KOM300M
Industrial Media Converter
Hardware Installation Manual

KYLAND

Kyland Technology Co., LTD.

Publication Date: Oct. 2011

Version: V1.0

Customer Service Hotline: (+8610) 88796676

FAX: (+8610) 88796678

Website: http://www.kyland.cn

E-mail: support@kyland.biz

No.: 1.12.02.2009-0

KOM300M Industrial Media Converter
Hardware Installation Manual

Disclaimer: Kyland Technology Co., Ltd. tries to keep the content in this manual as accurate and as up-to-date as possible. This document is not guaranteed to be error-free, and we reserve the right to amend it without notice to users.

Notice for Safety Operation

This product performs reliably as long as it is used according to the guidance. Artificial damage or destruction of the equipment should be avoided.

- Read this manual carefully and keep it for future reference;
- Do not place the equipment near water sources or damp areas;
- Do not place anything on power cable or put the cable in unreachable places;
- Do not tie or wrap the cable, which may cause a fire risk.
- Power connectors and other equipment connectors should be firmly interconnected and checked frequently.
- Do not repair the equipment by yourself, unless it is clearly specified in the manual.
- Please keep the equipment clean; if necessary, wipe the equipment with soft cotton cloth.

In the following cases, please immediately remove power and contact your Kyland representative:

- Water gets into the equipment;
- Equipment damage or shell breakage;
- Equipment operation or performance has abnormally changed;
- The equipment emits odor, smoke or abnormal noise.

Contents

1. Packing List

KOM300M Industrial Media Converter	1
Hardware Installation Manual	1
Certificate of Quality (including Warranty Card)	1

Note: After unpacking, please check the accessories and the appearance of the equipment. If anything is missing or damaged, please contact us.

2. Product Overview

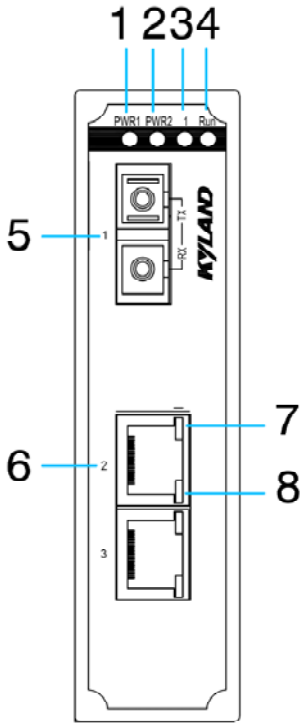
KOM300M is a series of green low power consumption DIN-Rail industrial media converter that can be applied extensively in wind power, distribution network automation, subway PIS, power SCADA, wastewater treatment, metallurgy, intelligent transportation, rail transit and many other industries.

KOM300M support telnet and web management methods, Kyvision centralized management, FTP/TFTP upgrade, and support SNMPv1/v2/v3, LLDP, HTTP, Modbus and TCP.

KOM300M industrial media converter supports DIN-Rail and panel mounting, and supports IP40 protection class. It provides one 100Base-FX port and two 10/100Base-T(X) RJ45 ports in the front panel.

3. Structure and Interface

3.1 Front Panel



1: PWR1 -- Power 1 LED

2: PWR2 -- Power 2 LED

3: 1 -- 100Base-FX port LED

4: Run-Run LED

5: 1 -- 100Base-FX port

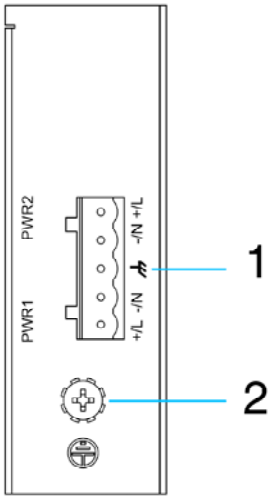
6: (2,3)-- two 10/100Base-T(X) RJ45 ports

7:RJ45 port Speed LED

8:RJ45 port Link/ACT LED

Figure 1 Front Panel

3.2 Top Panel



1: Terminal block for power input

2: Screw for grounding

Figure 2 Top Panel

4. Mounting

4.1 Dimension Drawing

- Dimension Drawing for DIN-Rail Mounting (Unit: mm)

