EN

PoE Managed Switch 4p 24V 5A OUT L

Power supply with PoE battery backup - for outdoor use

350-269
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1. ABOUT THIS DOCUMENT

This document is subject to change without prior notice.

All information is published with reservation for printing errors.

2. INSTALLATION AND COMMISSIONING

Instructions for installation and commissioning.

Instruction No: 350-269

3. ABOUT POE MANAGED SWITCH 4P 24V 5A OUT L

PoE Managed switch 4p 24V 5A UT L is a power supply with PoE for outdoor use. Built to withstand Nordic conditions - summer and winter. The product differs from indoor battery backups from Milleteknik and some functions have been added and others have been dropped.

WARNING
It is not certain that function can be maintained if the temperature falls below or above the specified parameters. See technical data. Damage to the product, property or anything else that occurs because the product has been used outside the temperature range is not covered by the warranty and is also not grounds for a complaint.

4. COMPONENT OVERVIEWS

4.1.

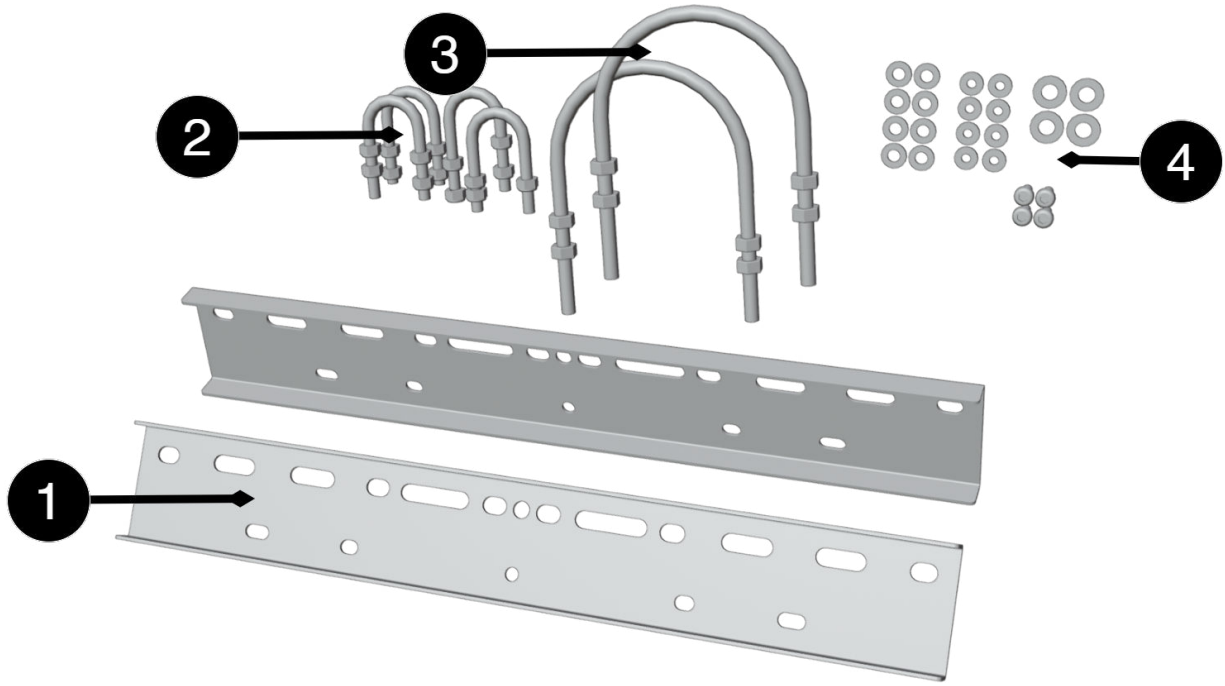
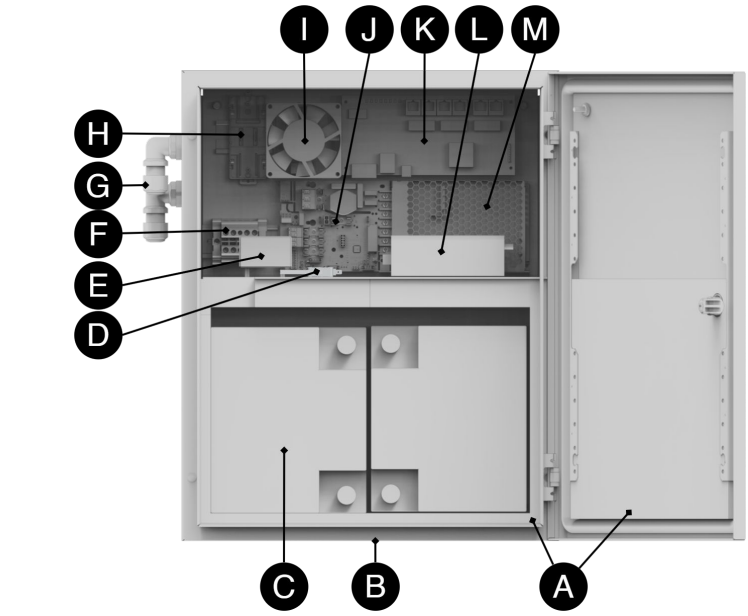


Table 1.

