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ORing IDS-312L Device Server Installation Guide

**IDS-312L Device Server
Installation Guide**

Contents
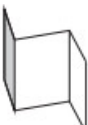
Introduction

The IDS-312L is an innovative secure one-port RS-232/422/485 to two ports LAN device server with standard features of device server, such as TCP/IP interface and versatile operation modes: Virtual Com, Serial Tunnel, TCP Server, TCP Client, and UDP. In addition, the Windows utility, DS-Tool, could configure multiple devices and set up the mappings of Virtual Com. On the other hand, it can simultaneously transfer data up to 5 redundant host PCs to avoid Ethernet connection breakdown or any host PC failure. Further, IDS-312L features HTTPS, SSH, and SSL encryption to assure the security of critical data transmission. The device supports RS-232/422/485 and provides dual redundant power inputs, 12-48 VDC, on the terminal block to guarantee a non-stop operation. With wide operating temperature, -10-70°C, and a rugged IP-30 housing design, the device could operate in the harsh industrial environment. Therefore, IDS-312L is the best solution to the high demand for secure serial to Ethernet critical data communication.
The product is an open type, intended to be installed in an industrial control panel or an enclosure.

Package Contents

The device is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.

Contents	Pictures	Number
IDS-312L		X 1
CD		X 1
QIG		X 1
DIN-rail kit		X 1
Wall-Mount Kit		X 2
4-pin terminal block		X 1
Dust cover		X 2

Preparation

Before installation, make sure you have all of the package contents available and a PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools.

Safety & Warnings

⚠️**Elevated Operating Ambient:** If installed in a closed environment, make sure the operating ambient temperature is compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

⚠️**Reduced Air Flow:** Make sure the amount of airflow required for the safe operation of the equipment is not compromised during installation.

⚠️**Mechanical Loading:** Make sure the mounting of the equipment is not in a hazardous condition due to uneven mechanical loading.

⚠️ **Circuit Overloading:** Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

- Indoor use and pollution degree II, it must be wiped with a dry cloth to clean up the device and
- Do not block air ventilation holes.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired."
- Shall be mounted in the Industrial Control Panel and the ambient temperature does not exceed 70 degrees C

DimensionUnit =mm (Tolerance ±0.5mm)
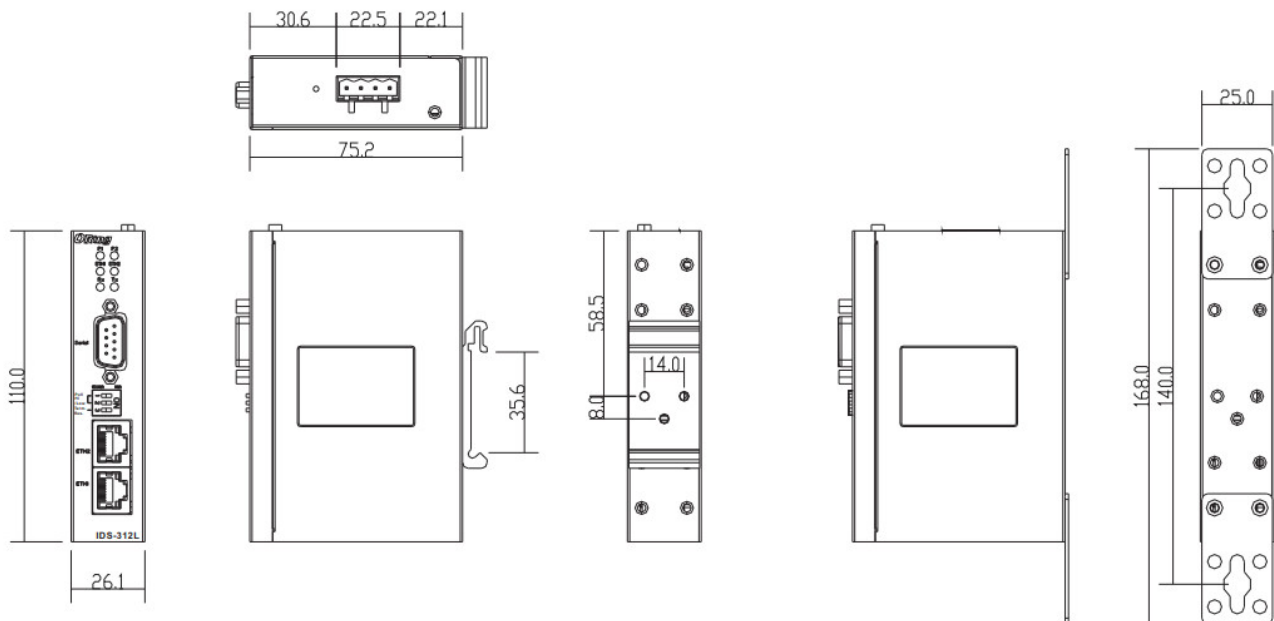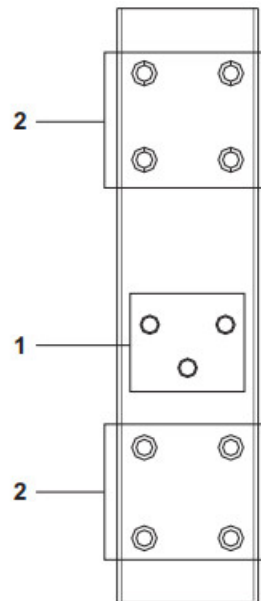

