Leonton

REG2-2602-2C Series

(REG2-2602-2C / REG2-2602-2C-T)

User Manual

Version 1.0

Disclaimer

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FCC Notice

This equipment has been tested and found to comply with the limits for a Class-A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. It may cause harmful interference to radio communications if the equipment is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

CE Mark Warning

This is a Class-A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

This document is the current official release manual. Please check our website (www.leonton.com) for any updated manual or contact us by e-mail (sales@leonton.com).

Contents

Overview

This series is rated IP40 and installation by Rack Mount. Each unit of this industrial gigabit unmanaged Ethernet switch series has 24*10/100/1000Tx Gigabit Ethernet ports and 2 Gigabit Ethernet combo ports (2*10/100/1000Tx RJ45, and 2*100/1000 SFP slots), suitable for applications that require high bandwidth and long distance communication.

In order to prevent unregulated voltage, this series provides high EFT and ESD protection. This also allows it to function in harsh environments.

With one model having an operating temperature of -10 to 65°C, and another with a wide operating temperature of -40 to 75°C, this series is designed to meet any needs for industrial automation application and harsh environments.

Key Features

Interface & Performance

- All Copper ports support auto MDI/MDI-X function
- Embedded 24*10/100/1000Tx Gigabit Ethernet and 2* Gigabit Ethernet combo ports (2*10/100/1000Tx RJ45, and 2*100/1000 SFP slots)
- Store-and-forward switching architecture
- 8K MAC Address Table
- Supports 9.6Kbytes Jumbo Frame
- 4Mbits memory buffer

Power Input

- One power AC 90-264V / 47-63Hz with AC socket

Certification

- CE/FCC
- UL 61010-1
- UL 61010-2-201
- ISA 12.12.01

Operating Temperature

- Standard operating temperature model: -10°C ~ 65°C
- Extended operating temperature model (–T): -40°C ~ 75°C

Case/Installation

- IP40 protection
- Installation in pollution degree to environment
- Rack mount design

Package Contents

- 1 - REG2-2602-2C(-T)
- 1 – AC power cord cable
- 2 – Rack mounting brackets and screws

Physical Dimensions

Figure 2.1, below, shows the physical dimensions of REG2-2602-2C series.