1	
2	
3	
4	

4.2. Component overviewNOVA FLX L



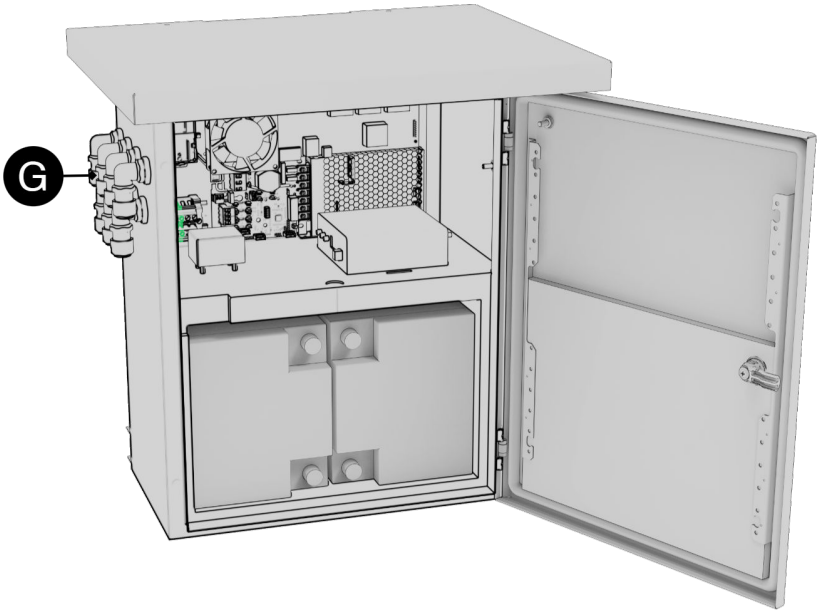


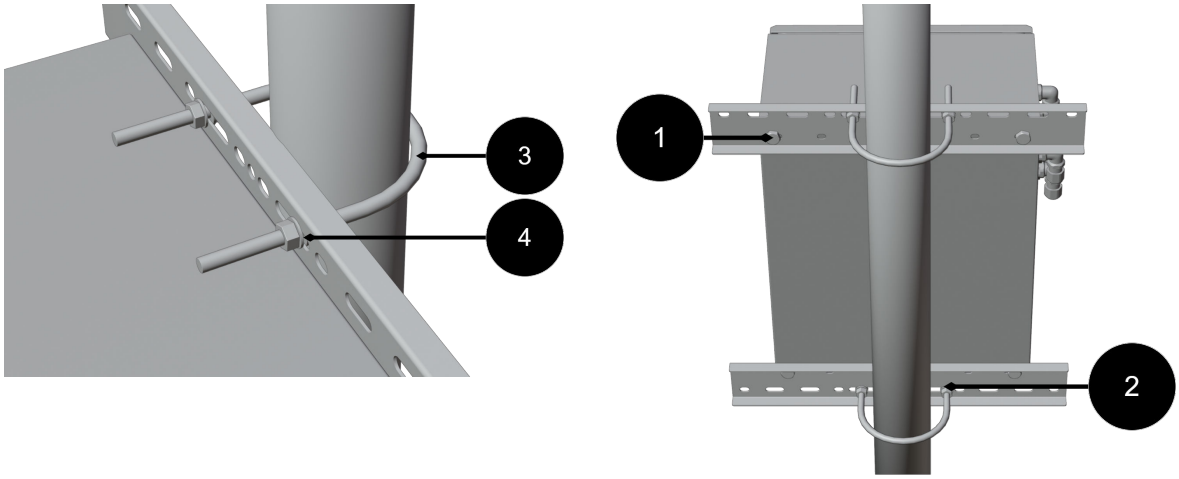
Table 2. Component overview

Number	Explanation
B1 +, B2 +	Battery cable +
B1 -, B2 -	Battery cable -
C	Indicator diode
D	
E	The power supply, location and type vary with configuration.
F	Motherboard
G	Battery fuse
H	Connection Load. If there are optional cards in the unit, the load must be connected there, see 8.
I	Weather protection, optional, not included.

Number	Explanation
J	Protection for temperature cable and battery.
K	Heating cable.
L	Lockable door.
M	Power supply unit.
N	Frost protection guard

5. ENCLOSURES

5.1.



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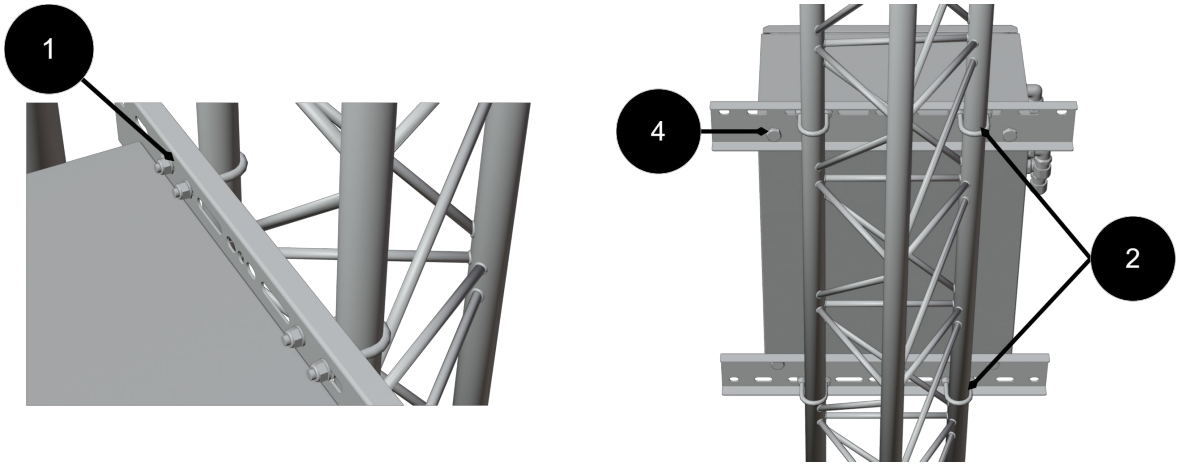

1.
2.
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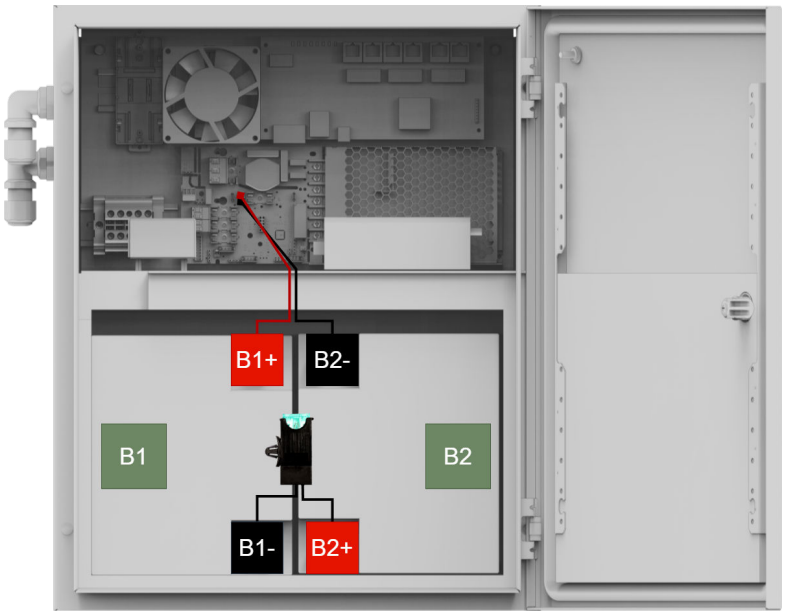
6. BATTERIES - PLACEMENT AND CONNECTION

6.1. Connecting batteries

CAUTION
Batteries can wear out faster than expected when temperatures fall outside the range that is optimal for battery operation.