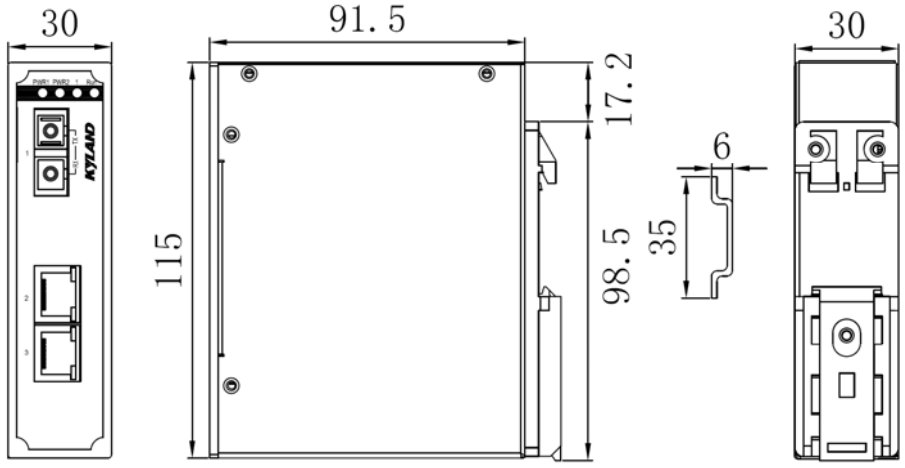


Figure 3 DIN-Rail Mounting Dimension Drawing

- Dimension Drawing for Panel Mounting (Unit: mm)

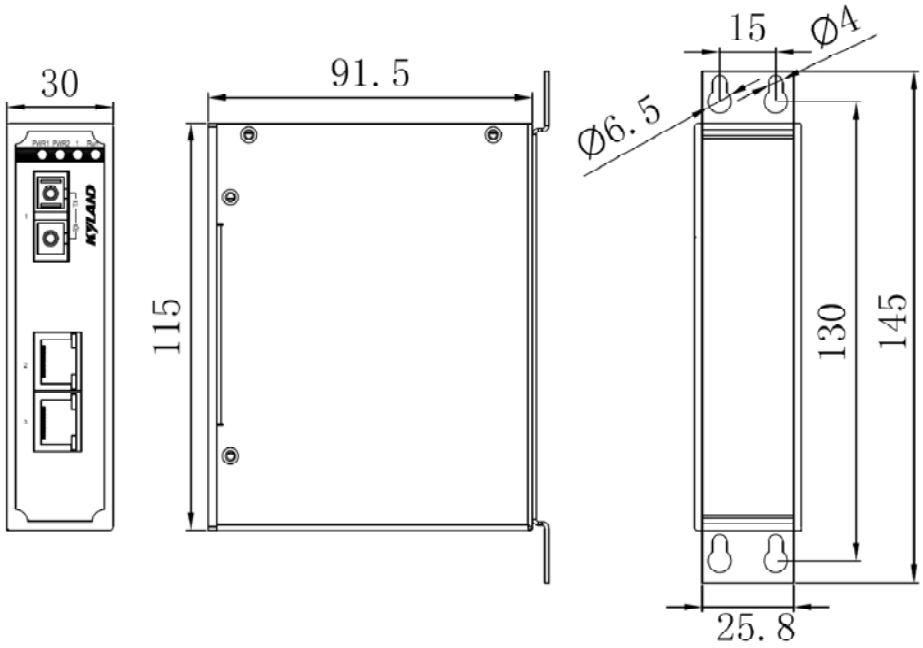


Figure 4 Panel Mounting Dimension Drawing

Note: The switch housing is a part of the heat dissipation system, which becomes hot during operation. Please be careful when handling the device during operation.

4.2 Mounting Steps

- KOM300M DIN-Rail Mounting

  The specific steps are as follows:

  Step 1: Select the mounting position for KOM300M and ensure that there is adequate space.

  Step 2: Insert the top of the DIN-Rail into the slot of the DIN-Rail connecting seat in the rear panel of KOM300M as seen in Figure 5; move the device in the direction of arrow 2 to put the whole Din-Rail into the seat; verify the KOM300M is firmly mounted on the DIN-Rail, as shown in Figure 5.

