

JetNet 6710G-RJ / 6710G –M12  
JetNet 6810G-RJ / 6810G –M12

*Industrial 8-Port PoE plus 2 Gigabit-TX  
Managed Ethernet Switch*

## Quick Installation Guide

V1.2  
15-DEC, 2010

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## Safety Instructions

The following instructions, which must be observed, ensure your personal safety and serve to avoid damage to the device and machinery. Only the personnel fully familiar with the safety instructions and warnings should operate the device. Failure to observe the information given in the instructions could result in injury or damage.

<b>Accessories</b>	Please note that the accessories' characteristics may not comply with the range of operating environment of this product. This might limit the operating condition for the entire system.
<b>Environment</b>	The device is only operated in the listed surrounding temperature range. Please select proper installation site compliance with the climatic limits listed in the Technical Data.
<b>Grounding</b>	The device is grounded via a ground screw. Before establishing any connections, connect the ground first. To remove connections, disconnect the ground last.
<b>Housing</b>	Any attempt at opening the housing is forbidden. Any malfunction resulted from opening the housing is out of the scope of warranty.
<b>Lightning</b>	It is recommended not to work on the device or the cables during the period of its lightning activity.
<b>Power Supply</b>	Observe proper DC voltage polarity when installing power input cables. Reversing voltage polarity can cause permanent damage to the unit and void the warranty.
<b>Recycling Note</b>	After usage this product must be disposed of properly as electronic waste in accordance with the disposal regulations of your country.
<b>Shielding Ground</b>	The shielding ground of the patch cable is connected to the chassis as a conductor. The shielding of the patch cable must be grounded on the plug housing. Beware of possible short circuits when connecting a cable with conductive shielding braiding.

### **FCC Note**

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 when the equipment is in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## 1. Overview

The JetNet 6710G /6810G series are Managed Industrial Power over Ethernet Switches, equipped with eight 10/100 TX ports with **30W/15.4** watts PoE injector and dual 10/100/1000 TX ports for uplink connection.

By software configuration or by LLDP auto detection, the eight 10/100 TX PoE injector ports of JetNet 6710G series can deliver 15.4W by IEEE 802.3af or 30W by the latest High Power PoE IEEE 802.3at standard for supporting High Power Requiring Devices (PD).

Besides, the eight IEEE 802.3af PoE injector ports of JetNet 6810G series are designed with the Korenix patented Booster PoE technology, which allows the switches to adopt 24~57VDC input and deliver 15.4W per port at 48V for applications where DC 48V power supply is not available.

The 2 Gigabit Ethernet ports can provide high speed uplink connectivity to higher level backbone switches with Korenix **MSR™** network redundancy technology, which can recover any failure in less than 5 milliseconds.

To work under vibration and shock environments, the switches are designed with industrial D-coded M12 connectors or rugged RJ45 connectors to ensure exceptional solid Ethernet and PoE connections.

### 1.1. Product Features

- 8 10/100 Base TX PoE ports and 2 Gigabit uplink ports
- Solid M12 D-coded or Rugged RJ45 Ethernet connectors to protect from vibration applications such as PoE in Tram, Rail, or Highway
- 8 PoE ports support both 15.4W IEEE 802.3af and the latest 30W high power IEEE802.3at by LLDP PoE classification (JetNet 6710G)
- Total power budget is 200W by IEEE 802.3at with maximum 30W per port (JetNet 6710G)
- 8 PoE ports support IEEE 802.3af standard with 120W total power budget / max. 15.4W per port (JetNet 6810G)
- Built-in Isolated 24V to 57V DC PoE Booster for vehicle use 32G switch Fabric, 8K MAC address (JetNet 6810G)
- Auto Power Budget Control with Thermal Detection (JetNet 6810G)
- All ports support Korenix patented RSR with 5ms recovery time, and MSR for up to 4 x 100M Rings plus 1 Gigabit Ring
- IEEE 802.1AB LLDP and optional JetView Pro i2NMS software for auto-topology and group management
- Tag VLAN for multiple VLAN traffic isolation

- LACP port trunk for bandwidth aggregation in video surveillance
- Auto thermal detection and power budget control
- Redundant DC Power Inputs and Relay Output
- AC 1.5KV Hi-Pot Isolation Protection for ports and power
- Compliant with EN50155/EN50121-4/EN50121-3-2 railway standards
- -40~60°C wide operating temperature (802.3af)

## 1.2. Packing List Checking

The JetNet 6000G series is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.

	JetNet 6710G-M12	JetNet 6710G-RJ	JetNet 6810G-M12	JetNet 6810G-RJ
JetNet 6710G Managed High Power IEEE 802.3at PoE Switch (M12 / Rugged RJ)	1	1		
JetNet 6810 Managed Booster PoE Switch ( M12 / Rugged RJ)			1	1
M12 on DB9 Shielded Console Cable	1	1	1	1
Rugged M12 D-coded 4-pole Field Assemble able Connector	8		8	
Rugged M12 A-coded 8-pole Field Assemble able Connector	2		2	
Rugged RJ45 Field Assemble able Connector		10		10
2 Wall-Mount kits & 8 Screws	1	1	1	1
Quick Installation Guide	1	1	1	1
Documentation and Software CD-ROM	1	1	1	1