(W x H x D) is **440mm x 44mm x 200mm**

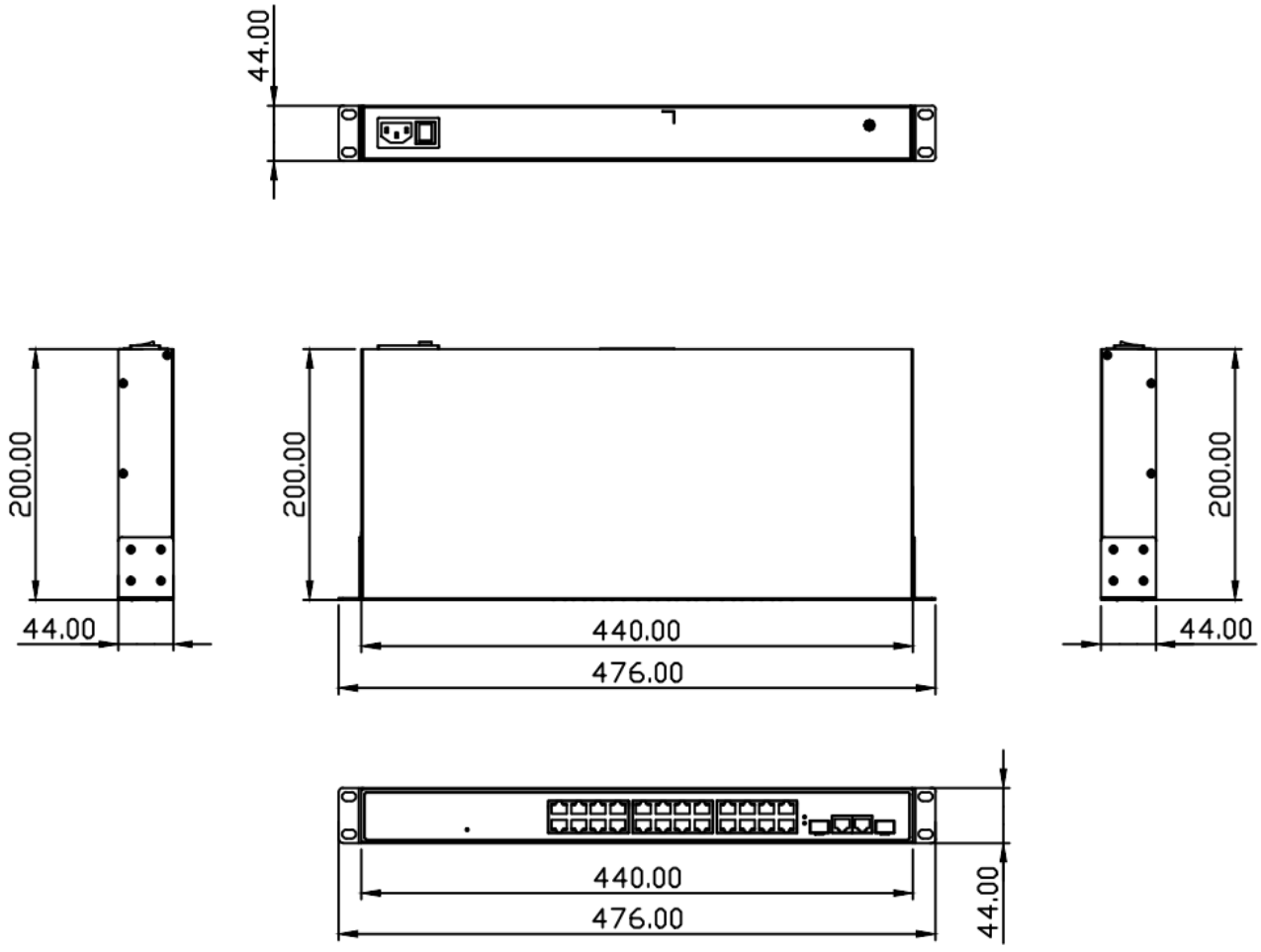


Figure 2.1: REG2-2602-2C Series Physical Dimensions

Front Panel

The front panel of the REG2-2602-2C series industrial PoE+ gigabit unmanaged Ethernet switch is shown below in Figure 2.2.

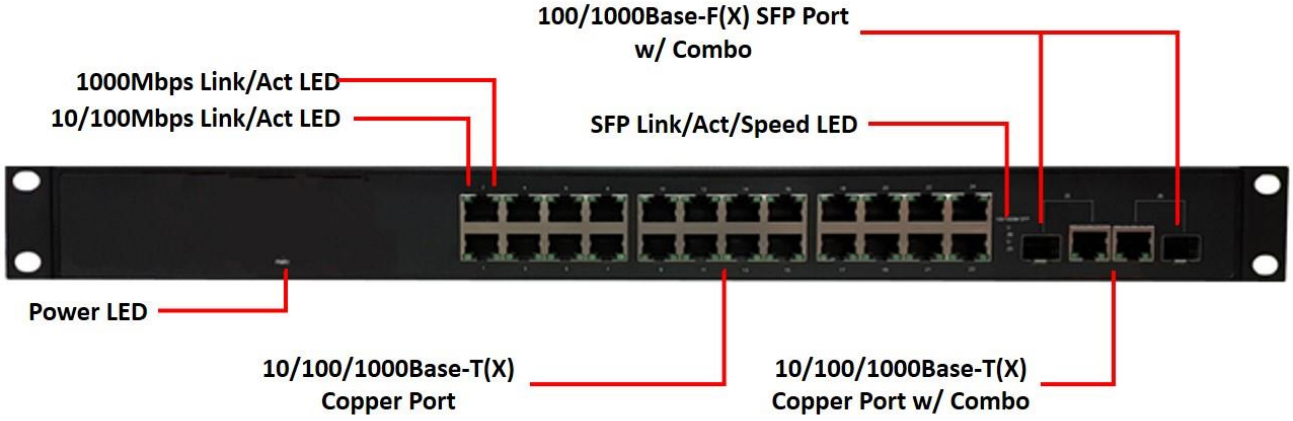


Figure 2.2: The Front Panel of REG2-2602-2C Series

Rear Panel

Figure 2.3, below, shows the rear panel of the REG2-2602-2C series switches that is equipped with one AC socket power input (90-264VAC).