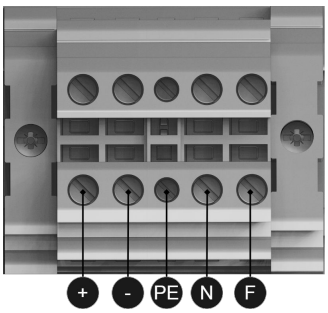


Note that configuration may differ by product.

Table 3. Connecting batteries.

Nr	Explanation
B1	Battery 1
B2	Battery 2
B1+	Plus terminal to battery fuse.
B1-	Minus terminal to motherboard.
B2-	Minus terminal to battery fuse.
B2+	Plus terminal to motherboard.

7. CONNECTION OF POWER SUPPLY (230 V) AND LOAD



Connect the load before connecting the mains.

Table 4. Connection of mains and load.

Symbol	Explanation
F	Phase.
N	Zero.
PE	Protective soil.
+	24 V load +.

Symbol	Explanation
-	24 V load -.

7.1. Fuses

Table 5. Fuses on PRO3 / NEO3

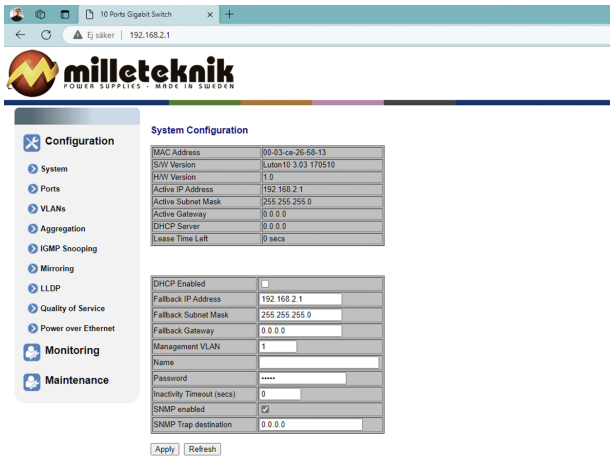
Fuse	Type	Explanation
F1	T2.5A	Mains fuse
F3	T16A	Load fuse 1 - (for P2:2)
F4	T16A	Battery fuse
F5	T5A	Load fuse 1+ (for P2: 1)
F7	T5A	Load fuse 2 + (for P2:3)

WARNING FOR REPLACING FUSES (CURRENT STRENGTH, A)

There is a risk of damage if the fuse is changed to a larger one than what the unit is delivered with. The function of the fuse is to protect the connected load and cables against damage and fire. It is not possible to change the fuse to a larger one to increase the power output.

8. HOW THE POE SWITCH SOFTWARE IS ACCESSED

8.1. How the software is accessed in the PoE Switch



This section shows how to log in to the switch's configuration web page.

To configure the software in the switch, the correct IP address needs to be set on the computer.

Access to the switch's software is through a browser, (such as: Chrome, Edge, Firefox, etc.).

Follow the steps to access the switch's settings.

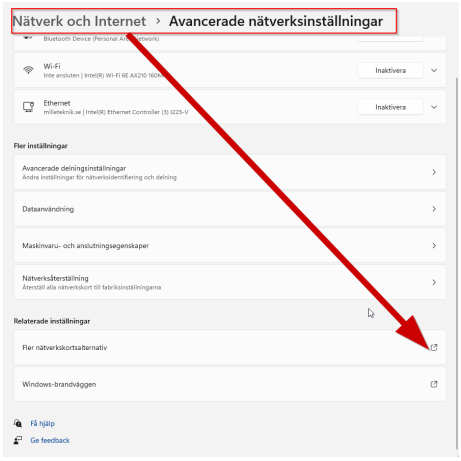
NOTE
The settings shown are settings for PC, (Windows 7 - Windows 11). Windows and names may vary between different versions of Windows. Unfortunately, we cannot provide support for settings of your computer.

NOTE
IP address of the switch (factory setting): **192.168.2.1**

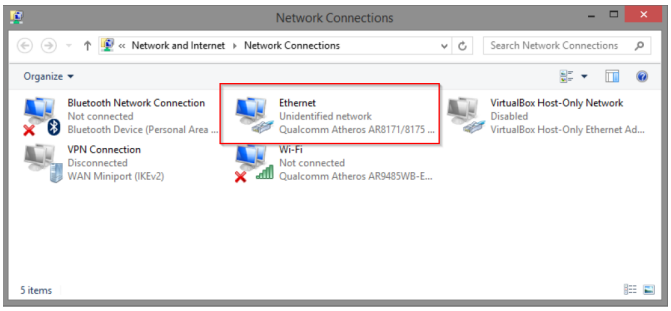
Password (factory setting): **admin**

NOTICE
The address of the PoE switch is: **192.168.2.1** and username and password are: **admin/admin** The IP address in the switch is static (fixed) and therefore the computer's IP address and subnet mask must be static.

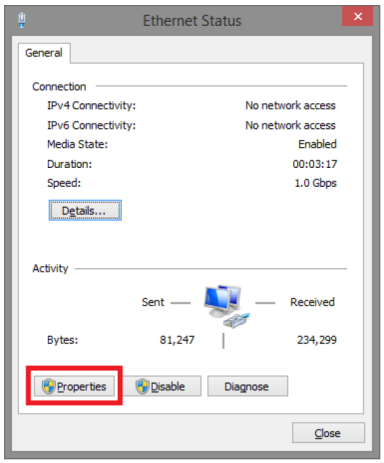
1. Open settings and go to **Network and Internet** -> **Advanced network settings**. Open **more network card options**.



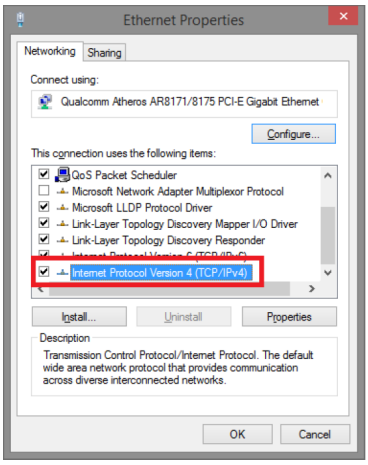
2. A Network Connections window will appear showing all available network connections on the computer. Double-click the network connection you use to connect to the switch.