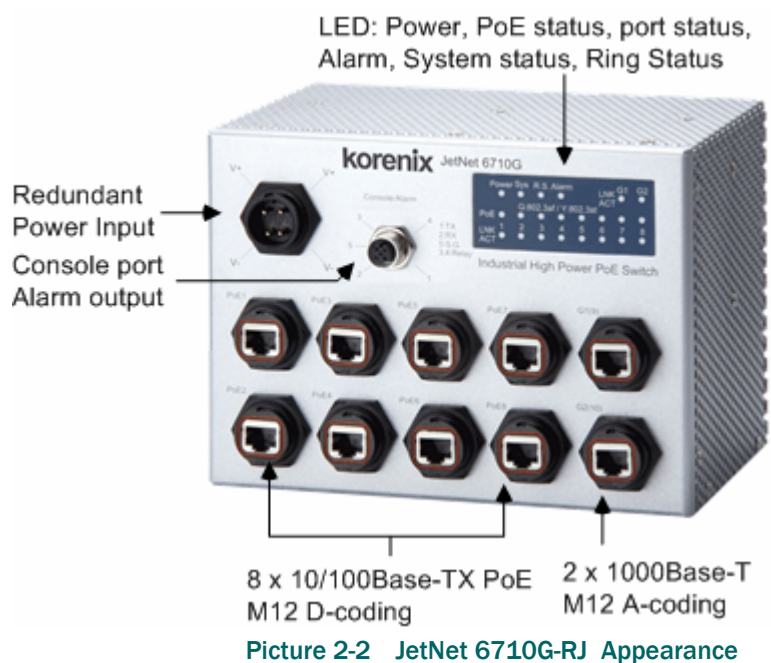
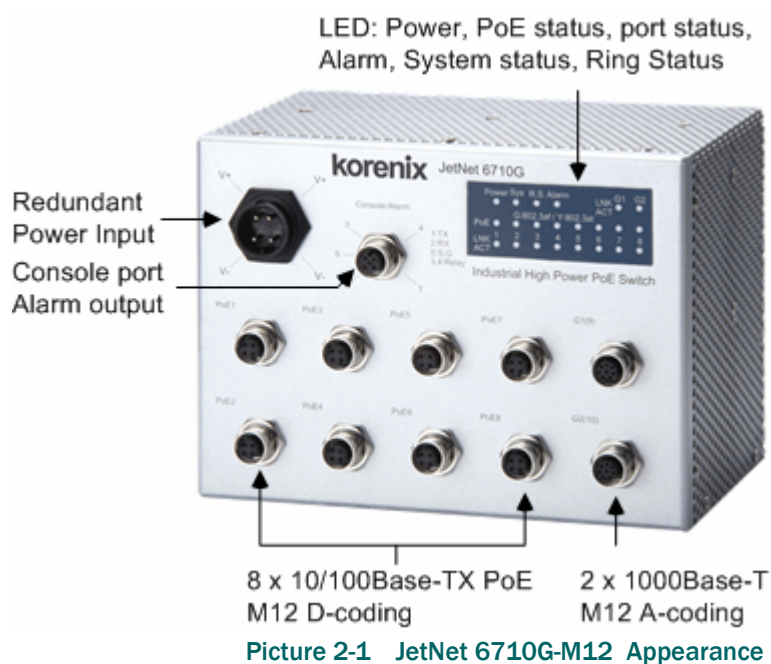
Table 1.2-1 Package Content Table

