VOLKTEK

Quick Installation Guide
9560-16GT4XS-I

1. Overview

9560-16GT4XS-I Industrial Ethernet Switch is a 16-port 10/100/1000 BASE-T RJ45 and 4-slot 1G/10G SFP+. There is one console port in RJ45 type and one USB port for firmware and configuration maintenance. This switch is delivered in a rugged, hardened case and components able to withstand a high degree of vibration and shock and wide operating temperature from -40°C~70°C.

Not an ordinary industrial switch, the switch is engineered and designed especially for harsh & extreme industrial type applications. With its aluminum case, redundant DC power inputs, and high-performance components, the switch is perfectly suited for your extreme industrial automation environment.

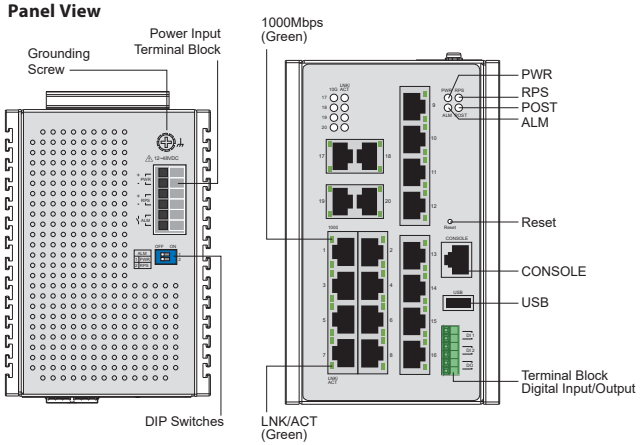
2. Package Checklist

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

- The Switch x 1
- DIN-Rail kit x 1
- Quick Installation Guide x 1

* Visit our product webpage to locate your model and download the user manual.
* Contents of the package can be adjusted based on customer demand.

Panel View



Top View **Front View**

3. Mounting and Dismounting to DIN-Rail

ATTENTION:
The Switch is an open type device and shall be DIN-Rail mounted or wall mounted (optional) in the cabinet and the ambient temperature should not exceed the operating temperature.

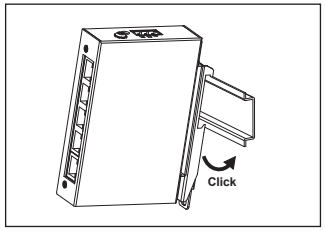
ATTENTION:
Le commutateur est un appareil de type ouvert et doit être monté sur rail DIN ou fixé au mur (en option) dans l'armoire et la température ambiante ne doit pas dépasser la température de fonctionnement.

Mounting the switch

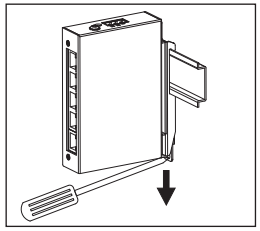
Place the switch on the DIN-Rail from above using the slot, push the front of the switch toward the mounting surface until it snaps into place with a click sound.

Dismounting the switch

Press the switch from top and pull out the lower edge of the switch and then remove the switch from the DIN-Rail.



Mounting the Switch (illustration)



Removing the Switch (illustration)

ATTENTION:
A corrosion-free mounting rail is advisable.
When installing, make sure to allow for enough space between devices to properly install the cabling. And provide ample space for air flow.

ATTENTION:
Un rail de montage sans corrosion est recommandé.
Lors de l'installation, assurez-vous de laisser suffisamment d'espace entre les appareils pour installer correctement le câblage. Et offrez suffisamment d'espace pour la circulation de l'air.

4. Grounding the Switch

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.

ATTENTION:
This product is intended to be mounted to a well-grounded mounting surface such as a metal panel.

ATTENTION:
Ce produit est destiné à être monté sur une surface de montage bien mise à la terre telle qu'un panneau métallique.

5. Wiring Requirements

WARNING:
Safety measures should be taken before connecting the power cable. Turn off the power before connecting modules or wires. The correct power supply voltage is listed on the product label. Check the voltage of your power source to make sure that you are using the correct voltage. DO NOT use a voltage greater than what is specified on the product label. Calculate the maximum possible current in each power wire and common wire. Observe all electrical codes dictating the maximum current allowable for each wire size. If current exceeds the maximum rating, the wiring can overheat causing serious damage to your equipment.