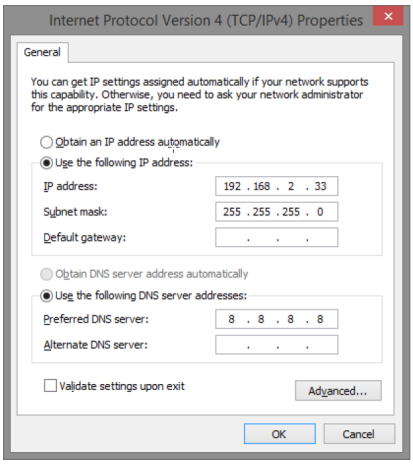
3. Ethernet status window appears. Click the button **Characteristics** as shown in the figure below.



4. Double-click: Internet Protocol Version 4 (TCP / IPv4).



5. Set the computer's IP address and subnet mask as shown in the figure below. By default, the product's **IP address be 192.168.2.1.** You can set any IP address as long as it is not the same as your switch's IP address and is in the same network segment as your switch's IP address. Press on **OK** to apply the TCP/IPv4 settings you just made. Now you can connect to your switch using a web browser (Chrome, Edge or Firefox).



6. Connect an RJ-45 cable and connect to the PoE switch.

8.2. Log in to the PoE switch

NOTE

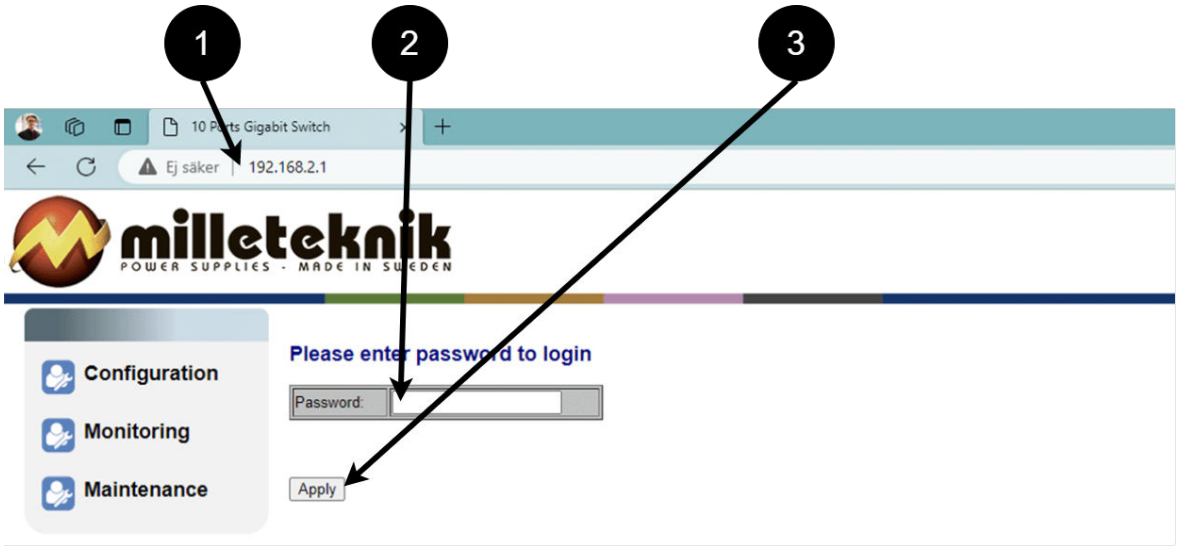
IP address of the switch (factory setting): **192.168.2.1**

Password (factory setting): **admin**

NOTE

If you get a warning that the page is not secure/the connection is not private, click "advanced" and then "continue".

1. Start the browser on your computer.
2. Login to PoE switch.



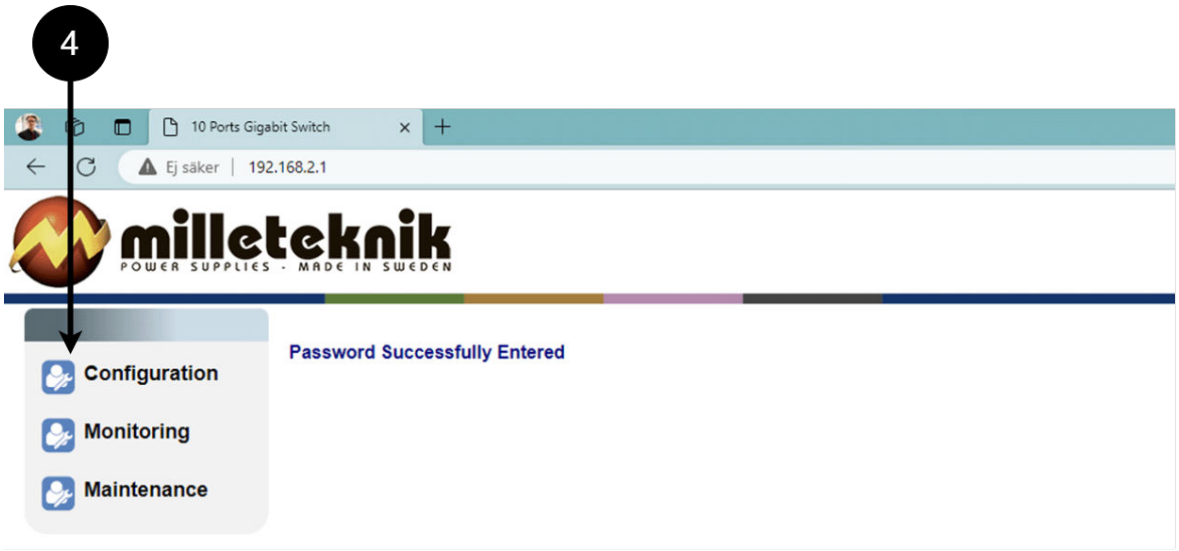


Table 6. Log in to the switch.