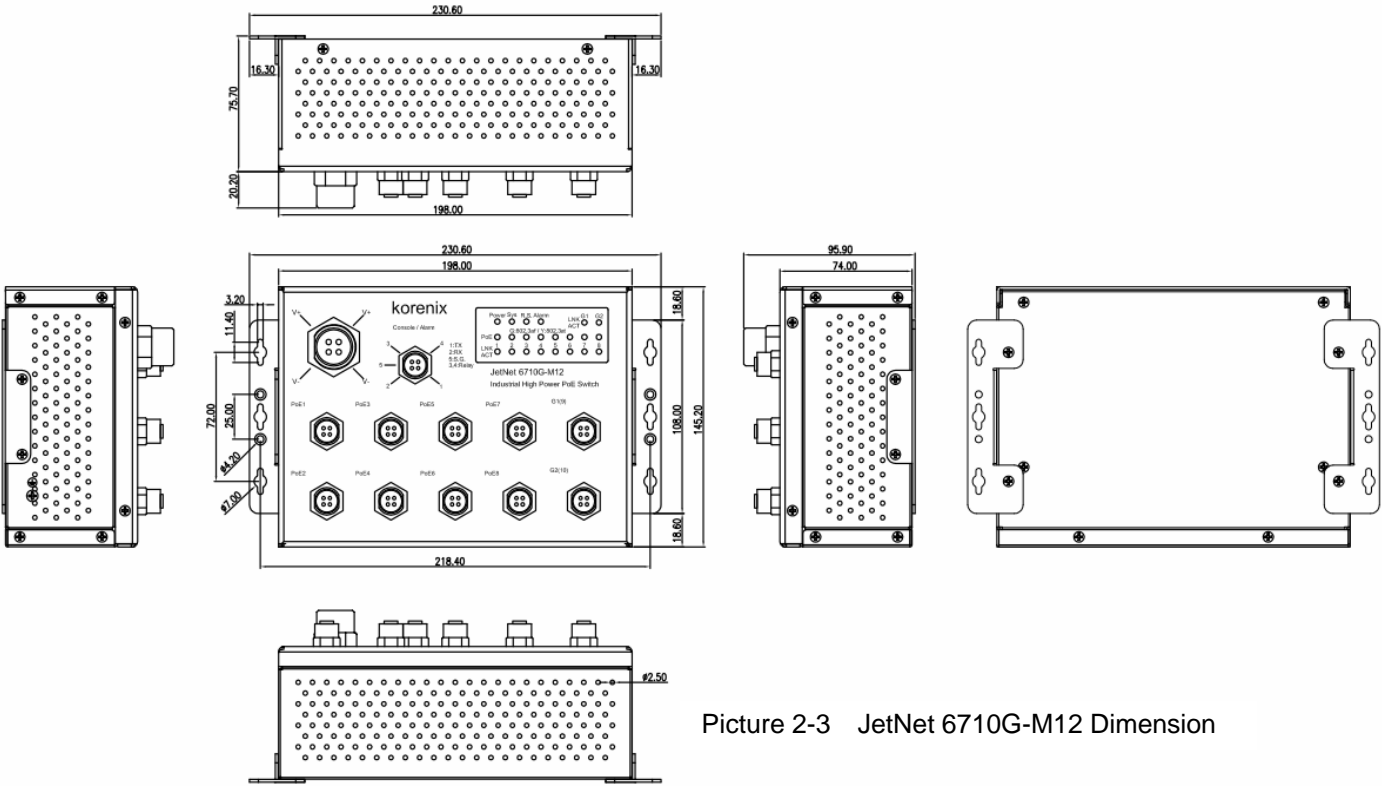
## 1.3. Introduction to the Manual

The following manuals are included as PDF files on the CD-ROM:

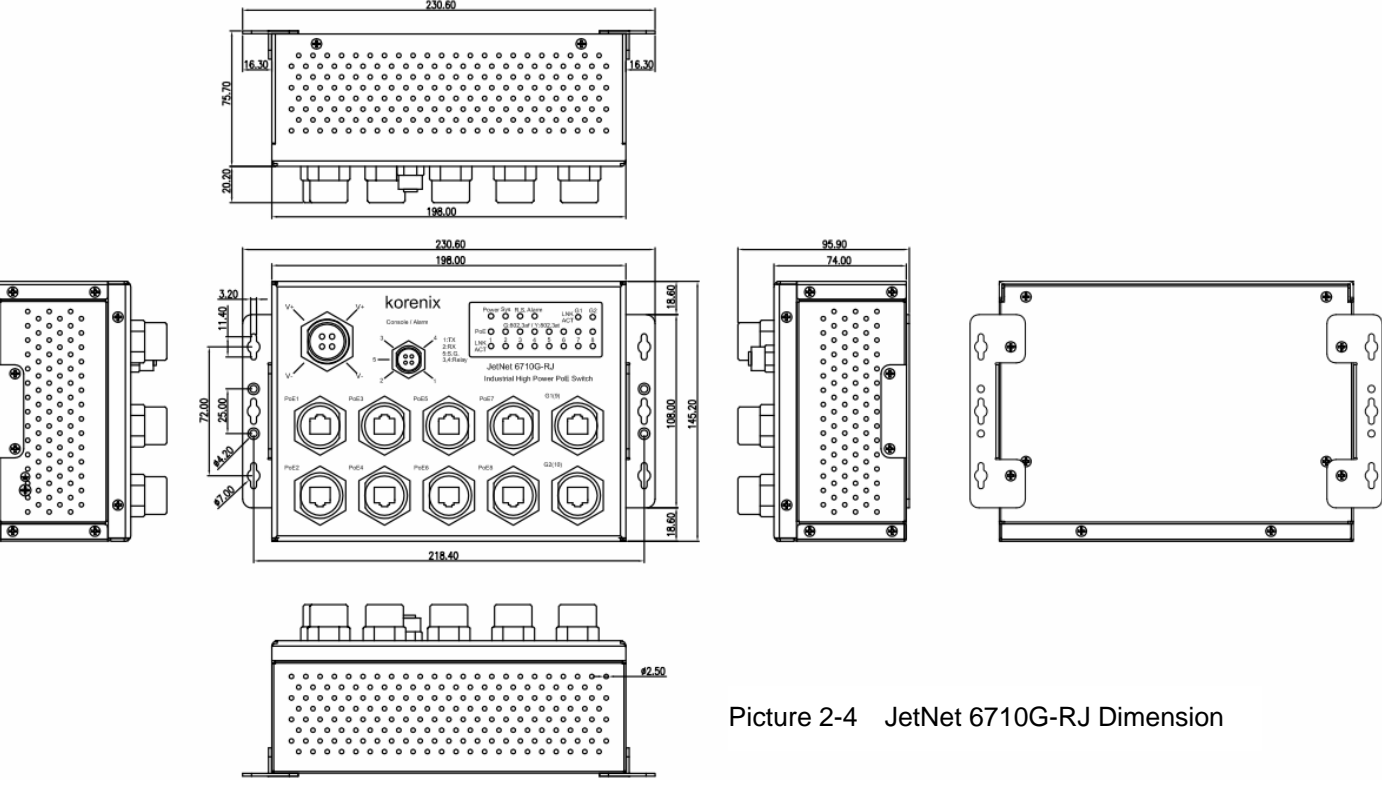
- Quick Installation Guide: includes information on installing all versions of JetNet 6710G / 6810G series PoE Switch
- User manual – Configuration: applied to the managed versions of JetNet 6710G/ 6810G series PoE Switch

## 2. Appearances and Dimensions





Picture 2-3 JetNet 6710G-M12 Dimension



Picture 2-4 JetNet 6710G-RJ Dimension



### 3. Hardware Installation

#### 3.1. Powering of the system

The Power input port is located at the top of the front panel and supports redundant input function via a proprietary assembly capable IP-67 connector (CDG-L207SA) included in the shipment. If you cannot find this power connector, please contact your local distributor. For the available input power range and recommended cable size, please refer to the below table.

	Power Input (DC Voltage)			Input Conductor	Cable Size
	Minimum	Maximum	Recommended	Redundant Input	AWG No. / Cable Area (mm <sup>2</sup> )
JetNet 6710G-M12	48	60	48	V1, V2	AWG 14 / 2.0
JetNet 6710G-RJ	48	60	48	V1, V2	AWG 14 / 2.0
JetNet 6810G-M12	22	60	24	V1, V2 bind together	AWG 14 / 2.0
JetNet 6810G-RJ	22	60	24	V1, V2 bind together	AWG 14 / 2.0

Table 2 Power Input Voltage

The JetNet 6810G only supports single power input that binds V1 and V2 together to obtain higher current for the booster.