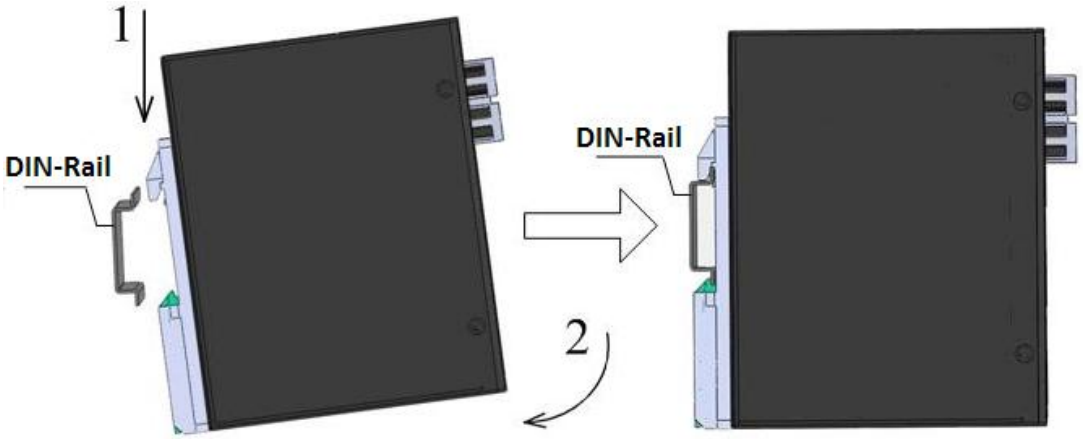


Figure 5 DIN-Rail Mounting

- Remove KOM300M from DIN-Rail

  The specific steps are as follows:

  Step 1: Insert the screwdriver into the hole at the bottom of spring locking plate; press the plate down to loosen the connection of DIN-Rail and switch, as shown in arrow 1

  Step 2: Pull the KOM300M up in the direction of arrow 2; meanwhile remove the device from the DIN-Rail along the direction of arrow 3.

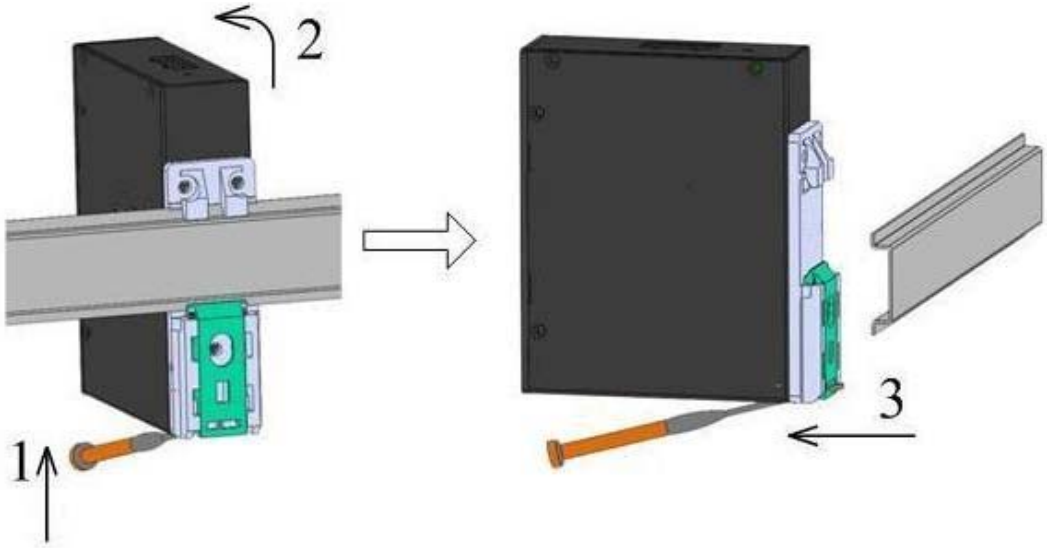


Figure 6 DIN-Rail Dismounting

- KOM300M Panel Mounting

The specific steps are as follows:

Step 1: Select the mounting position for KOM300M on the wall or in cabinet; ensure that there is adequate space for the switch.

Step 2: Drill 4 holes on the selected position according to the panel mounting dimension drawings; use a cross-screwdriver to screw 4 cross-slot screws (M3×10) into holes. Don't tighten the screws completely; leave about 5mm of space between.

Step 3: Aim 4 mounting holes on KOM300M mounting plate at 4 fixed screws; pass the screws through 4 holes with the diameter of 6.5mm (Φ6.5); then slide down KOM300M as seen in arrow 2; finally screw 4 screws tightly. Now the KOM300M should be firmly fixed to the wall or cabinet.