Panel Layouts

Front Panel
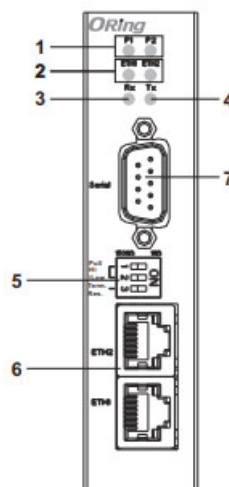
1. Power status indicators
2. LAN connection status indicators
3. Serial signal reception status indicator

4. Serial signal transmission status indicator

5. Dip switch button

6. Ethernet port

7. Serial port

Rear Panel

1. Din-rail screw holes

2. Wall-mount screw holes
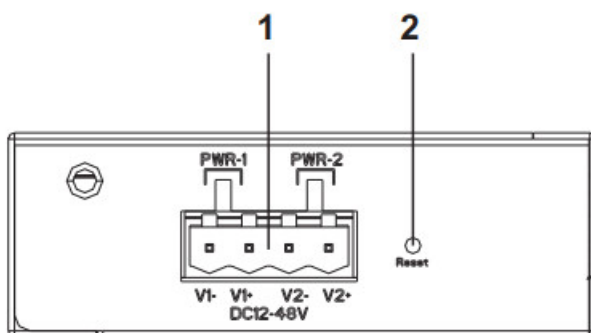
1. Terminal block
2. Reset button

Installation

DIN-rail
Step 1: Slant the device and screw the Din-rail kit onto the back of the device, right in the middle of the back panel.
Step 2: Slide the device onto a DIN-rail from the Din-rail kit and make sure the device clicks into the rail firmly.

Wall-mount

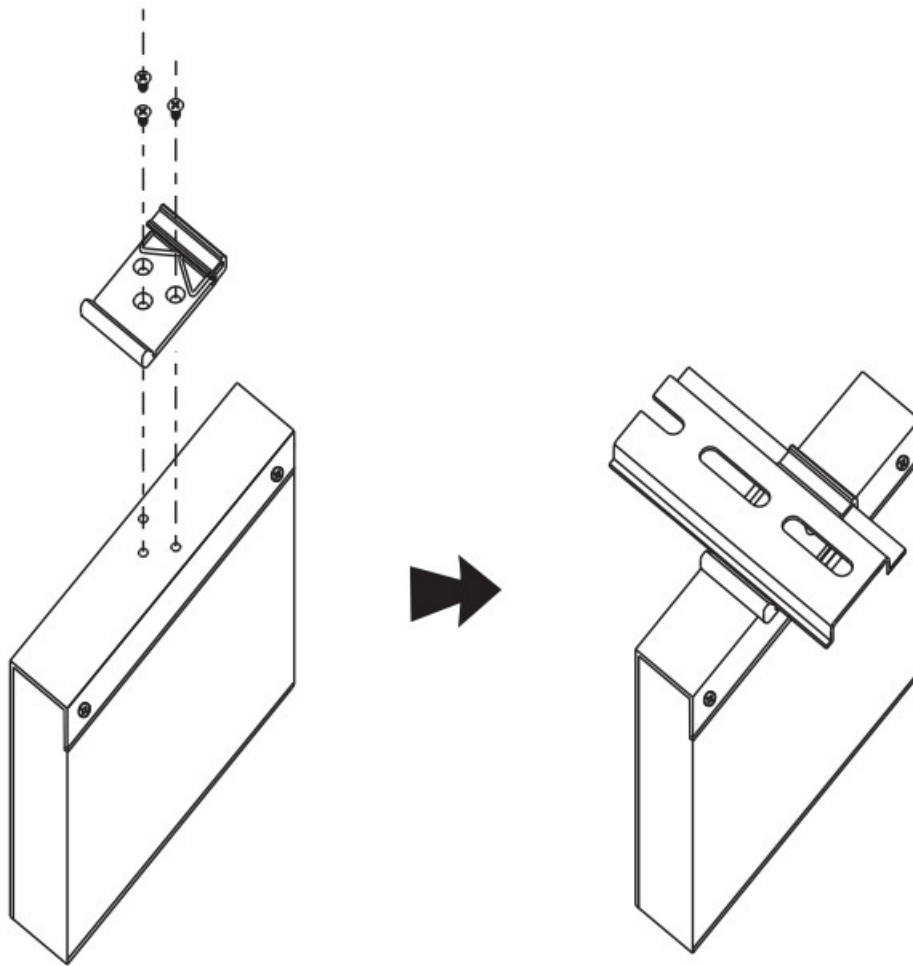**Step 1:** Screw the two pieces of wall-mount kits to the top and bottom panels of the device. A total of eight screws are required, as shown below.

