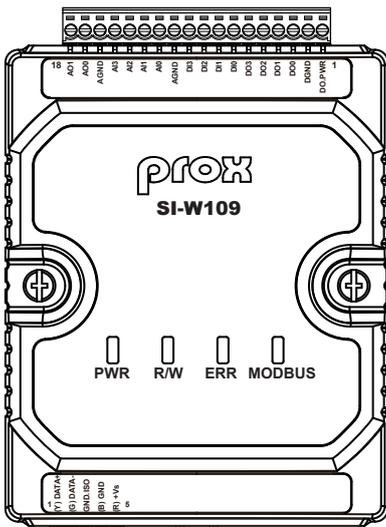
Specifications

System	
Communication Interface	RS-485
Baud Rate	9,600 bps ~ 115,200 bps (Max.)
Communication Protocol	Modbus / RTU
Intra-module Isolation	3000V
Installation	DIN-Rail, Wall Mount
LED Indicator	Power LED, Green / R/W LED, Orange / Error LED, Red / Modbus LED, Green
I ² C Interface	Temperature/ Humidity Sensor Module
Power Supply	9 ~ 50V DC In from terminal block
System Weight and Dimensions	220g / 113.9 x 90 x 40mm (WxHxD)
Certificate	FCC/CE
4-Channel I/O Analog Input	
Type	0V ~ +5V, 0V ~ +10V, ±10V ±20 mA, 0~20 mA, 4~20 mA (jumper selectable)
Resolution	16-bit
Sample Rate	Normal Mode: 10Hz / Fast Mode: 200Hz
Accuracy	Normal Mode: ±0.1 % / Fast Mode: ±0.5 %
Overvoltage Protection	120V DC
2-Channel I/O Analog Output	
Type	0V ~ +5V, 0V ~ +10V, ±10V 0 mA~+20 mA, +4 mA~+20 mA (jumper selectable)
Resolution	12-bit
Accuracy	±0.1%
Voltage Output Capability	10V @ 20mA
Current Load Resistance	500Ω
4-Channel Digital Input / Counter	
Type	Dry Contact, Source
On Voltage Level	Dry Contact, Close to GND
Off Voltage Level	Dry Contact, Open
Counters	Channels: 4/Max. Count: 32-bits (0~4,294,967,285) Max.Input Frequency: 50Hz/Min. Pulse Width:10 ms
Overvoltage Protection	60V DC
4-Channel Digital Output	
Type	Source
Max. Load Current	650 mA/ channel
Load Voltage	11V ~ 40V DC
Overvoltage Protection	47V DC
Overload Protection	Yes
Short-circuit Protection	Yes
Power-on Value	Yes, Programmable
Environment	
Operating Temp. (with airflow)	-25°C ~ 75°C (-13°F ~ 167°F)
Storage Temp.	-40°C ~ 85°C (-40°F ~ 185°F)
Humidity	20% ~ 90%

Pin Assignment

Jumper Settings

JCN1



I/O Channel Connector (JCN1)

Pin No.	Signal
1	DO.PWR
2	DGND
3	DO0
4	DO1
5	DO2
6	DO3
7	DI0
8	DI1
9	DI2
10	DI3
11	AGND
12	AIO
13	AI1
14	AI2
15	AI3
16	AGND
17	AO0
18	AO1

RS-485 and Power Connector(JCN2)

Pin No.	Signal
1	(Y)DATA+
2	(G)DATA-
3	GND.ISO
4	(B)GND
5	(R)+Vs

Analog Input Jumper Settings

Analog Input AI0(JP8), AI1(JP7), AI2(JP5), AI3(JP6)	
Voltage	Current

Analog Output Jumper Settings

Analog Output AO0(JP3), AO1(JP4)	
Voltage	Current

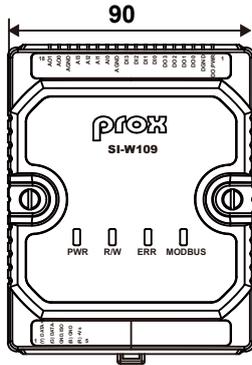
SI-W109

Multi-Functional I/O Module

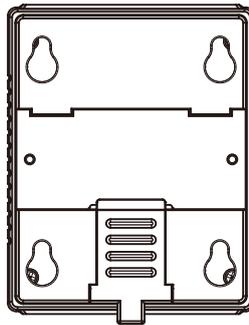
Overview

(Unit: mm)

