

# MS1-U05L

## Quick Start Guide

### 1. Overview

MS1-U05L Unmanaged Industrial Ethernet Switch is specially designed to expand reliable Ethernet connectivity to factory floors and outdoor environments with extreme temperature and climatic conditions.

MS1-U05L is equipped with 5 x 10/100 RJ45 Ports enclosed in IP30 housing (not certified by UL).

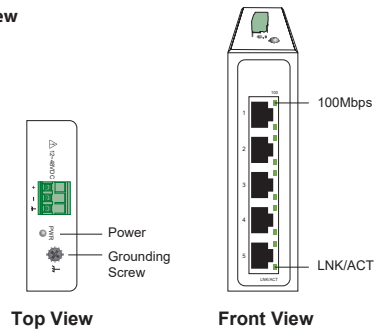
### 2. Package Checklist

MS1-U05L is shipped with the following items\*. If any of these are missing or damaged, please contact your customer service representative for assistance.

- MS1-U05L Switch x 1
- Quick Start Guide x 1

\*Contents of the package can be adjusted based on customer demand.

#### Panel view



### 3. Mounting and Dismounting to DIN-Rail



#### ATTENTION:

The MS1-U05L is an open type device and MS1-U05L shall be DIN-Rail mounted or wall mounted (optional) in cabinet or enclosure and the ambient temperature should not exceed 167°F (75°C).

#### ATTENTION:

L'MS1-U05L est un appareil de type ouvert et l'MS1-U05L doit être monté sur rail DIN ou fixé au mur (en option) dans une armoire ou un boîtier et la température ambiante ne doit pas dépasser 167°F (75°C).



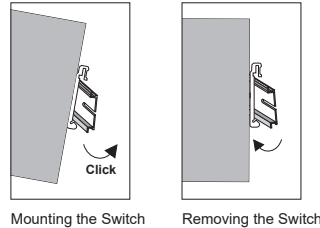
For more information contact Maple Systems at:  
email: sales@maplesystems.com  
Tel.: (425) 745 3229

### Mounting the switch

Place the MS1-U05L 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.

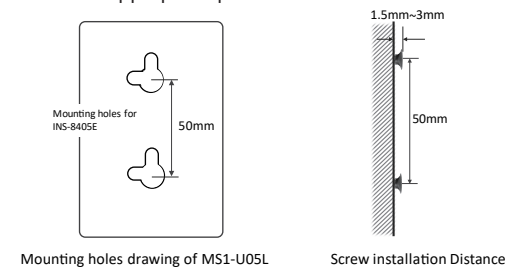
### Dismounting the switch

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



### Wall-Mounted Mask of MS1-U05L

Step1: Place this device by using mounting holes on the wall at the appropriate place.



Step2: The wall-mount direction can be straight or horizontal.



#### 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 MS1-U05L

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI).

Step 1: Run the ground connection from the ground screw to the grounding surface prior to connecting devices.

Step 2: Connect the ground connection from the terminal block to the grounding surface prior to connecting device.



#### 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.

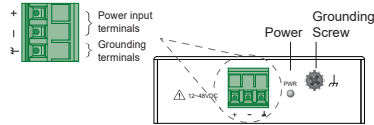
- You should separate input wiring from output wiring.
- We advise that you label the wiring to all devices in the system.

## 5.1 Wiring Power Input

### 5.1.1 3pin terminal block

Check the polarity while connecting.

Top view of Terminal Block is shown in the figure below:



#### Caution:

- Use copper conductors only
- Wiring cable temperature should support at least 221°F (105°C).
- Tighten the wire to a torque value 4.5lb with green connector.
- The wire gauge for the terminal block should range between 12~24 AWG with green connector, 12~22AWG with gray connector.

#### MISE EN GARDE:

- Utilisez uniquement des conducteurs en cuivre
- La température du câble de câblage doit supporter au moins 221°F (105°C)
- Serrer le fil à une valeur de couple de 4.5lb avec le connecteur vert.
- Le calibre de fil du bornier doit être compris entre 12 et 24 AWG avec un connecteur vert, 12 et 22 AWG avec un connecteur gris.

To insert power wire and connect the 12~48VDC at a maximum of 0.15A DC power to the power terminal block, follow the steps below:

- Use flat-head screw driver to loosen the wire-clamp screws
- Insert the negative/positive DC wires into the ( - / + ) terminals, respectively
- Tighten the wire-clamp screws to prevent the wires from loosening



#### ATTENTION:

Please use a power supply from 12~48VDC, the device power shall be supplied by SELV circuit.

#### ATTENTION:

Veuillez utiliser une alimentation de 12 ~ 48VDC, l'alimentation de l'appareil doit être fournie par un circuit SELV.

### 5.1.2 Cabling RJ45

Connect one end of an Ethernet/RJ45 cable into Ethernet port of MS1-U05L and other end to attached networking device.

- Ports 1-5 of the switch support Fast Ethernet (10/100Base-T RJ45 Ports)
- All the RJ45 ports on the MS1-U05L 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. LED Indicators

PWR (Green)	Illuminated Off	Power On by terminal block PWR Terminal block PWR fails or is not available
100 (Green)	Illuminated	Link speed at 100Mbps
	Blinking	Data is transmitting / receiving
	Off	Link speed at 10Mbps or no link
LNK/ACT (Green)	Illuminated	Copper port link-up
	Blinking	Data is transmitting / receiving
	Off	No link or link failed

## 7. Environmental limits

Operating Temperature	-40°F~167°F (-40°C~75°C)
Storage Temperature	-40°F~185°F (-40°C~85°C)
Altitude	Up to 2000m
Ambient relative humidity	5 to 95% (non-condensing)

#### NOTE:

- The highest degree of temperature operation certified by UL is -40°F~167°F (-40°C~75°C).
- Two switches 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 Maple Systems, the protection provided by the equipment may be impaired.

#### ATTENTION:

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

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