Step 2: Use the device, with wall mount plates attached, as a guide to mark the correct locations of the four screws.

Step 3: Insert a screw head through the middle of the keyhole-shaped aperture on the plate, and then slide the device downwards. Tighten the screw head for added stability.
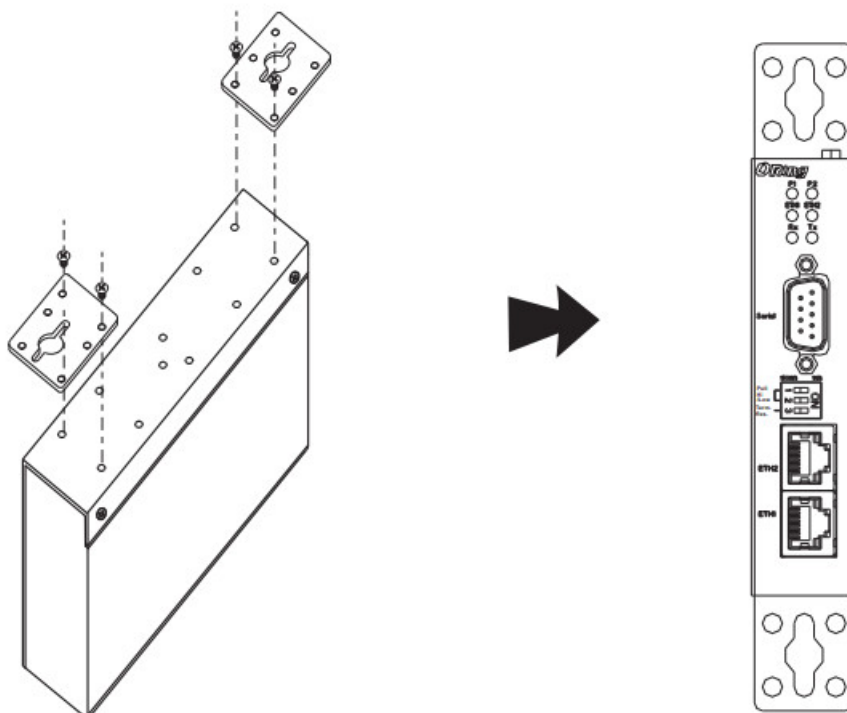
Network Connection

The device has two 10/100Base-T(X) Ethernet ports. According to the link type, the AP uses CAT 3. 4, and 5. 5e, 6 UTP cables to connect to any other network device (PCs. servers. switches, routers. or hubs).

Cable	Type	Max.Length	Connector
10Base-T	Cat.3,4,5100-ohm	UTP100m(328ft)	RJ45
100Base-TX	Cat.5100-ohmUTP	UTP100m(328ft)	RJ45

For pin assignments for different types of cables, please refer to the following tables.

| 10/100 Base-T(X) RJ-45		
Pin Number	MDI port	MDI-X port
1	TD+(transmit)	RD+(receive)
2	TD-(transmit)	RD-(receive)
3	RD+(receive)	TD+(transmit)
4	Not used	Not used
5	Not used	Not used
6	RD-(receive)	TD-(transmit)
7	Not used	Not used
8	Not used	Not used