Use the UL listed Switching power supply to power the JetNet Switch. For the power wiring method, please refer to the figures 3.1-1 and 3.1-2. For system safety and the anti-immunity ability, the chassis ground screw should be well grounded to the earth ground.

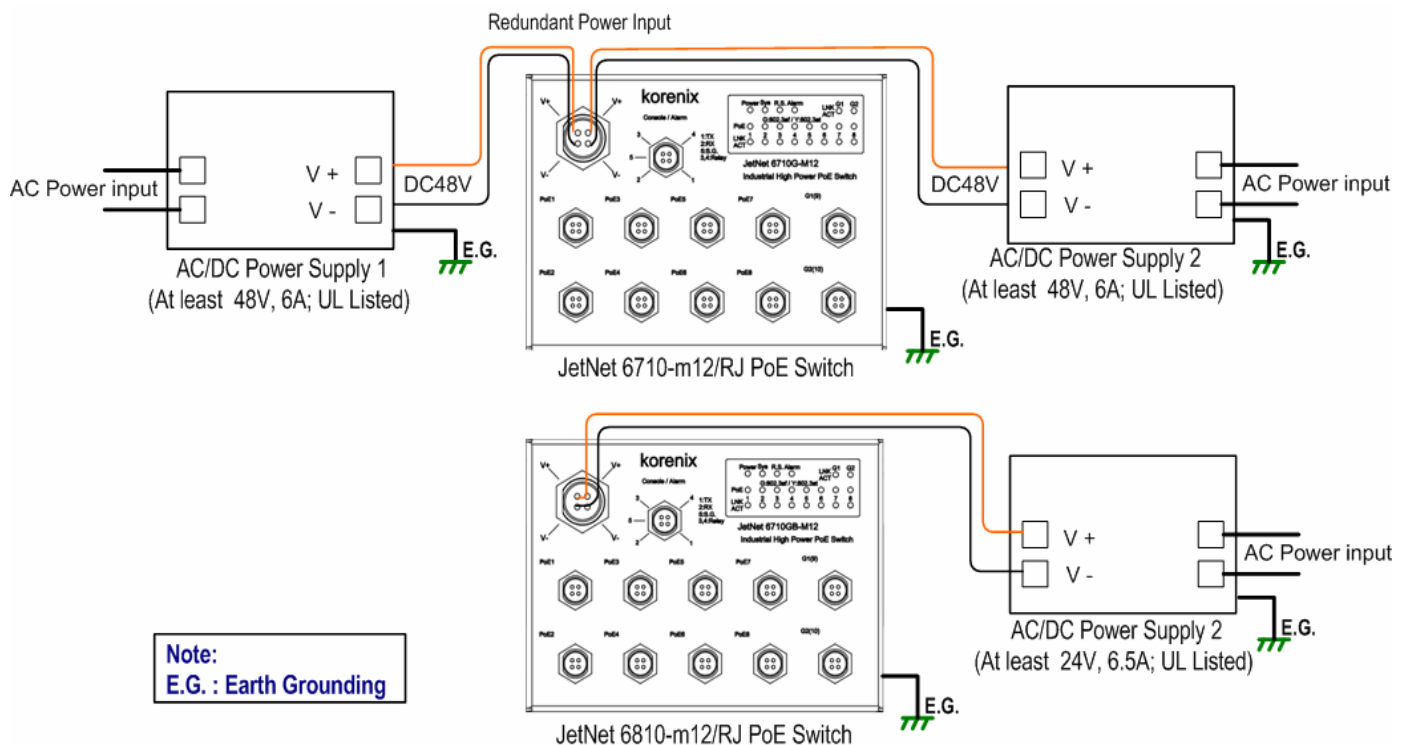


Figure 3.1-1. Power Supply wiring architecture

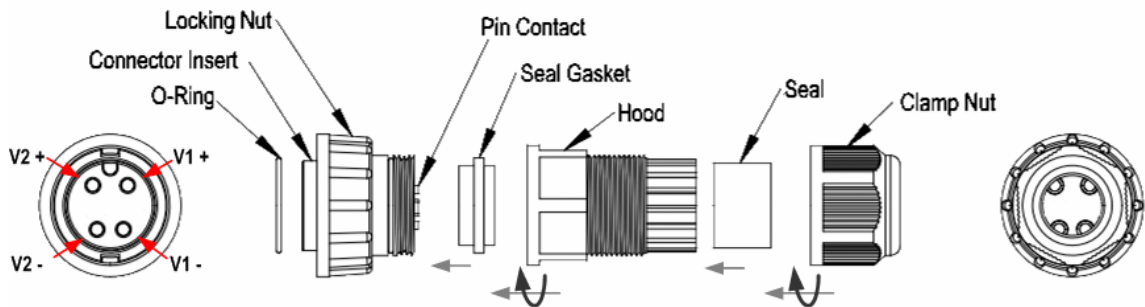


Figure 3.1-2 Power connector assembly diagram

## 3.2. RS-232 console and Relay Output Connection

The RS-232 console and the alarm relay are connected via the assembly type of 5-pole M12 A-coding connector included in the supplied package of JetNet switch. The following figure 3-2-1 is the disassembly diagram of M12 A-coding connector.