Figure 2.3: The Real Panel of REG2-2602-2C Series

LED Indicators

There are LED light indicators located on the front panel of the industrial Ethernet switch that display the power status and network status. Each LED indicator has a different color and has its own specific meaning, see below in Table 2.1.

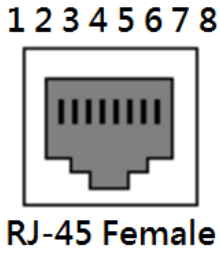
LED	Color	Description	
PWR	Green	On	Power input 1 is active
		Off	Power input 1 is inactive
		Off	Extension power source 1 and 2 are both functional
SFP Port with combo port LINK/ACT (Port 25-26)	Green	On	Connected to network
		Flashing	Networking is active with 1000Mbps
		Off	Not connected to network
	Amber	On	Connected to network
		Flashing	Networking is active with 100Mbps
		Off	Not connected to network
LAN Port with combo port (Port 25-26)	Green 	On	Connected to network, 1000Mbps
		Flashing	Networking is active
		Off	Not connected to network
LAN Port with combo port (Port 25-26)	Green 	On	Connected to network, 10/100Mbps
		Flashing	Networking is active
		Off	Not connected to network
LAN Port 1-24	Green 	On	Connected to network, 1000Mbps
		Flashing	Networking is active
		Off	Not connected to network
LAN Port 1-24	Green 	On	Connected to network, 10/100Mbps
		Flashing	Networking is active
		Off	Not connected to network

Table 2.1: LED Indictors for REG2-2602-2C Series

Ethernet Ports

RJ-45 Ports (Auto MDI/MDIX)

The RJ-45 ports are auto-sensing for 10Base-T, 100Base-TX or 1000Base-T devices connections. Auto MDI/MDIX means that the switch can connect to another switch or workstation without changing the straight-through or crossover cabling. See the figures as below for straight-through and crossover cabling schematics.



RJ-45 Female

10/100BASE-T(X) RJ-45 Pin Assignments (Table 2.2)

Crossover Cable		Straight Through Cable	
Pin Number / Signal	Pin Number / Signal	Pin Number / Signal	Pin Number / Signal
1 / RX+	3 / TX+	1 / RX+	1 / TX+
2 / RX-	6 / TX-	2 / RX-	2 / TX-
3 / TX+	1 / RX+	3 / TX+	3 / RX+
6 / TX-	2 / RX-	6 / TX-	6 / RX-

Table 2.2

1000BASE-T RJ-45 Pin Assignments (Table 2.3)

Crossover Cable		Straight Through Cable	
Pin Number / Signal	Pin Number / Signal	Pin Number / Signal	Pin Number / Signal
1 / TP0+	3 / TP1+	1 / TP0+	1 / TP1+
2 / TP0-	6 / TP1-	2 / TP0-	2 / TP1-
3 / TP1+	1 / TP0+	3 / TP1+	3 / TP0+
4 / TP2+	7 / TP3+	4 / TP2+	4 / TP3+
5 / TP2-	8 / TP3-	5 / TP2-	5 / TP3-
6 / TP1-	2 / TP0-	6 / TP1-	6 / TP0-
7 / TP3+	4 / TP2+	7 / TP3+	7 / TP2+
8 / TP3-	5 / TP2-	8 / TP3-	8 / TP2-

Table 2.3

Note: “+” and “-” signs represent the polarity of the wires that make up each wire pair.

Cabling

Use the four twisted-pair, category 5e, or the above cabling for RJ-45 port connections. The cable between the switch and the link partner (switch, hub, workstation, etc.) must be less than 100 meters (328 ft.) long.

The small form-factor pluggable (SFP) is a compact optical transceiver used in optical communications for both telecommunication and data communication applications.

To connect the transceiver and LC cable, please follow below steps:

Step 1. Insert the SFP transceiver module into the SFP slot as shown below in Figure 2.9. Notice that the triangle mark is at the bottom of the SFP slot. Figure 2.10 shows SFP transceiver module was inserted.