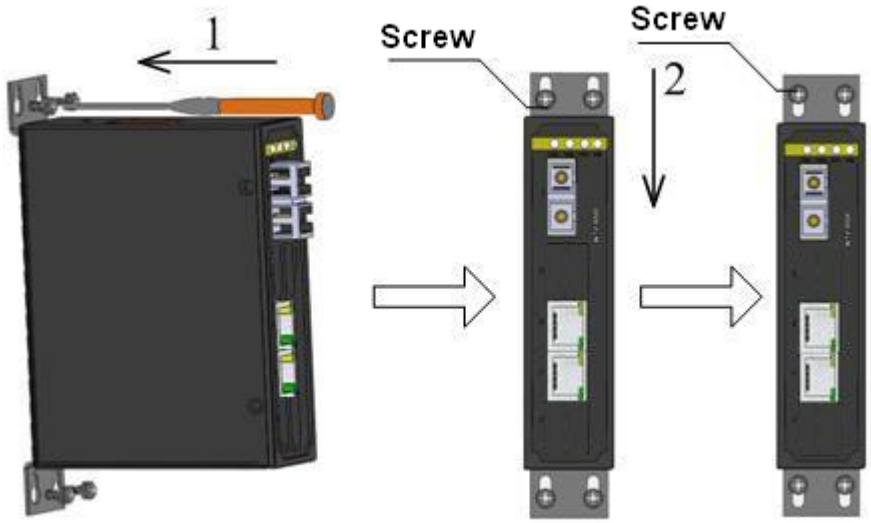


Figure 7 Panel Mounting

- Remove KOM300M from wall or cabinet

  The specific steps are as follows:

  Step 1: Use a screwdriver to loosen 4 screws; move the device up to let screws into 4 holes with the diameter of 6.5mm (Φ6.5) as seen in arrow 1.

  Step 2: Unscrew the screws from wall or cabinet; remove the device from wall or cabinet

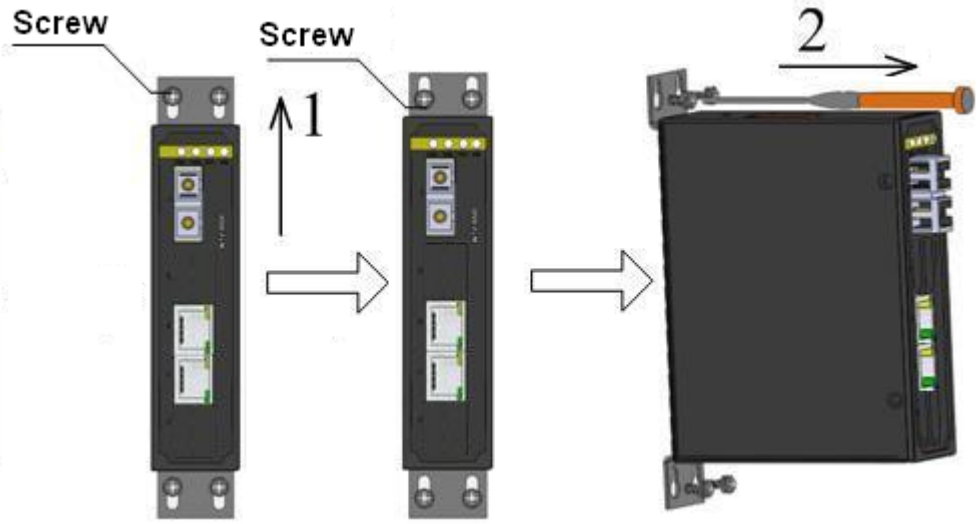


Figure 8 Panel Dismounting

5. Cable Connection

5.1 10/100Base-T(X) Ethernet port

10/100Base-T(X) Ethernet RJ45 port can be connected to terminal equipment and network devices with straight-through cables or crossover cables. RJ45 connectors must be equipped at both ends of cable.

- Pin definition of 10/100Base-T(X) RJ45 port

Pin number of 10/100Base-T(X) RJ45 port is shown in Figure 9

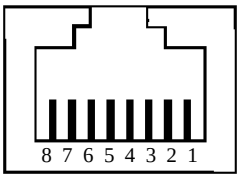


Figure 9 RJ45 Port

Pin definition of 10/100Base-T(X) RJ45 port is shown in Table 1

Table 1 Pin Definition of 10/100Base-T(X) RJ45 Port

Pin	MDI-X signal name	MDI signal name
1	Receiving data+（RD+）	Output data+（TD+）
2	Receiving data-（RD-）	Output data-（TD-）
3	Output data+（TD+）	Receiving data+（RD+）
6	Output data-（TD-）	Receiving data-（RD-）
4, 5, 7, 8	Unused	Unused
Note: "+""-"means level polarity.		