Number	Explanation
1	IP address of the PoE switch: 192.168.2.1
2	Password: admin
3	Apply = Ok
4	Menu in the PoE switch

8.3. Configuration

8.3.1. System, configuration

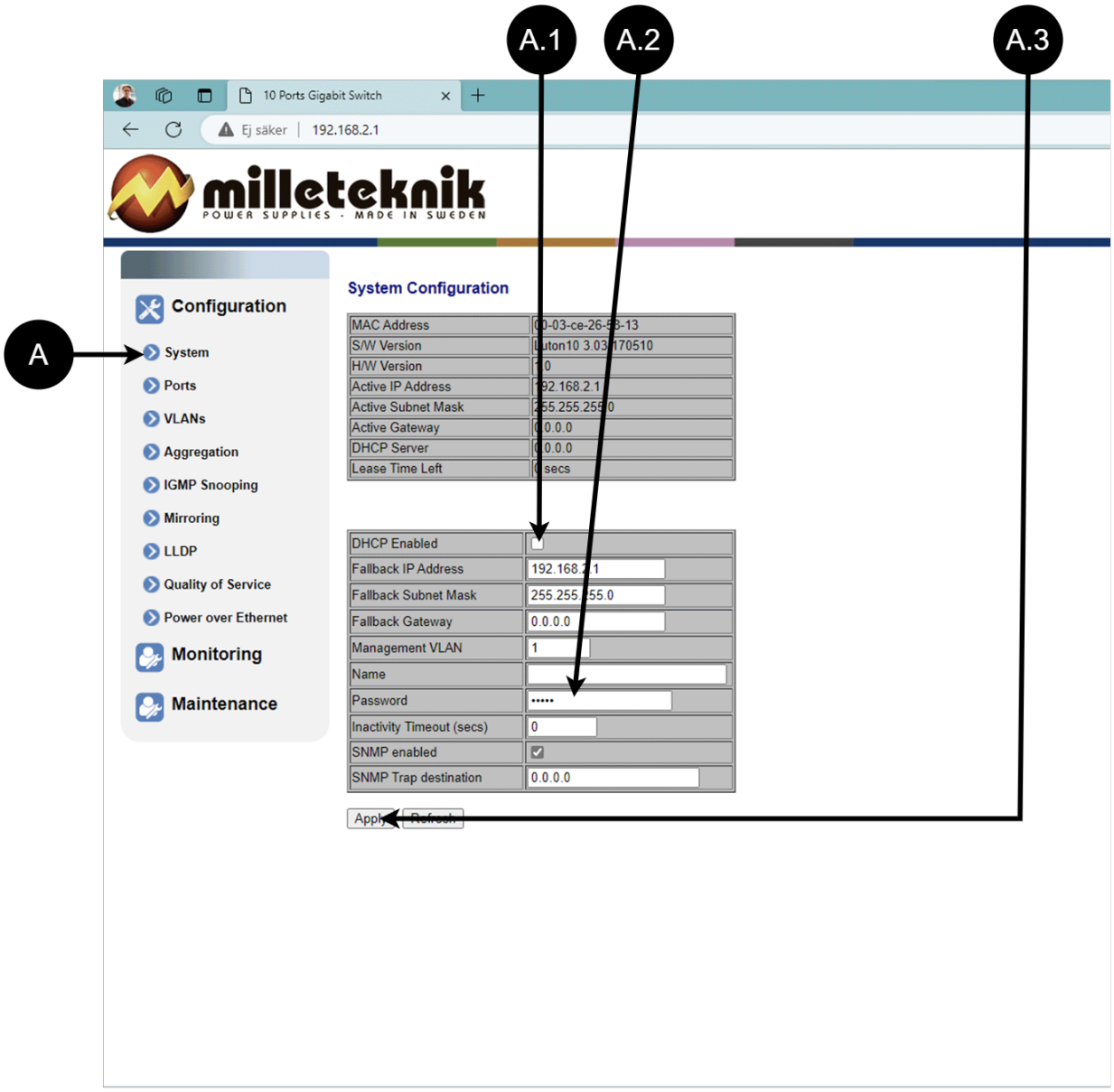


Table 7. System, configuration.

Letter, number	Explanation
A	PoE switch system configuration page
A.1	Tick here if you are going to use DHCP, see warning below.
A.2	Changes the factory default password, (admin).
A.3	If you have made any changes, you need to click "Apply" to save the changes.

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.

8.3.2. Ports, configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.

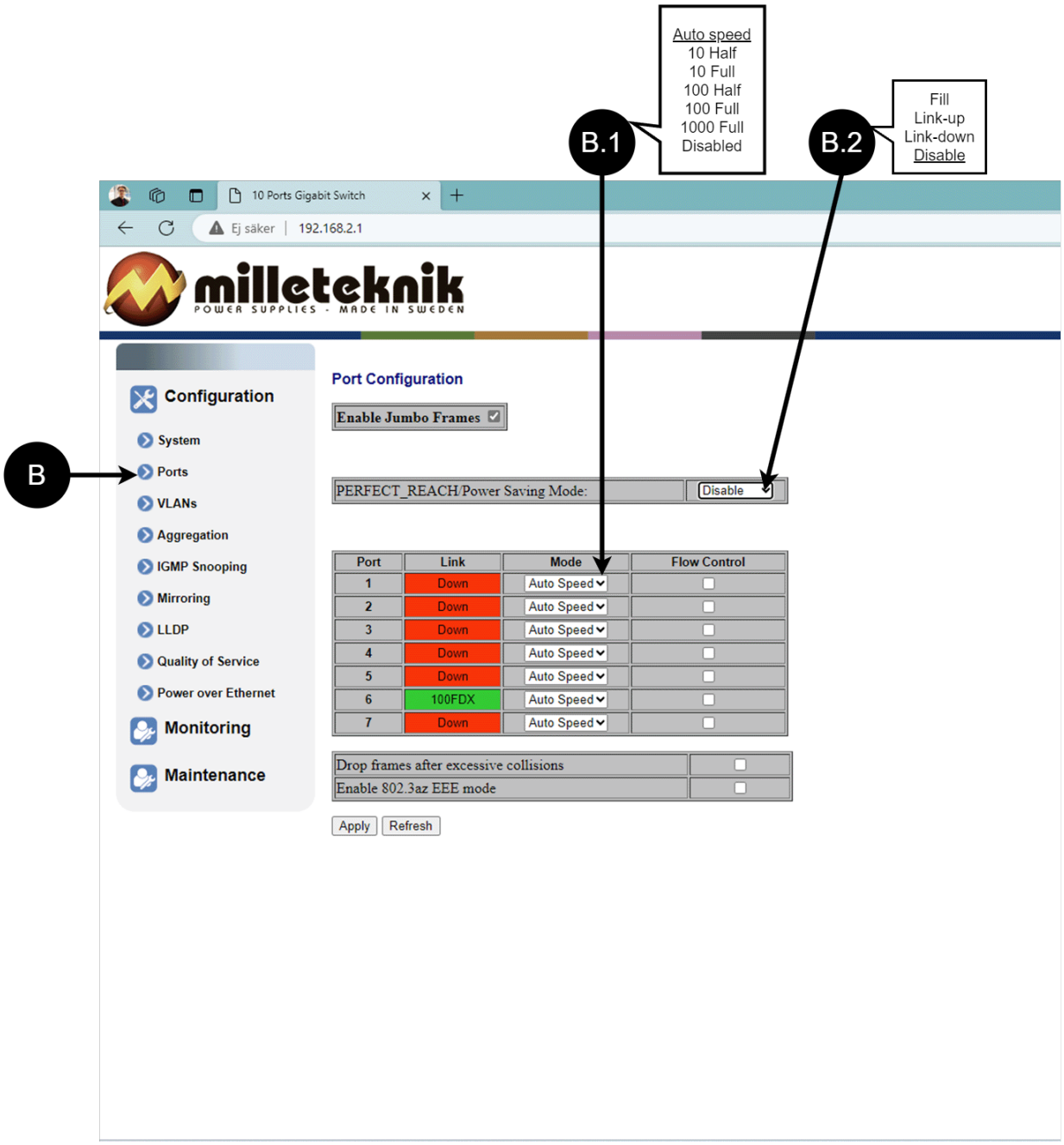


Table 8. Ports, configuration.