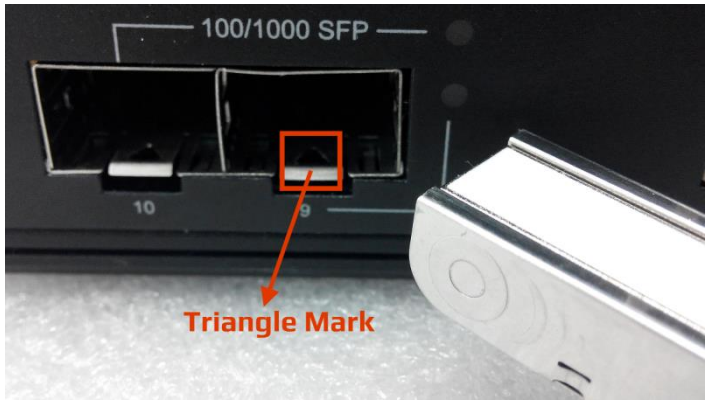


Figure 2.9: Transceiver to the SFP Module

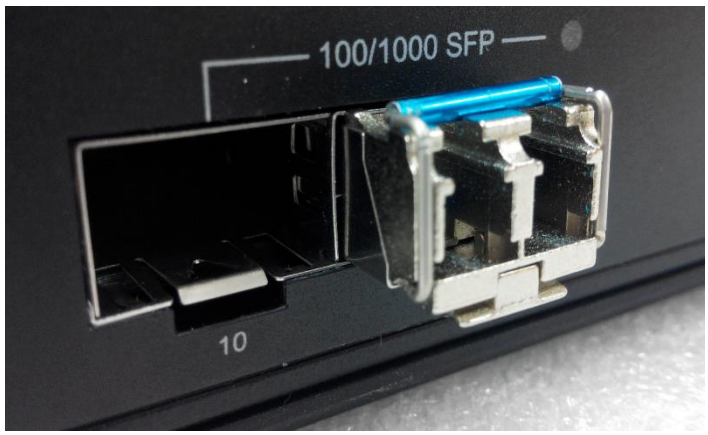


Figure 2.10: Transceiver Inserted

Step 2. Insert the fiber cable of the LC connector into the transceiver as shown below in Figure 2.11.

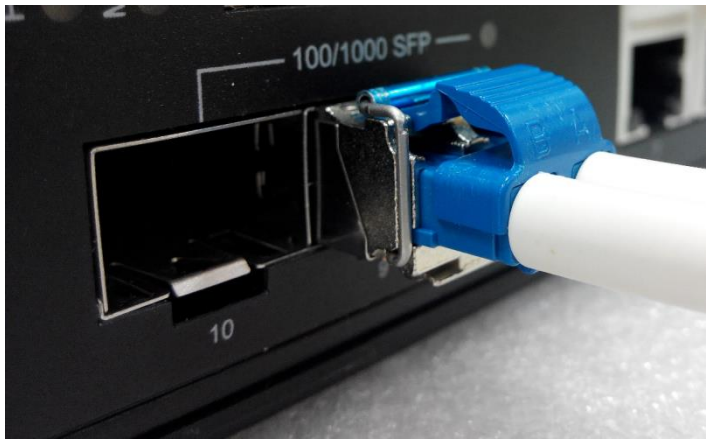


Figure 2.11: LC Connector to the Transceiver

To remove the LC connector from the transceiver, please follow the steps shown below:

Step 1. Press the upper side of the LC connector from the transceiver and pull it out to release as shown below in Figure 2.12