- Wiring Sequence

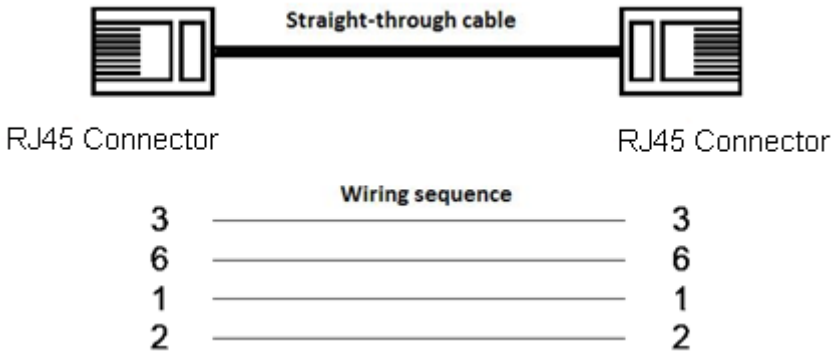


Figure 10 10/100M Straight-through Cable Wiring

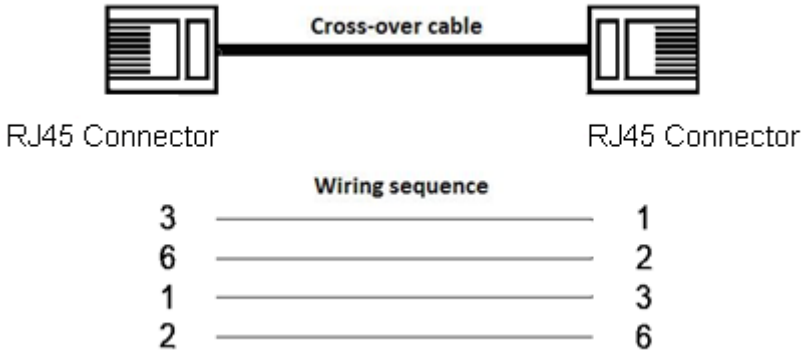


Figure 11 10/100M Cross-over Cable Wiring

5.2 100Base-FX Ethernet Port

100Base-FX Ethernet port is equipped with FC/ST/SC connector, and each port consists of TX (transmit) port and RX (receive) port, as seen on the left in Figure 12.

100Base-FX port wiring is shown on the right in Figure 12 (Take SC port as example; ST/FC wiring method is the same with SC). Connect the TX (transmit) port of device A to the RX (receive) port of device B, and the RX (receive) port of device A to the TX (transmit) port of device in order to transmit data between device A and device B.

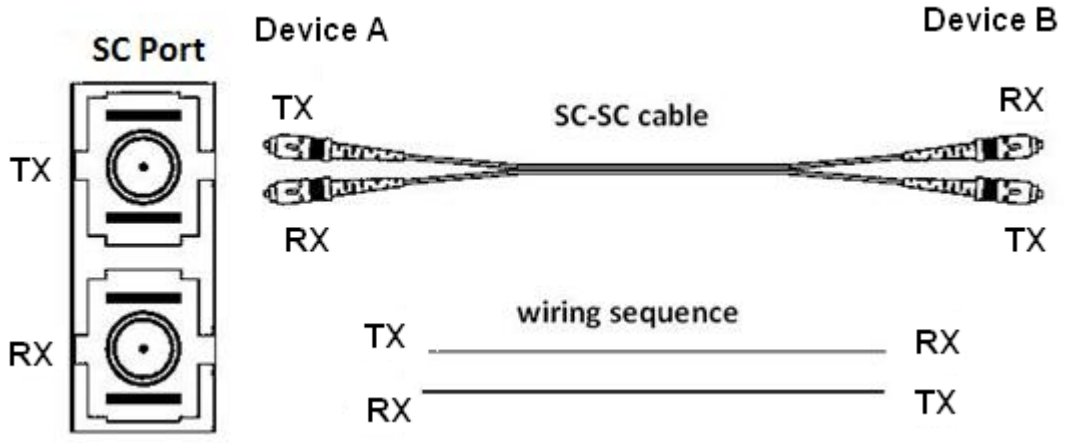


Figure 12 100Base-FX Port Wiring

Note: A laser is used to transmit signals in fiber cables. The laser meets the requirements of level 1 laser products. Routine operation is not harmful to your eyes, but do not look directly at the fiber port or fiber connector when the switch is powered on.

5.3 Power

According to the power input requirements, use a 5.08mm-spacing terminal block to connect power cable.

Note: The cross section area of power cable is required to be greater than 0.75mm^2 and less than 2.5mm^2. The grounding resistance requirement: <5Ω.

- 5 pin 5.08mm power terminal block

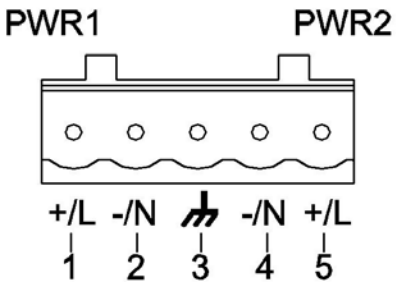


Figure 13 5-pin 5.08mm-spacing Plug-in Terminal Block

5 pin 5.08mm power terminal block contact definition

Table 2 Contact Definition

Contact number	DC wiring definition	AC wiring definition
1	PWR1: +	PWR1: L
2	PWR1: -	PWR1: N
3	Protection Ground	Protection Ground
4	PWR2: -	PWR2: N