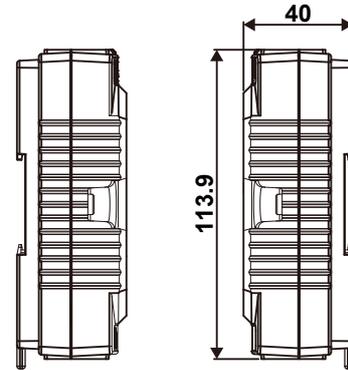
Front View



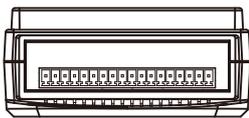
Rear View



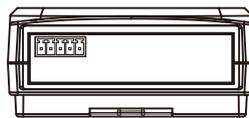
Side View



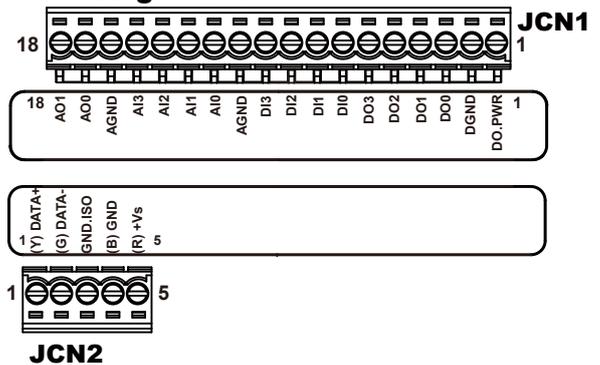
Top View



Bottom View

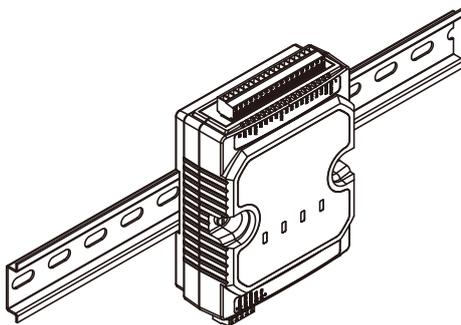


Pin Assignment



Quick Setup

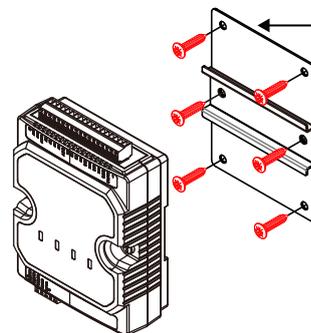
Installing DIN-RAIL Mount



Installing Wall Mount

Step 1. Prepare and fasten the 2 or 4 self-tapping T5 screws to tighten the wall mount kit onto the wall.

Step 2. Attach the SI-Wx09 onto the wall mount kit installed on the wall to complete.



Wall Mount Kit

Wall Mount Accessories

Screw

Self-Tapping Screw T5 x 4 (1/2)

Wall Mount Kit



Wall Mount Kit x 1

Safety Precaution

The following messages are reminders for safety on how to protect SI-W109 from damages and extend a long life for SI-W109.

1. Check the Cable Voltage

- The range of operating voltage should be DC 9~50V. Otherwise, the SI-W109 module could be damaged.

2. Environmental Conditions

- Place your SI-W109 on a sturdy, level surface. Be sure to allow enough space to have easy access around SI-W109.
- Avoid extremely hot or cold place to install the SI-W109.
- Avoid exposure to sunlight for a long period of time or in an airtight space.
- Avoid SI-W109 from any heating device or using SI-W109 when it's been left outdoors in a cold winter day.
- Avoid moving SI-W109 rapidly from a hot place to a cold place and vice versa because condensation may come from inside of SI-W109.
- Don't place SI-W109 close to any radio-active device in case of signal interference.

3. Handling

- Avoid putting heavy objects on top of SI-W109.

- Do not turn SI-W109 upside down.

4. Good Care

- When the outside of the case is stained, remove the stain with a neutral washing agent with a dry cloth.
- Never use strong agents such as benzene and thinner to clean SI-W109.
- If heavy stains are present, moisten a cloth with diluted neutral washing agent or with alcohol and then wipe thoroughly with a dry cloth.
- If dust has been accumulated on the outside, remove it by using a special vacuum cleaner for computers.

WARNING! Some internal parts of SI-W109 may have high electrical voltage. And therefore we strongly recommended that qualified engineers can open and disassemble SI-W109.