AVERTISSEMENT:
Des mesures de sécurité doivent être prises avant de brancher le câble d'alimentation. Coupez l'alimentation avant de connecter des modules ou des fils. La tension d'alimentation correcte est indiquée sur l'étiquette du produit. Vérifiez la tension de votre source d'alimentation pour vous assurer que vous utilisez la bonne tension. NE PAS utiliser une tension supérieure à celle indiquée sur l'étiquette du produit. Calculez le courant maximum possible dans chaque fil d'alimentation et fil commun. Respectez tous les codes électriques dictant le courant maximum autorisé pour chaque taille de fil. Si le courant dépasse la valeur nominale maximale, le câblage peut surchauffer et endommager gravement votre équipement.

Please read and follow these guidelines:

- Use separate paths to route wiring for power and devices. If power wiring and device wiring paths must cross make sure the wires are perpendicular at the intersection point.

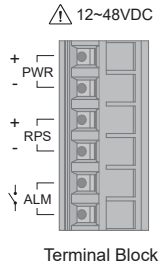
  NOTE: *Do not run signal or communications wiring and power wiring through the same wire conduit. To avoid interference, wires with different signal characteristics should be routed separately.*

- You can use the type of signal transmitted through a wire to determine which wires should be kept separate. The rule of thumb is that wiring that shares similar electrical characteristics can be bundled together.
- You should separate input wiring from output wiring.
- We advise that you label the wiring to all devices in the system.

5.1 Wiring Power Input

The switch with 6 terminal block

You can use "PWR" for Power input Top view of Terminal Block is shown in the figure below:



Terminal Block

Caution:
- Use copper conductors only
- Wiring cable temperature should support at least 105˚C
- Tighten the wire to a torque value 5lb
- The wire gauge for the terminal block should range between 12~24 AWG

ATTENTION:
- Utilisez uniquement des conducteurs en cuivre
- La température du câble de câblage doit supporter au moins 105°C
- Serrer le fil à une valeur de couple de 5lb
- Le calibre du fil pour le bornier doit être compris entre 12 et 24 AWG

To insert power wire and connect the specied voltage and maximum electric current to the terminal block, follow the steps below:

1. Use a at-head screwdriver to loosen the wire-clamp screws.
2. Insert the negative/positive DC wires into the (- / +) terminals, respectively as shown on the label.
3. Tighten the wire-clamp by releasing the screwdriver to prevent the wires from loosening.

ATTENTION:
Please use a power supply from 12~48VDC, 1.8A (DC) maximum. The device power shall be supplied by SELV circuit.

ATTENTION:
Veuillez utiliser une alimentation de 12~48VDC, 1.8A (DC) maximum. L'alimentation de l'appareil doit être fournie par un circuit SELV.

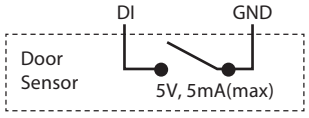
5.1.2 Digital input

Digital input signals are used to represent items that only have two (2) states, such as...ON (binary 0) or OFF (binary 1) states. So, a digital signal is something like telling if a door is open or not.

Action
ON(0)=OPEN(0)
OFF(1)=CLOSE(1)

Maximum Voltage : 5V
Maximum Current : 5mA

Door Sensor status	Action
Open	ON(O)
Short	OFF(1)



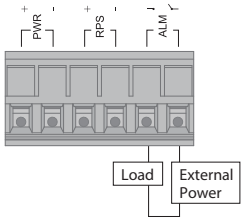
Note:This DI port has internal power source 5V.

5.1.3 Digital output

The Digital Output port is used to send signals to external devices when the Digital Input of the switch triggers specific operations.

NOTE: *This model use relay component to implement DO function and it's specification is 24V / 1A.*

5.2 Wiring the Relay Contact (ALM)



Relay rating: 24V, 1A

The switch has one set of relay alarm output. This relay contact uses two contacts of the terminal block on the switch top panel. The two contacts of the terminal block connector are used to detect user-configured events. The two wires attached to the fault contacts form an open circuit when a user-configured event is triggered. If a user-configured event does not occur, the fault circuit remains closed.