5	PWR2: +	PWR2: L

- Wiring and mounting

  Step 1: Take the power terminal block off KOM300M

  Step 2: Insert the power cable into the terminal block and fix the power cable

  Step 3: Put the terminal block back to KOM300M with the connected cable

5.4 Grounding

- Chassis grounding and power terminal grounding

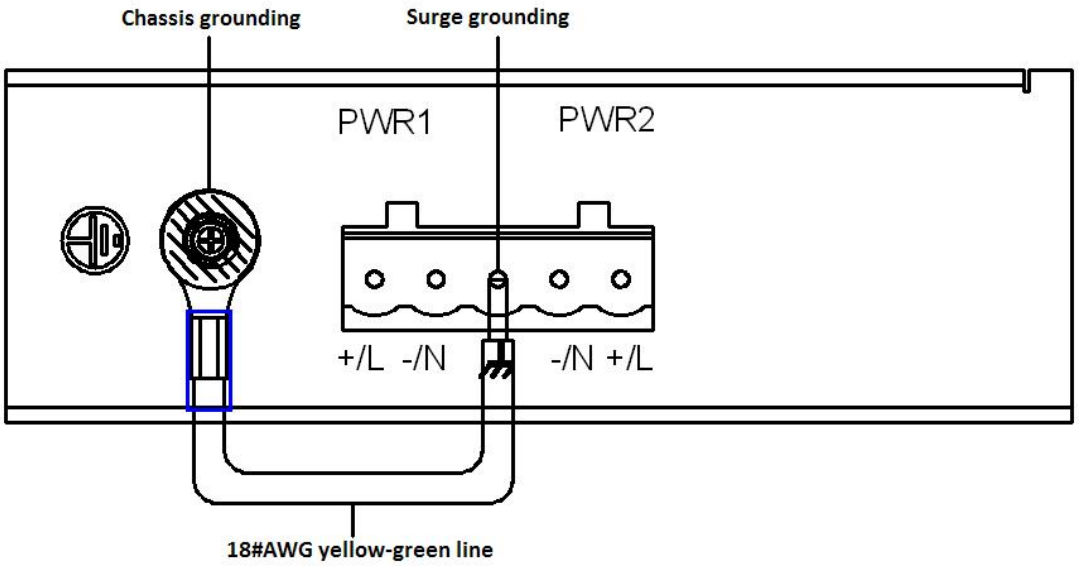


Figure 14 Chassis Grounding and Power Terminal Grounding

There is a grounding screw on the top panel of the KOM300M, which is for chassis grounding. One end of the chassis grounding cable is connected with the grounding screw and the other end of the cable is reliably grounded. (The cross section area of chassis grounding cable should be more than 2.5mm^2. The grounding resistance requirement: <5Ω)

The grounding part in the 5.08mm power terminal block is called surge grounding.

It is required to connect the chassis grounding part with the surge grounding part by an 18#AWG yellow-green line as seen below

- 18#AWG yellow-green line (Unit: mm)

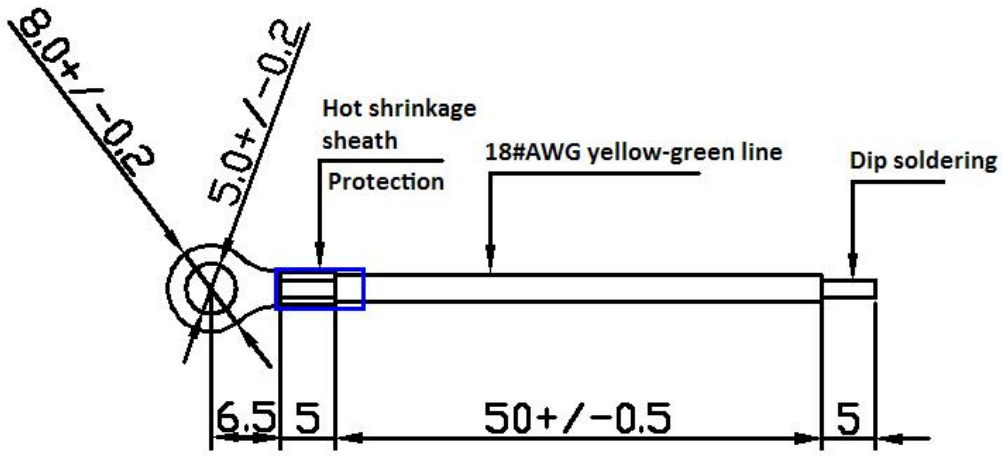


Figure 15 18#AWG Yellow-green Line

Note: If KOM300M needs to perform a dielectric voltage withstand test, in order to avoid test failure, please disconnect the 18#AWG yellow-green line to disable surge protection circuit, which connects to surge grounding.