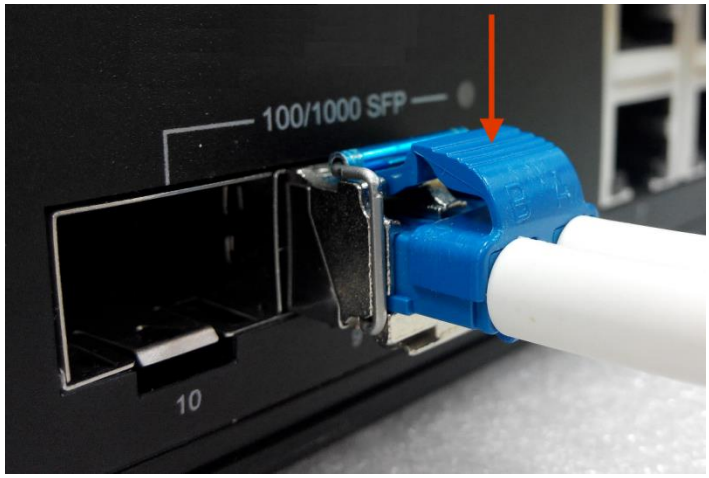


Figure 2.12: Remove LC Connector

Step 2. Push down the metal clasp and pull the transceiver out by the plastic part as shown below in Figure 2.13

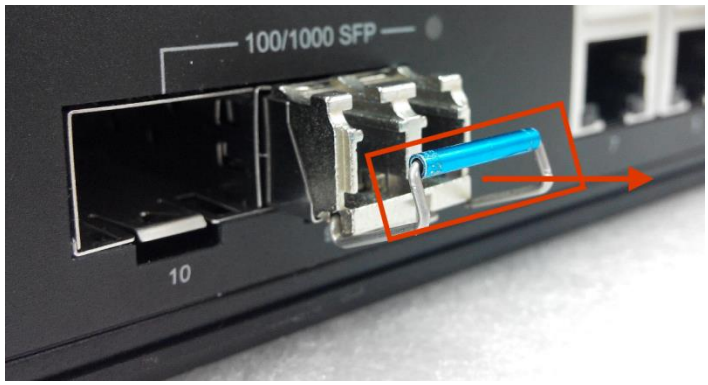


Figure 2.13: Pull Out from the SFP Module

Wiring the Power Input

Please follow the below steps to insert the power wire.

Step 1. Insert the AC power cable into the universal AC socket as shown below in Figure 2.14.

Figure 2.14: AC Power Socket

Step 2. Switch the power switch for power on.

Grounding Note

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

NOTE: Using a shielded cable achieves better electromagnetic compatibility.

Mounting Installation

RACK Mounting

This switch can be mounted in a standard 19-inch rack with rack-mount kits. Please follow the step to install rack-mounting switch.

Step 1. Locate one plate to align with the holes on one side of the switch and secure it with the plate screws and then attach the remaining plate to the other side of the switch. Please refer to the Figure 3.1