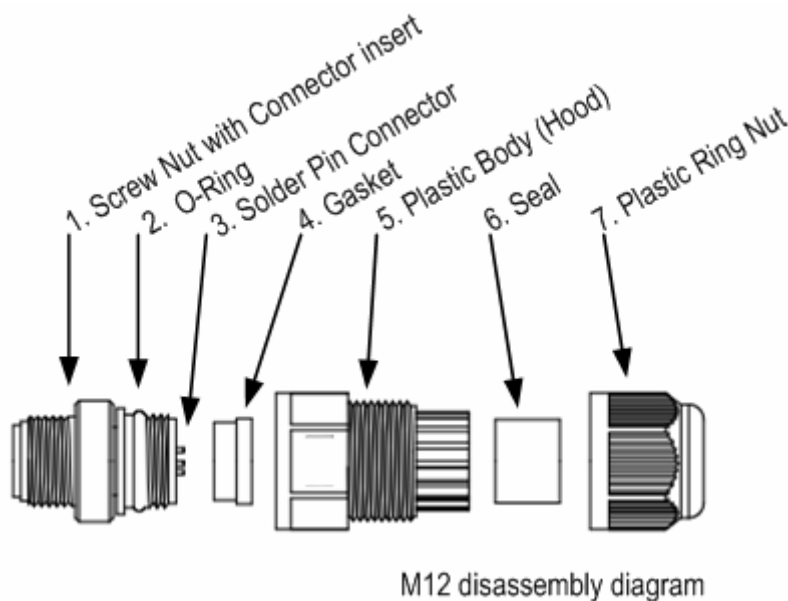


Figure 3.2-1 Field Assemble M12 disassembly connector

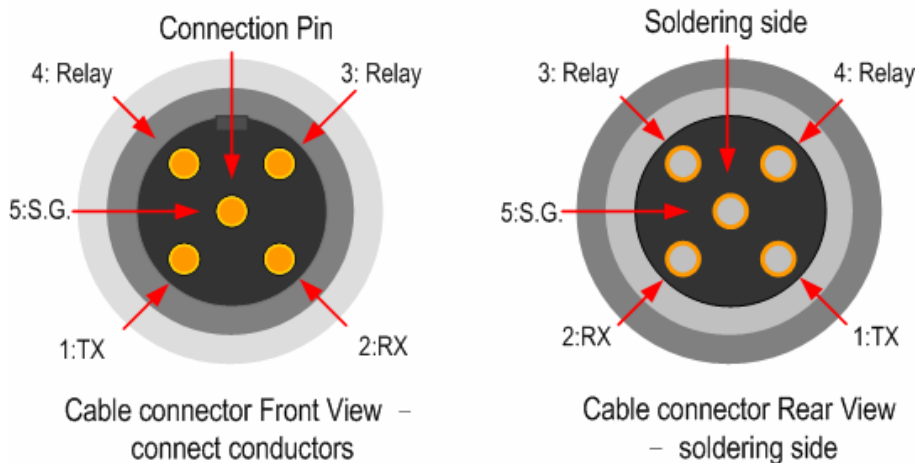
In the M12 connector packing, the parts 1, 2, 3 are already assembled. Follow the steps for soldering and assembling the cable and connector together:

**Step -1:** Slide component 4, 5, 6 and then 7 over the console cable. Keep them loose. Do not tighten them yet. 2 cable glands are provided for cable diameter from 3.5 to 5.8 mm. Choose the one that best fits the cable.



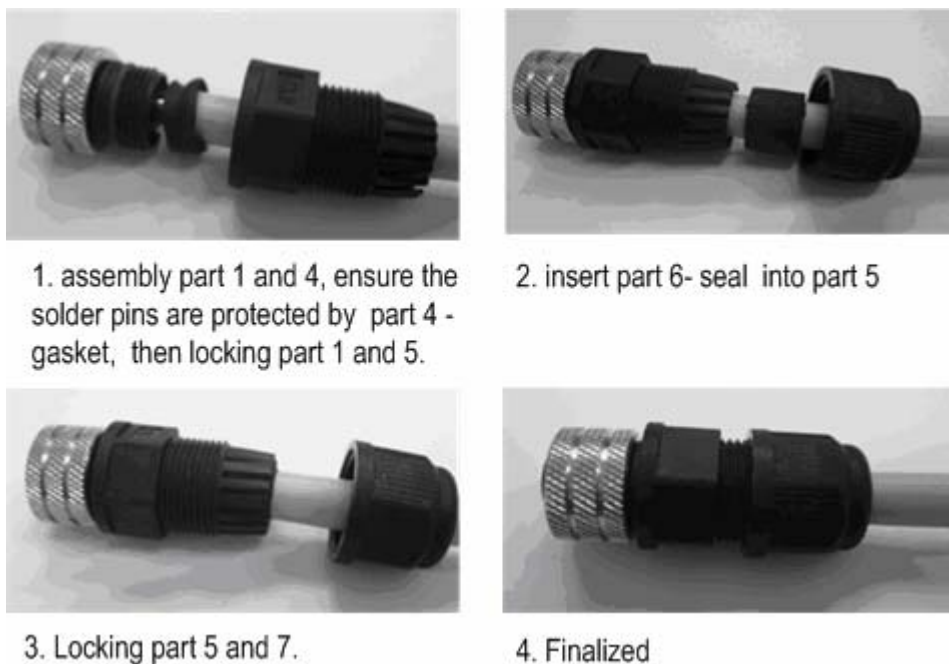
Picture 8

**Step-2:** Solder the conductors with the copper wires according to the pin assignment. The soldering side view of the pin is shown as below:



Picture 9 – Console cable pin assignment (cable’s connector pin assignment)

**Step-3:** Fasten the components 4, 5, 6 and 7 in sequence. Be sure the gasket is on the right position. See the below M12 assembly diagram:



Picture 10 – M12 Assembly

### 3.3. Assembly of Ethernet Patch Cables

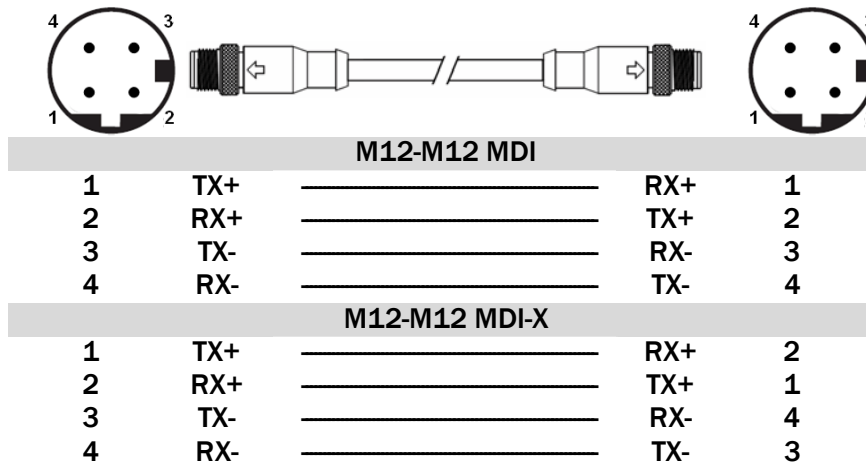
You can connect terminal devices and other segments via twisted pair cables. Ports which are not assigned should be closed with the covering caps contained in the package list of delivery to guarantee the connector is clear without rust.



**Never install or work on/with the equipment or the cabling during the period of its lightning activity.**

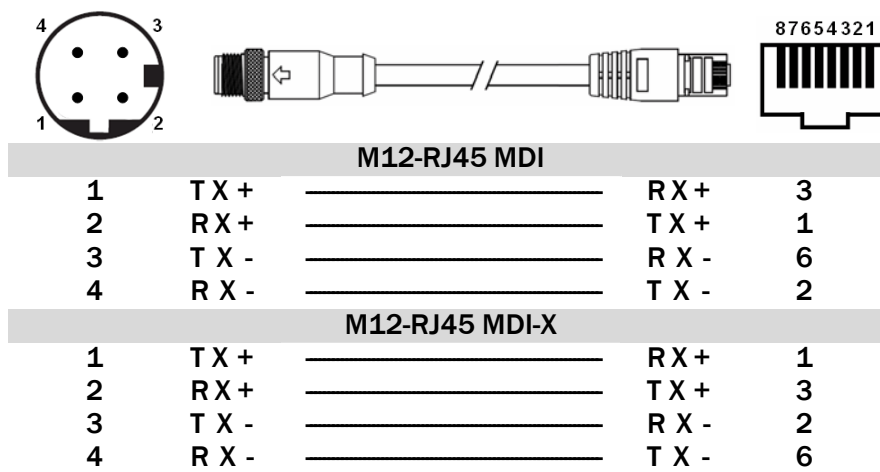
### 3.3.1 Assembly of M12 Ethernet Connector

For Fast Ethernet M12 D-Code to M12 D-Code connection, you can use either version below:



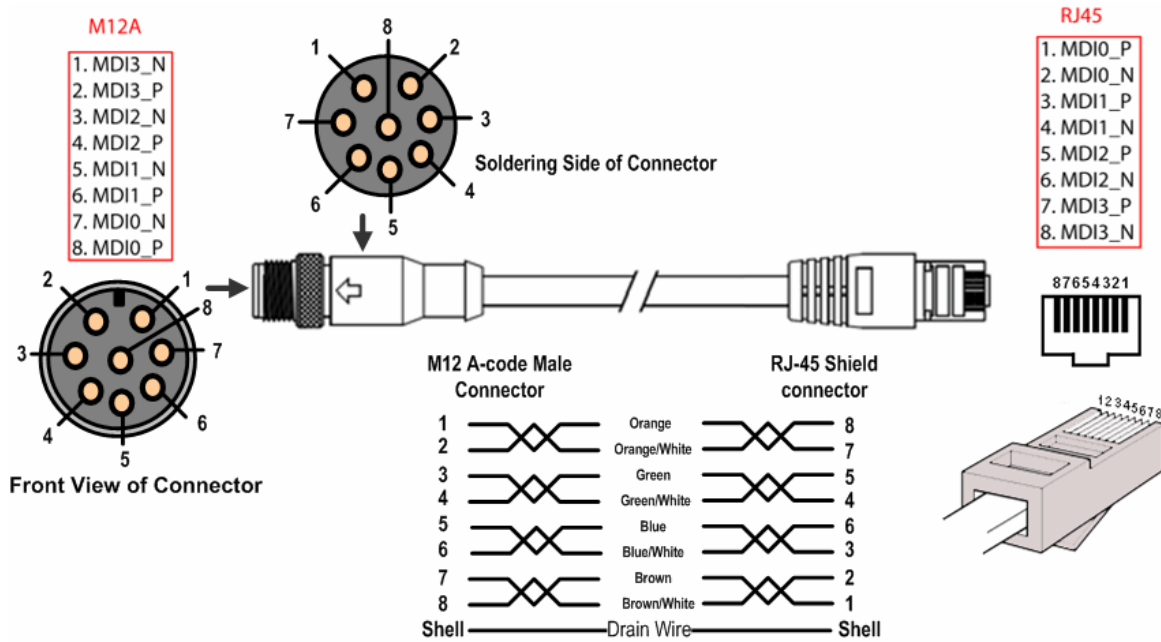
Picture 14 M12-to-M12 Ethernet Cable Wiring

For Fast Ethernet M12 D-Code to RJ45 connection, the pin assignment of the patch cable is shown below:



Picture 15 M12-to-RJ45 Ethernet Cable Wiring

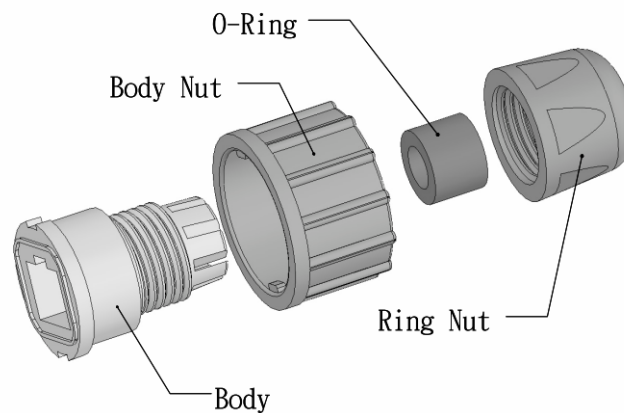
For Gigabit Ethernet M12 A-Code to RJ45 connection, the pin assignment of the patch cable is shown below,



Picture 16 Gigabit M12-to-RJ45 Ethernet Cable Wiring

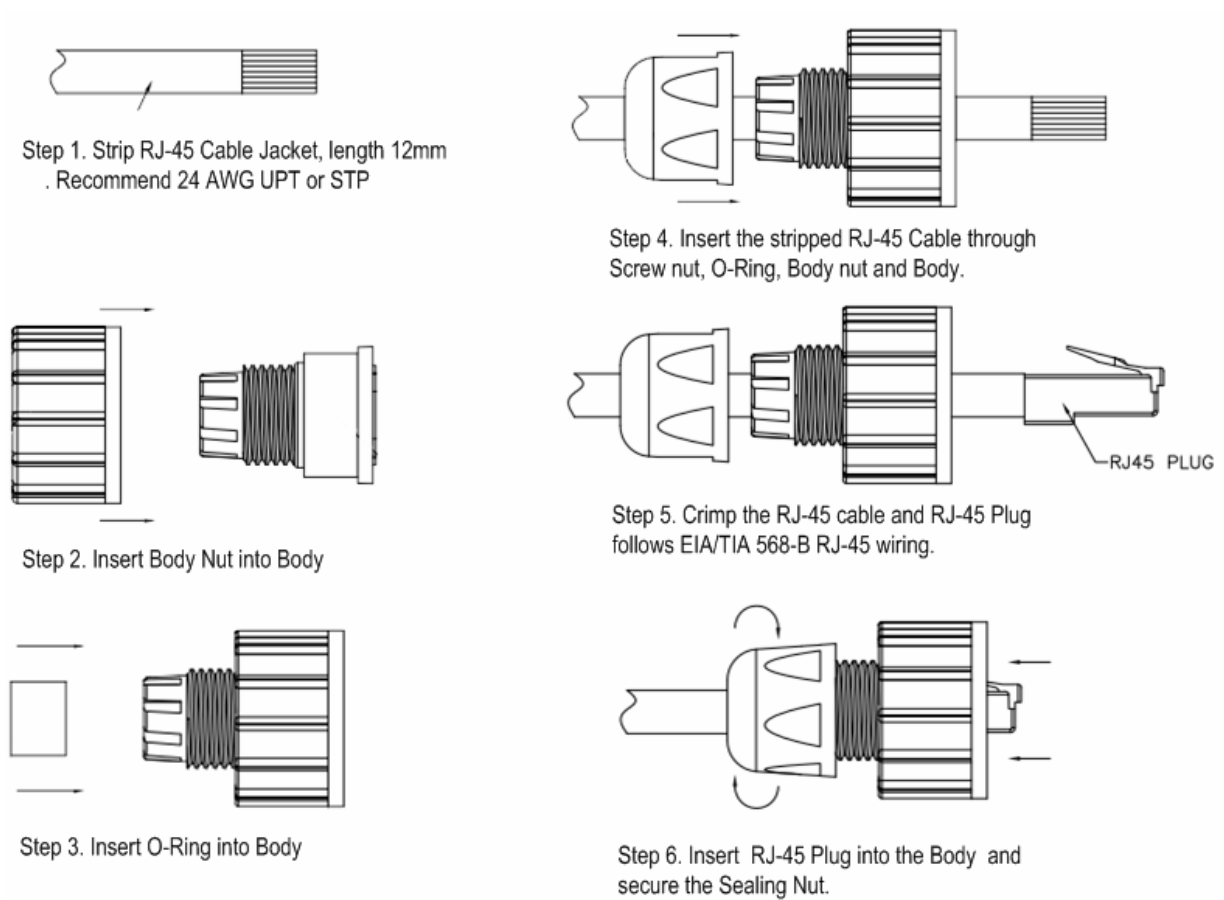
### 3.3.2. Assembly of Rugged RJ45 Connector

The RJ version provides robust connection by the field assembly capable rugged RJ45 connector. Each component of the connector is shown below:



3.3.2-1 Rugged RJ45 Connector Components

Follow the steps to assemble the rugged RJ45 connector:



Picture 18 Rugged RJ45 Cable Connection diagram

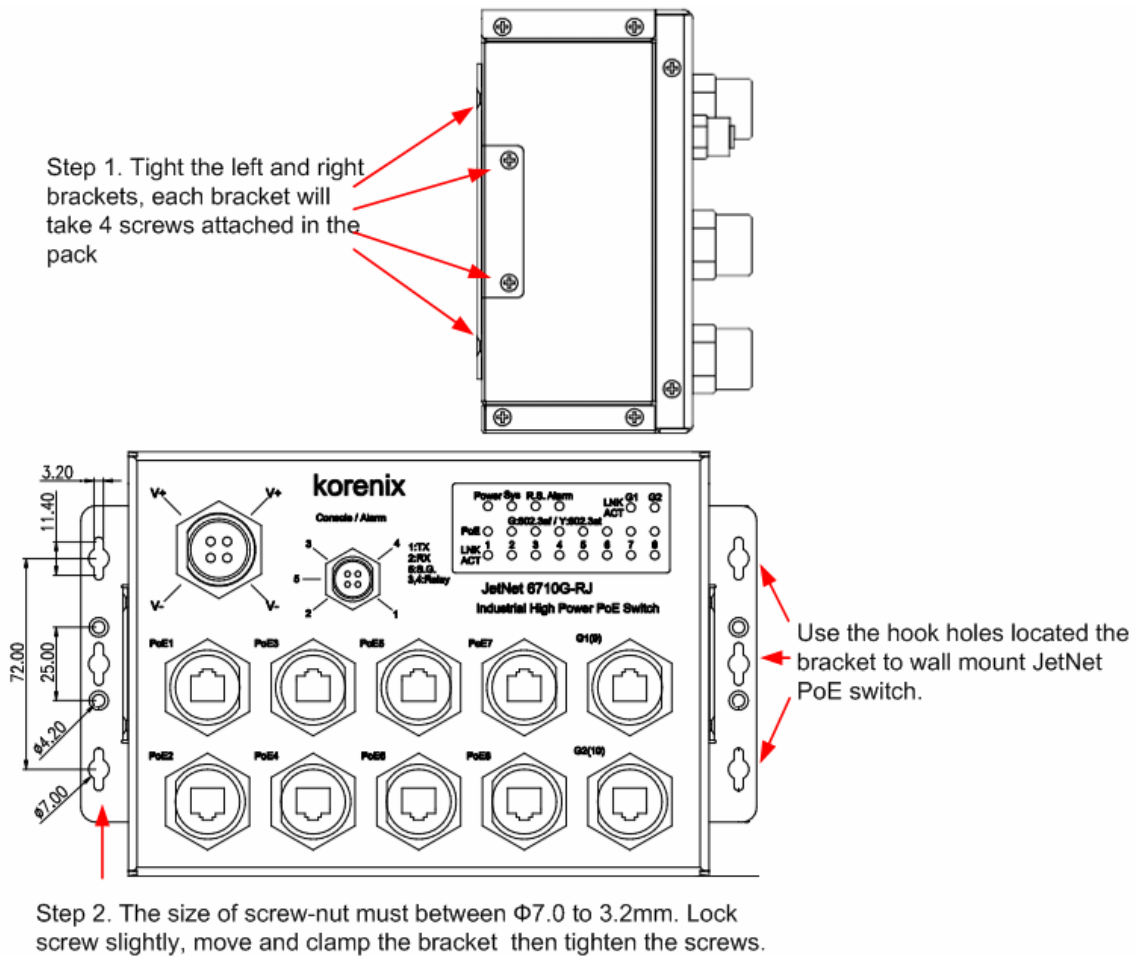
Following picture-19 shows the color code of Cat.-5E UTP/STP cable based on the two standards released by TIA/EIA – 568A and 568B. The 568B wiring is by far, the most common wiring method. You can choose the method that suits your application; but ensure that both ends of the cable use the same standard.



Picture 19 RJ45 Cable color code

### 3.4. Wall /Panel Mounting Installation

The JetNet 6710G/6810G series are shipped with 1 set mounting bracket which allows users to install JetNet 6710G/6810G on the panel or wall. Assemble the brackets on the rear side of JetNet 6710G/6810G body, then using a suitable screw install onto wall / panel of cabinet with good heat dissipation (follow picture 20).



Picture-20 Bracket installation and Wall mounting

## 4.0. Device Management

JetNet 6710G / 6810G series switches provide both in-band and out-band configuration methods. You can configure the switch via the RS232 console with the attached console cable, or you can remotely manage the switch via network using Telnet/SSH, Web/HTTPS management.

### 4.1 Preparation for console management

Attach the RS-232 DB9 connector to your PC's COM port. Connect the M12 A-code 5-pin connector to the console port of the JetNet 6710G/6810G.

4.1.1 Go to Start -> Program -> Accessories -> Communication -> Hyper Terminal

4.1.2 Give a name to the new console connection to create a new serial communication session.

4.1.3 Choose the COM name, and select the correct serial settings. The serial settings of JetNet 6710G/6810G are as below:

Baud Rate: 9600 / Parity check: None / Data Bit: 8 / Stop Bit: 1

4.1.4 After connected, you can see Switch login request. Type-in the username and password to login. The default username is "admin", password is "admin" for console interface.

4.1.5 Follow the manual to configure the device features.

### 4.2 Preparation for Web management

Before you attempt to use the embedded web interface to manage switch operation, verify that your JetNet switch is properly installed on your network and that every PC on this network can access the switch via the web browser.

4.2.1 Launch the web browser (Internet Explorer or Mozilla Firefox) on the PC.

4.2.2 Type `http:// 6710G_IP_Address` or `6810G_IP_Address` (The default IP address is 192.168.10.1.), then press Enter.

4.2.3 The login screen will appear next. Type-in the user name and the password. The default user name and password is admin/admin.

4.2.4 Click OK, and then the welcome page of the web-based management interface will appear.

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**JETNET**

Your Industrial Computing & Networking Partner

Help

**Welcome to the JetNet6710G Industrial Managed Switch**

System Name	Switch
System Location	
System Contact	
System OID	1.3.6.1.4.1.24062.2.3.3
System Description	JetNet6710G Industrial Managed Switch
Firmware Version	v0.1.8 20100308
Device MAC	00:12:77:ff:03:84

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At the left column of the Web management interface are listed the available software features; by pressing the ring column you can also view the detailed configuration interface.

For more detailed management features please refer to the software's users' manual. The software user manual can be downloaded from Korenix Website as below:

<http://www.korenix.com/downloads.htm>

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