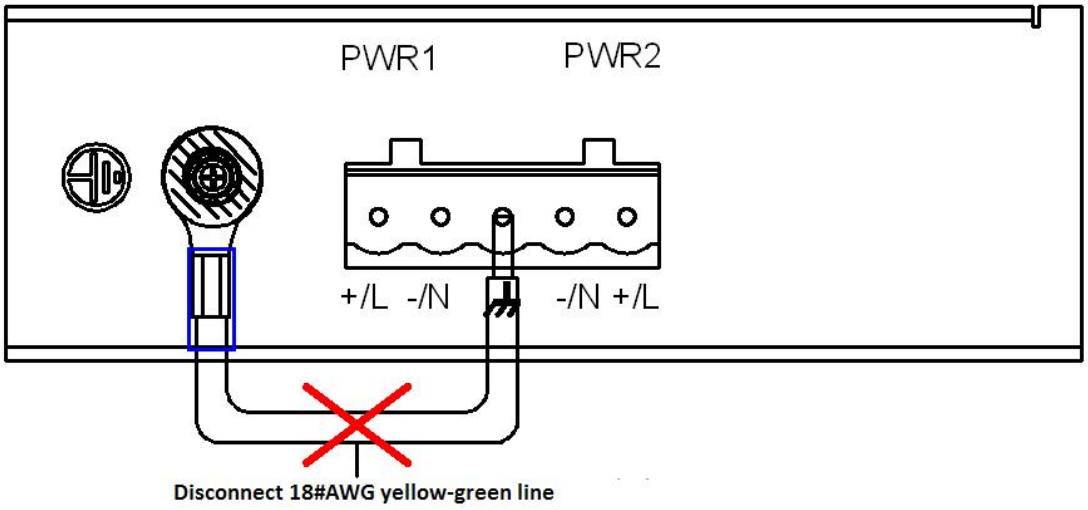


Figure 16 Disconnect 18#AWG Yellow-green Line

6. LED Indicators

Table 3 KOM300M LED Indicators

LED	State	Description
Power LEDs		

PWR1	ON	Power 1 connects and operates normally.
	OFF	Power 1 disconnects or operates abnormally.
PWR2	ON	Power 2 connects and operates normally.
	OFF	Power2 disconnects or operates abnormally.
Run LED		
Run	Blinking	CPU is running normally at 1 Hz.
	ON	CPU is running abnormally or the device is starting.
	OFF	CPU is not started up.
10/100Base-T(X) RJ45 port LEDs		
Speed (Yellow)	ON	100M working state
	OFF	10M working state or no connection
Link/Act (Green)	ON	Effective network connection in the port
	Blinking	Network activities in the port
	OFF	No effective network connection in the port
100Base-FX port LED		
LINK/ACT	On	Effective network connection in the port
	Blinking	Network activities in the port
	Off	No effective network connection in the port

7. Management access

Access the switch through the following two ways

7.1 Connected through Ethernet cable

First, connect any port of the device with the Ethernet port of a personal computer through an RJ45 cable.

Second, open the Run window from the start menu, then input "telnet + 'IP address'". Click "OK" to enter the Telnet interface. The default IP address is 192.168.0.2

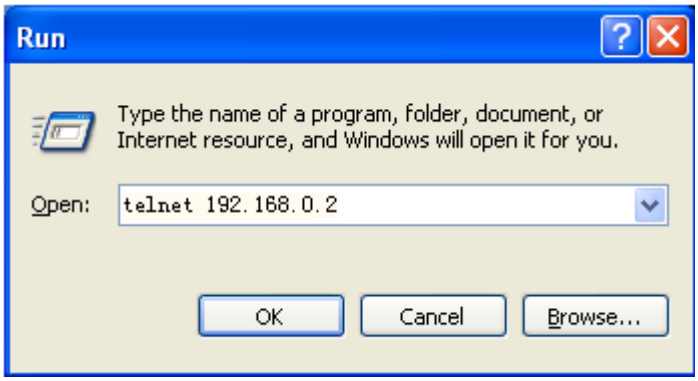


Figure 17 Enter Telnet

Third, click "OK", and input a default user name "admin" and password "123" to enter the Telnet configuration interface, see Figure 18.Type in a CLI command from Table 4