5.3 Cabling RJ45

Connect one end of an Ethernet/RJ45 cable into Ethernet port of the switch and other end to attached networking device.

- Ports 1-16 support 10/100/1000Mbps speeds.
- All the RJ45 ports on the switch support auto negotiation and auto MDI/MDI-X to eliminate the need for crossover cabling.

NOTE: *Category 5e cable or above should be used.*

6. DIP Switch Setting & Reset Button



PWR	ON: Primary power alarm reporting is enabled
	OFF: Primary power alarm reporting is disabled
RPS	ON: Redundant power alarm reporting is enabled
	OFF: Redundant power alarm reporting is disabled

7. LED Indicators

PWR (Green)		Illuminated	Primary power on
		Off	Primary Power failure or not available
RPS (Green)		Illuminated	Redundant power on
		Off	Redundant power off or failure
POST (Green)		Illuminated	Switch is ready or running
		Blinking	Self-testing the device when power on
		Off	Switch is not ready
ALM (Red)		Illuminated	Alarm triggered for abnormal power status and anomalous features
		Off	Normal operation or DIP switch off
1st~20th	1000 (Green)	Illuminated	Link speed at 1000Mbps
		Off	Link speed at 10/100Mbps
	10G (Green)	Illuminated	Link speed at 10Gbps
		Off	Link speed at 1Gbps
	LNK/ACT (Green)	Illuminated	Port link-up
		Blinking	Activity (receiving or transmitting data)
		Off	Port disconnected, or link failed

8. Environmental limits

Operating Temperature	-40˚C~70˚C (-40°F~158°F)
Storage Temperature	-40˚C~85˚C (-40°F~185°F)
Ambient relative humidity	5 to 95% (non-condensing)

NOTE:

- *The highest degree of temperature operation certified by UL is -40˚C~70˚C (-40°F~158°F).*
- *Two switchs must be installed at least 50 mm apart.*

ATTENTION:
This device complies with Part 15 of the FCC rules. Operation is subject to the following conditions:
1. This device may not cause harmful interference.
2. This device must accept any interference received including interference that may cause undesired operation.

ATTENTION:
Cet appareil est conforme à la partie 15 des règles de la FCC.
Le fonctionnement est soumis aux conditions suivantes :
1. Cet appareil ne doit pas causer d'interférences nuisibles.
2. Cet appareil doit accepter toute interférence reçue, y compris les interférences susceptibles de provoquer un fonctionnement indésirable.

ATTENTION:
If the equipment is used in a manner not specified by the VOLKTEK, the protection provided by the equipment may be impaired.

ATTENTION:
Si l'équipement est utilisé d'une manière non spécifiée par VOLKTEK, la protection fournie par l'équipement peut être altérée.

ATTENTION:
Please leave at least 5cm of space at the left and right of the unit for ventilation.

ATTENTION:
Veuillez laisser au moins 5 cm d'espace à gauche et à droite de l'unité pour la ventilation.

Limited Warranty

VOLKTEK Corporation warrants this product against defect in materials and workmanship for a period of FIVE (5) YEARS to the original purchaser.
If you discover a defect, VOLKTEK will, at its sole option, repair or replace the product at no additional charge, provided that you contact VOLKTEK technical support to obtain a Return Merchandise Authorization Number (RMA) and instruction on how and where repairs can be made. This warranty does not apply if the product has been damaged by accident, abuse, misuse, misapplication, neglect, fire, water, lightning or other acts of nature, failure to follow supplied instructions, installation or removal, have been repaired or have undergone attempted repair by unauthorized personnel without written consent from VOLKTEK, modified, defaced, or has its serial numbers removed. VOLKTEK reserves the right to use remanufactured, refurbished, or used parts and components in making warranty repairs.
All expressed or implied warranties for this product, including the implied warranties of merchantability and fitness for a particular purpose are limited in duration to the warranty period. No warranties expressed or implied will applied after this period. VOLKTEK shall not be liable for lost profits, damage to other property caused by any defects of this product, or damages based upon inconvenience, loss of product use, loss of time, commercial use, incidental and/or consequential damages for the breach of any expressed or implied warranty, including damages to property, and to the extent permitted by law, damages for personal injury, even if VOLKTEK has been advised of the responsibilities of such damages.
If you have any further questions, please contact Customer Support:

Address of the manufacturer.

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