10/100 Base-T(X) RJ-45	
Pin Number	Assignment
1	TD+
2	TD-
3	RD+
4	Not used
5	Not used
6	RD-
7	Not used
8	Not used

Note: "+" and "-" signs represent the polarity of the wires that make up each wire pair.
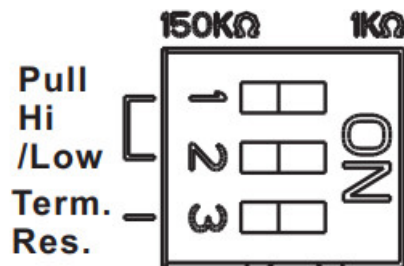
DB9 serial port

The device can be connected to a serial device using a DB9 cable. The DB9 connector supports RS232 / RS422 / RS485 operation modes. Please refer to the following table for the pin assignments of the DB9 connector.
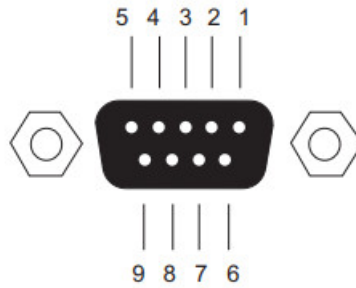
| Pin #	RS-232	RS-422	RS-485 (4wire) RS-485	(2wire)
1	DCD	TX-	TX-	
2	RXD	TX+	TX+	
3	TXD	RX+	RX+	DATA+
4	DTR	RX-	RX-	DATA-
5	GND	GND	GND	GND
6	DSR			
7	RTS			
8	CTS			

Dip Switch

SW No.	Description
#1	150K / 1K Ohm Pull High/Low Resistor
#2	
#3	Enable / Disable Terminal Resistor

Wiring Power inputs

This device supports dual redundant power supplies, Power Supply 1 (PWR1) and Power Supply 2 (PWR2). The connectors for PWR1 and PWR2 are located on the terminal block.

STEP 1: Insert the negative/positive DC wires into the V-/V+ terminals, respectively.
STEP 2: To keep the DC wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.

```
PWR-1    PWR-2

V1-  V1+  V2-  V2+
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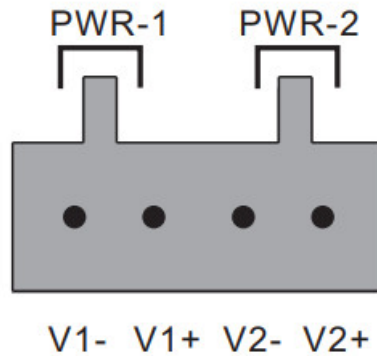
Grounding

Grounding and wire routing help limit the effects of noise due to electromagnetic interference **(EMI).** Run the ground connection from the ground screws to the grounding surface prior to connecting devices.
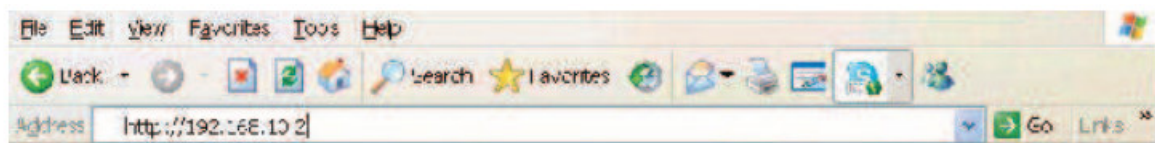
Configurations

After installing the device and connecting cables, the green power LED should turn on. Please refer to the following table for LED indication.

LED	Color	Status	Description
PWR 1/2	Green	On	The power is on and functions normally
ETH 1/2	Green	On	Port is connected
		Blinking	Data Transmitted
RX / TX	Amber	On	Receiving Serial data
	Green	On	Transmitting Serial data

Follow the steps below to log in and access the system:

1. Launch Internet Explorer and type in the IP address of the device. The default static IP address is **192.168.10.2**

2. Log in with the default user name "admin" and password is "admin" also. however, you can set up a password later in the management page. After logging in, you should see the following screen. For more information on configurations, please refer to the user manual. For information on operating the device server using ORing's DS-Tool management utility, please go to the ORing website.

Contact for maintenance and repair service:

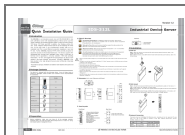**ORing Industrial Networking Corp.**
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Documents / Resources

ORing IDS-312L Device Server [pdf] Installation Guide
IDS-312L Device Server, IDS-312L, Device Server, IDS-312L Server, Server

References

- **ORing Industrial Networking**

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