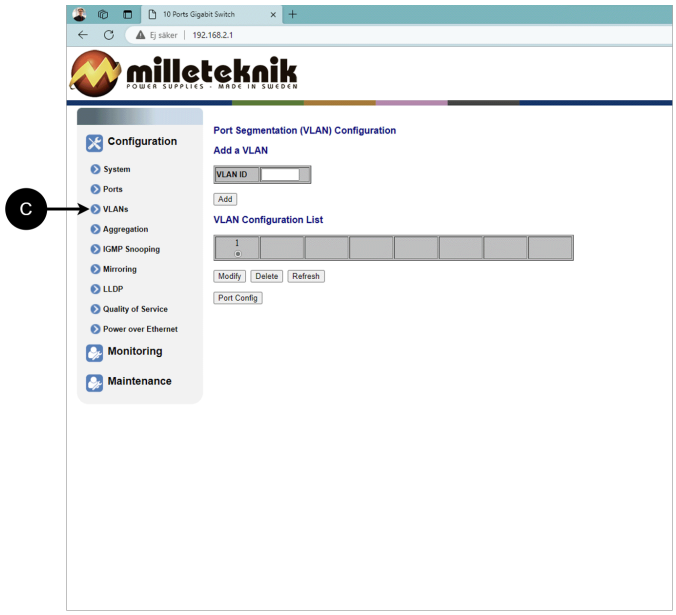
Letter, number	Explanation
B	Gates
B.1	This setting normally does not need to be changed. Select the speed of the PoE switch's ports.
B.2	This setting normally does not need to be changed.

8.3.3. VLAN configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.



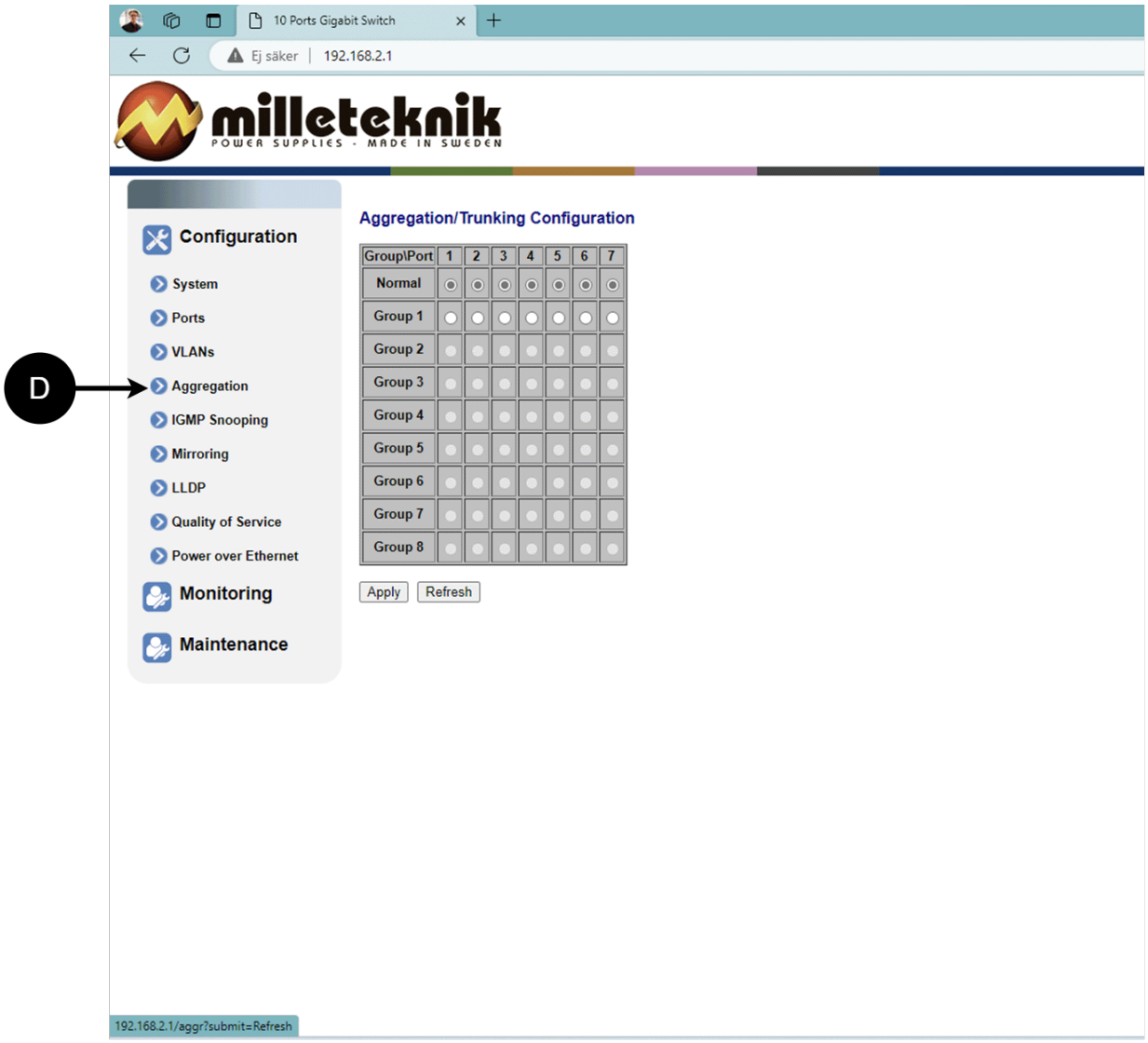
C: Configuration of Virtual LAN.