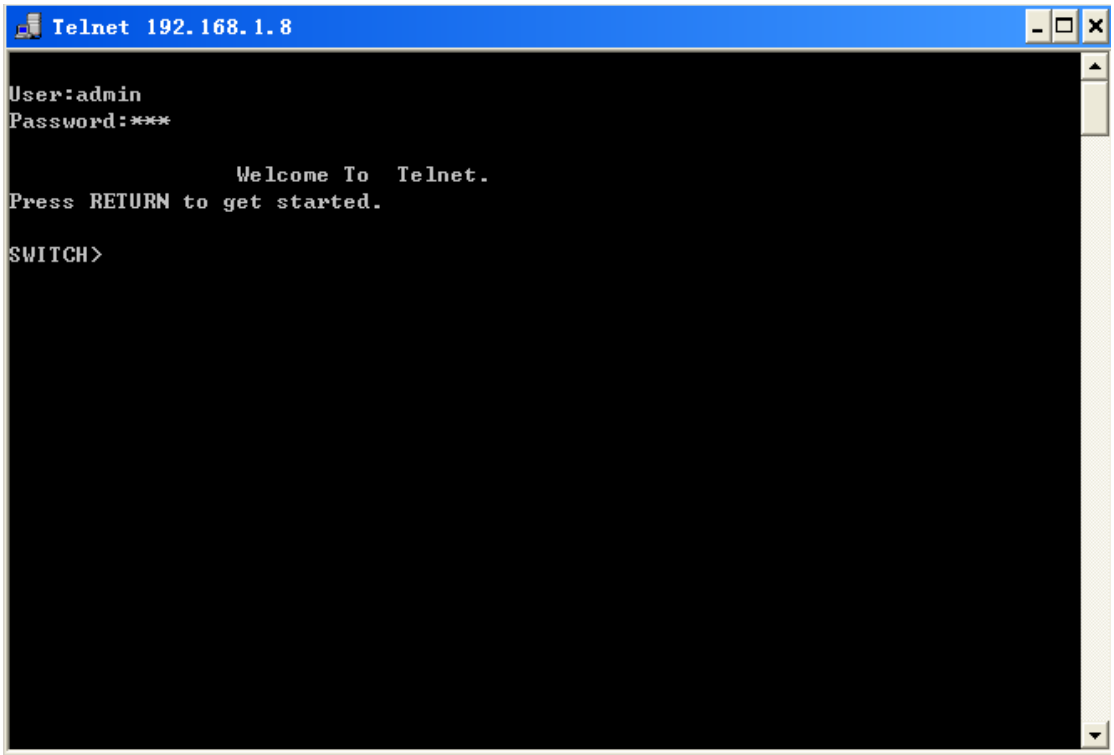


Figure 18 Telnet Configuration Interface

Table 4 CLI Command

View	Command	Description
User View	SWITCH>enable	Enter management view
Management View	SWITCH#show interface	Show the IP address of current device
Management View	SWITCH#show version	Show hardware and software versions
Management View	SWITCH#reboot	Reboot
Management View	SWITCH#load default	Reload factory default settings
Management View	SWITCH#config terminal	Enter configuration view

7.2 Web interface

First, connect the Ethernet port on the PC to any RJ45 port on the device.

Second, input the IP address of the current device in web browser , default IP is 192.168.0.2. The Web interface access screen will appear as shown below in Figure 19, login with default user name "admin" and password "123".

Figure 19 Access Web Interface

8. Product Models

The specific configuration models of KOM300M are shown in below table;

Table 5 KOM300M Configuration Table

Model	Description	Power

KOM300M-1S/M-2T	1 100Base-FX port, SM/MM ports, FC/SC/ST connector; 2 10/100Base-T(X) RJ45 ports	12VDC, 24VAC/DC, dual redundant power inputs

The optional accessories of KOM300M are shown in below table;

Table 6 KOM300M Optional Accessories

Model	Description
DT-BGAZ-01	Panel mounting kit
DT-FCZ-RJ45-01	RJ45 dustproof shield

9. Basic Features and Specifications

- **Power Requirements**

  Power input: 12VDC (9~18VDC), 24VAC/DC (18~72VDC, 18~50VAC)

  Power terminal: 5-pin 5.08mm-spacing plug-in terminal block

  Power consumption: full load: 2.6W(MAX)

- **Physical Characteristics**

  Housing:Metal,fanless

  Installation: DIN-Rail or Panel mounting

  Dimensions (W×H×D): 30mm×115mm×91.5mm

  Weight: 0.3Kg

- **Environment Limits**

  Operating Temperature: -40℃ to 85℃

  Storage Temperature: -40℃ to 85℃

  Ambient Relative Humidity: 5% to 95% (non-condensing)

- **MTBF**: 462741hrs

- **Warranty**: 5 years

For more information about KYLAND products, please visit our website:

http://www.kyland.cn/