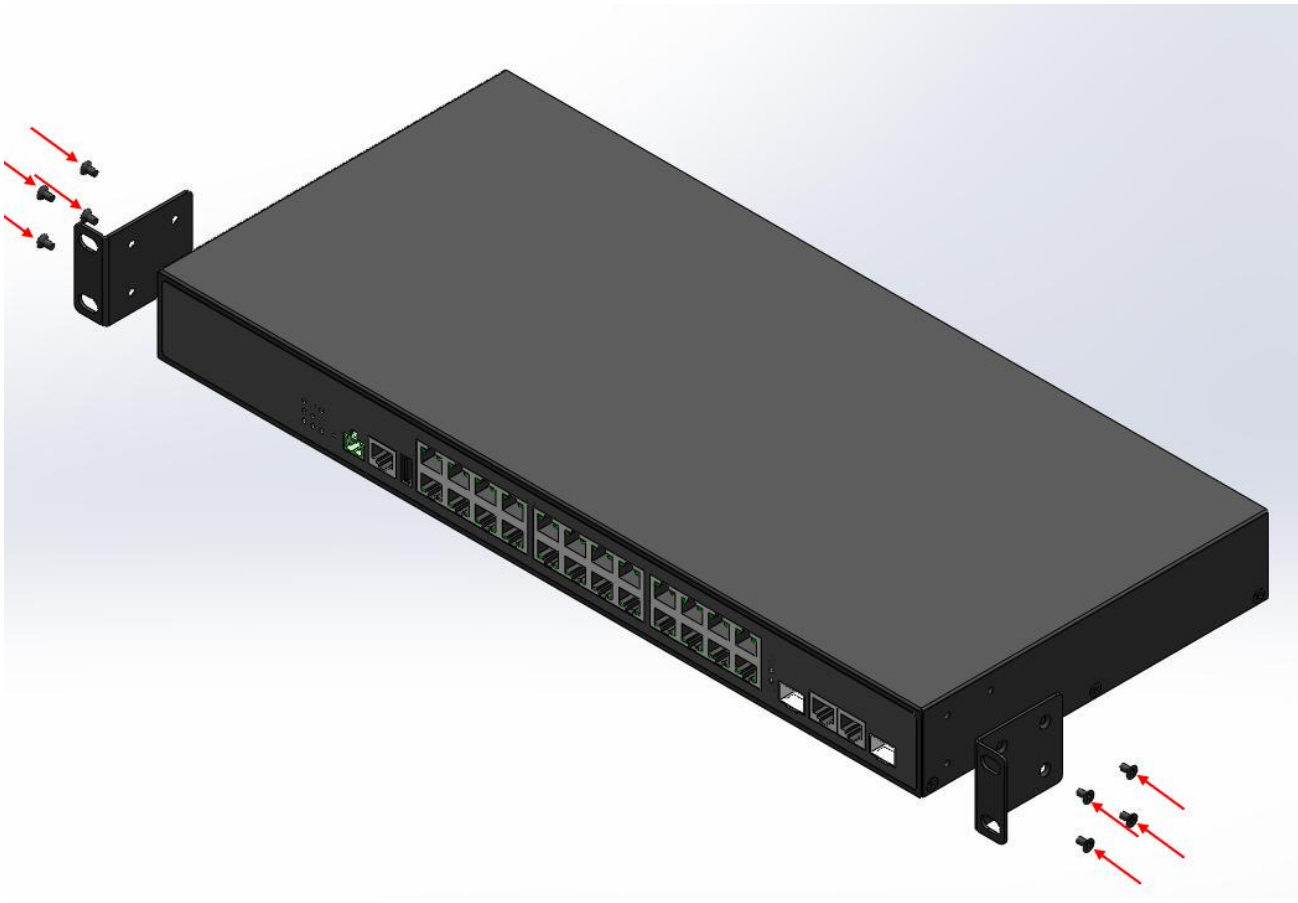


Figure 3.1 Installation of Rack-mounting Switch

Installation Steps

This section will explain how to install REG2-2602-2C series.

Installation Steps

Step 1. Unpack the industrial Ethernet switch from the original packing box.

Step 2. Check if the rack-mount bracket is screwed on the industrial Ethernet switch.

- If the rack-mount bracket is not screwed on the industrial Ethernet switch, please refer to the **Rack Mounting** section for rack-mount bracket installation.

Step 3. Power on the industrial Ethernet switch and then the power LED light will turn on.

- If you need help on how to wire power, please refer to the **Wiring the Power Input** section.
- Please refer to the **LED Indicators** section for LED light indication.

Step 4. Prepare the twisted-pair, straight-through category 5 cable for Ethernet connection.

Step 5. Insert one side of the RJ-45 cable into switch's Ethernet port and on the other side into the networking device's Ethernet port, e.g. switch PC or server. The Ethernet port's (RJ-45) LED on the industrial Ethernet switch will turn on when the cable is connected to the networking device.

- Please refer to the **LED Indicators** section for LED light indication.

Step 6. When all connections are set and the LED lights all show normal, the installation is complete.

Trouble Shooting

- Verify you have the right power cord or it will burn the equipment.
- Select the proper UTP or STP cable in order to construct the network. Use an unshielded twisted-pair (UTP) or shield twisted-pair (STP) cable for RJ-45 connections: 100Ω Category 5e for 10M/100/1000Mbps. Also be sure that the length of any twisted-pair connection does not exceed 100 meters (328 feet).
- Diagnosing LED Indicators: To assist in identifying problems, the switch can be easily monitored with the LED indicators which help to identity if any problems exist.
  - Please refer to the LED Indicators section for LED light indication.
- If the power indicator LED does not turn on when the power cord is plugged in, the user may have a problem with the power cord. Check for loose power connections, power losses or surges at the power outlet.
  - Please contact Leonton for technical support service, if the problem still cannot be resolved.
- If the industrial switch LED indicators are normal and the connected cables are correct but the packets still cannot transmit, please check the system's Ethernet devices' configuration or status.