8.3.4. Aggregation, configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.



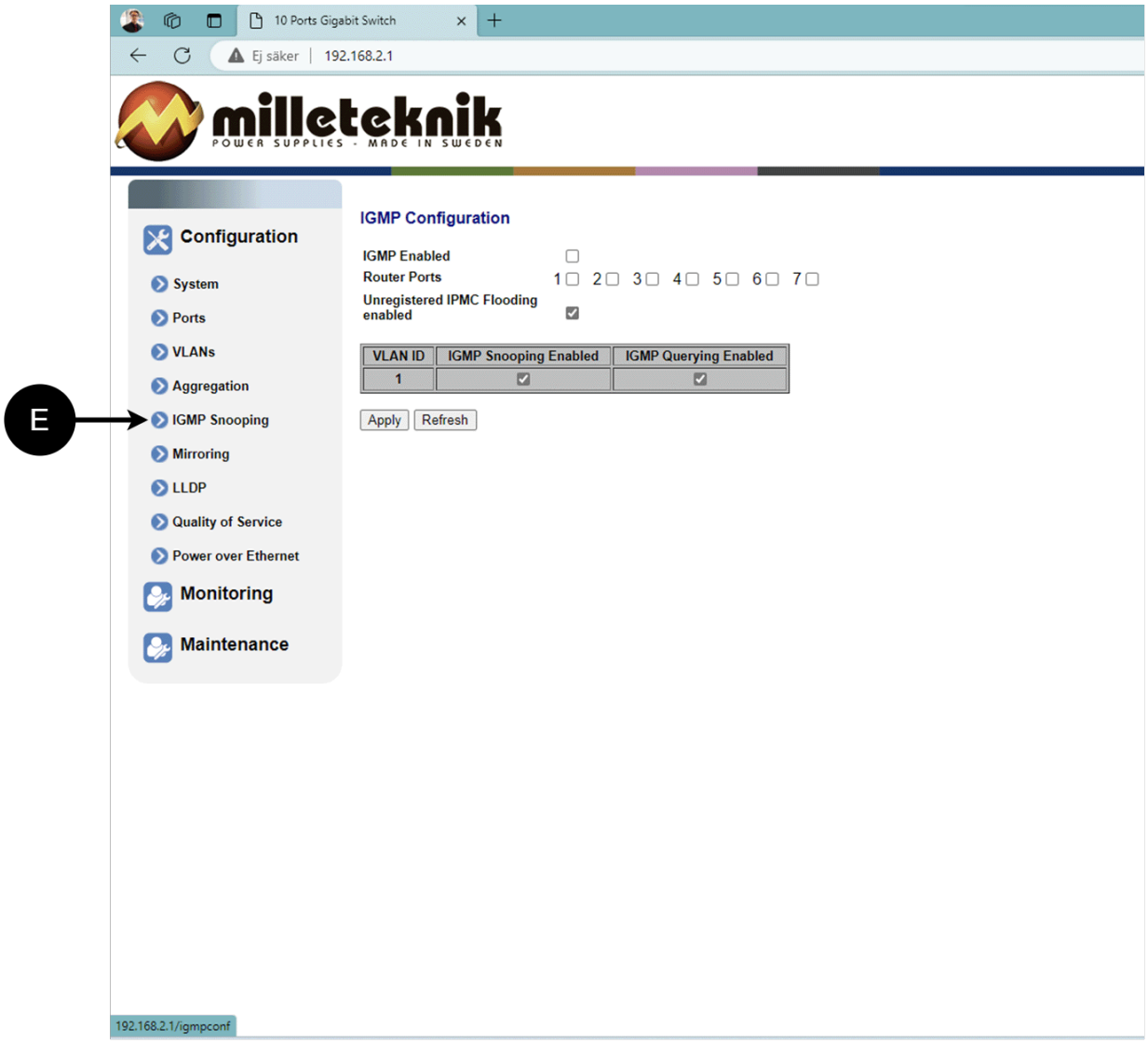
D: Load balancing between the ports.

8.3.5. IGMP Snooping, configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.



E: Switch that controls reception.

8.3.6. Mirroring, configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.

F: Mirroring of ports.

8.3.7. LLDP configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.

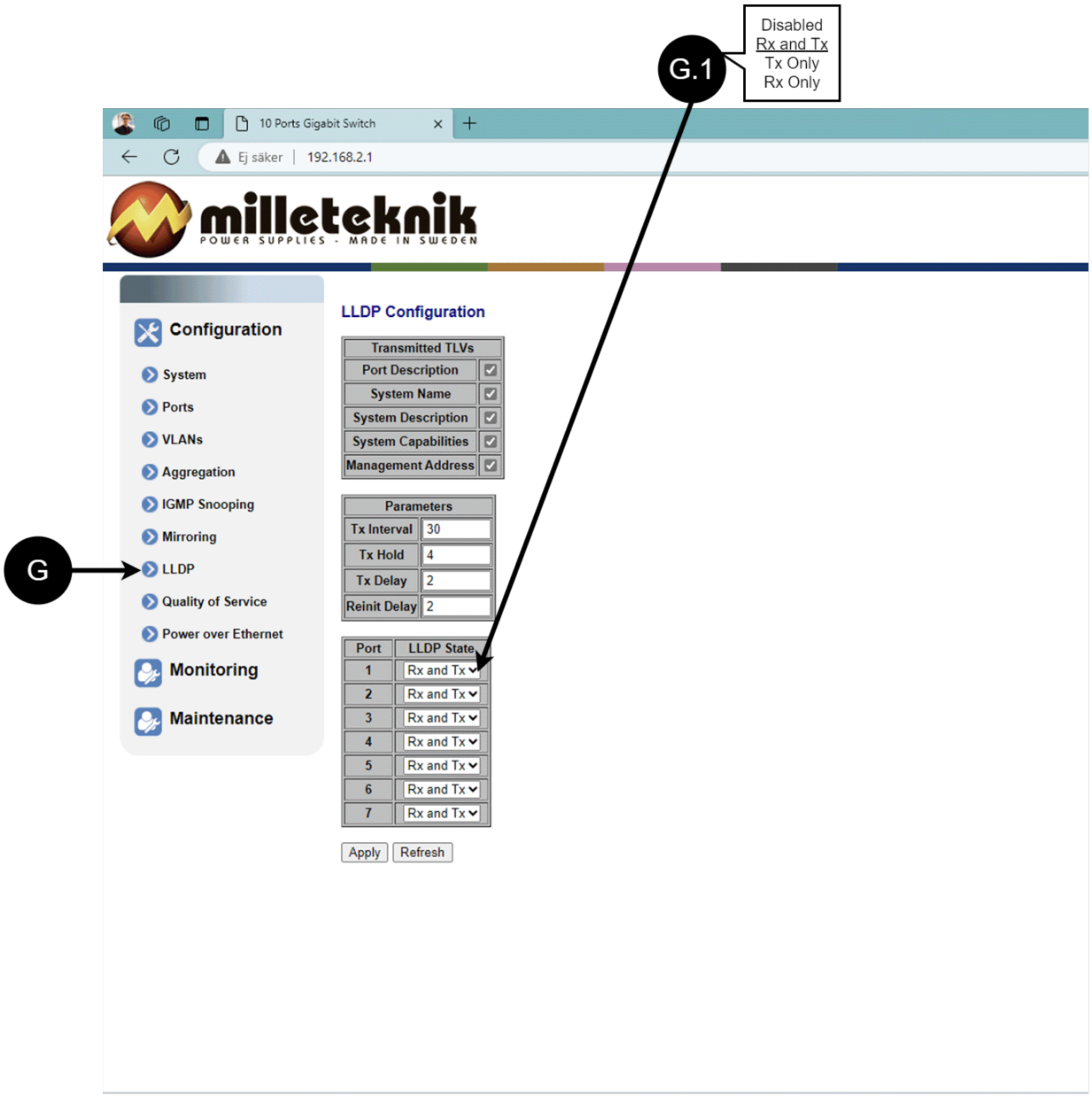


Table 9. LLDP configuration.

Letter, number	Explanation
G	LLDP stands for "Link Layer Discovery Protocol", which is a network protocol standard used to discover and communicate information about network devices connected to the same Ethernet network. The protocol allows devices such as switches and routers to send and receive messages containing information about the device's identification, capabilities, and connection topology.
G.1	RX and TX are abbreviations used in electronics, communications, and computer networking to indicate the direction of data flow between devices. RX: The abbreviation "RX" stands for "Receive" or "Reception". It indicates that the device is receiving data or signals from another device. When a device has an RX input, it means that it is designed to receive data or information from a transmitting device. TX: The abbreviation "TX" stands for "Transmit" or "Transmission". It indicates that the device is transmitting data or signals to another device. If a device has a TX output, it means that it is designed to transmit data or information to a receiving device. These abbreviations are especially common when it comes to data communication, such as in the context of network cables where there are specific RX and TX wires that allow for two-way communication between devices.

8.3.8. QoS, configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.

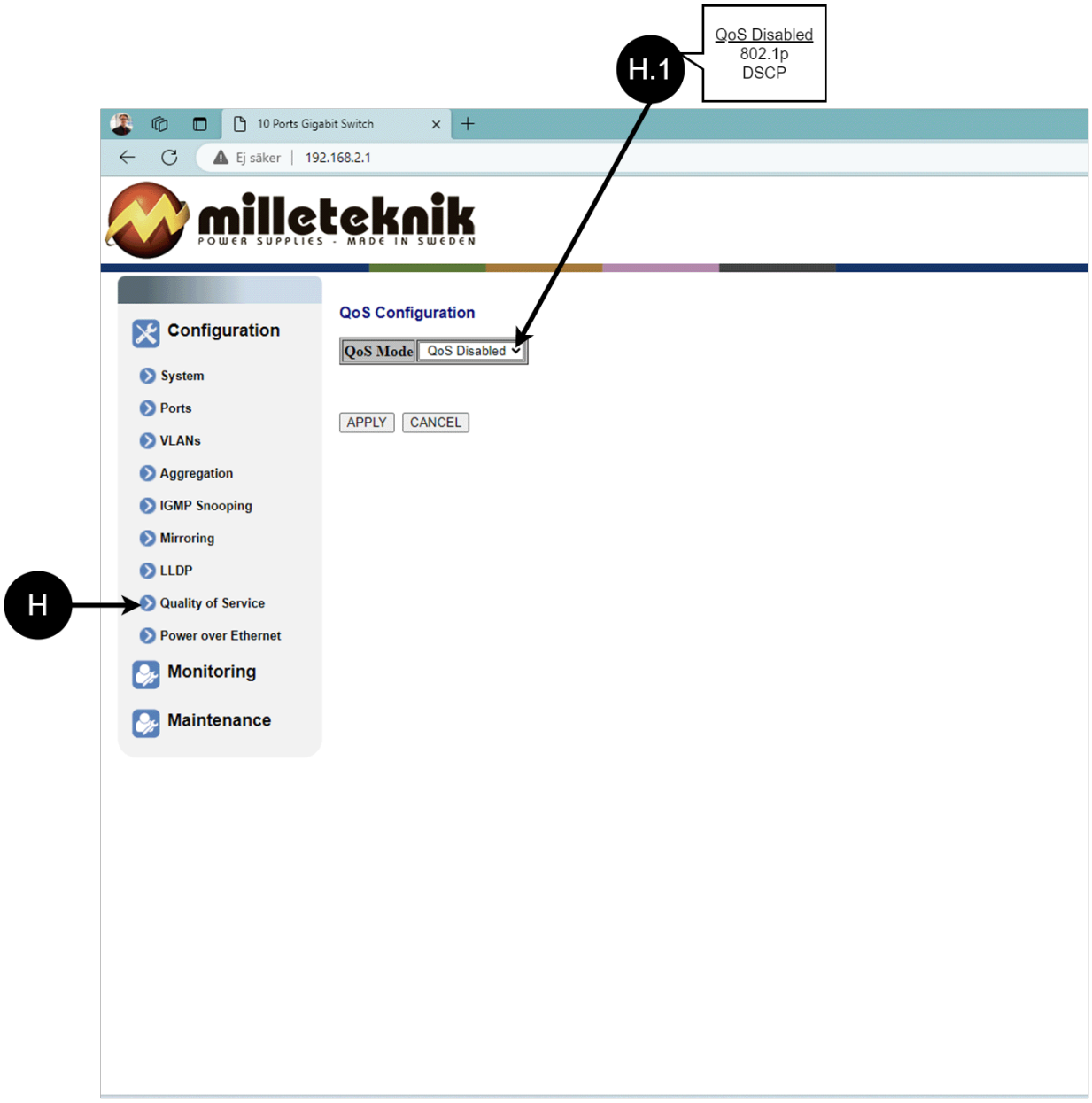


Table 10. QoS, configuration.

Letter, number	Explanation
H	QoS gives different network traffic different priority, helping to ensure that important services are delivered with sufficient bandwidth and minimal delay even when the network is under load.
H.1	Sets whether QoS is active.

8.3.9. PoE, configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.

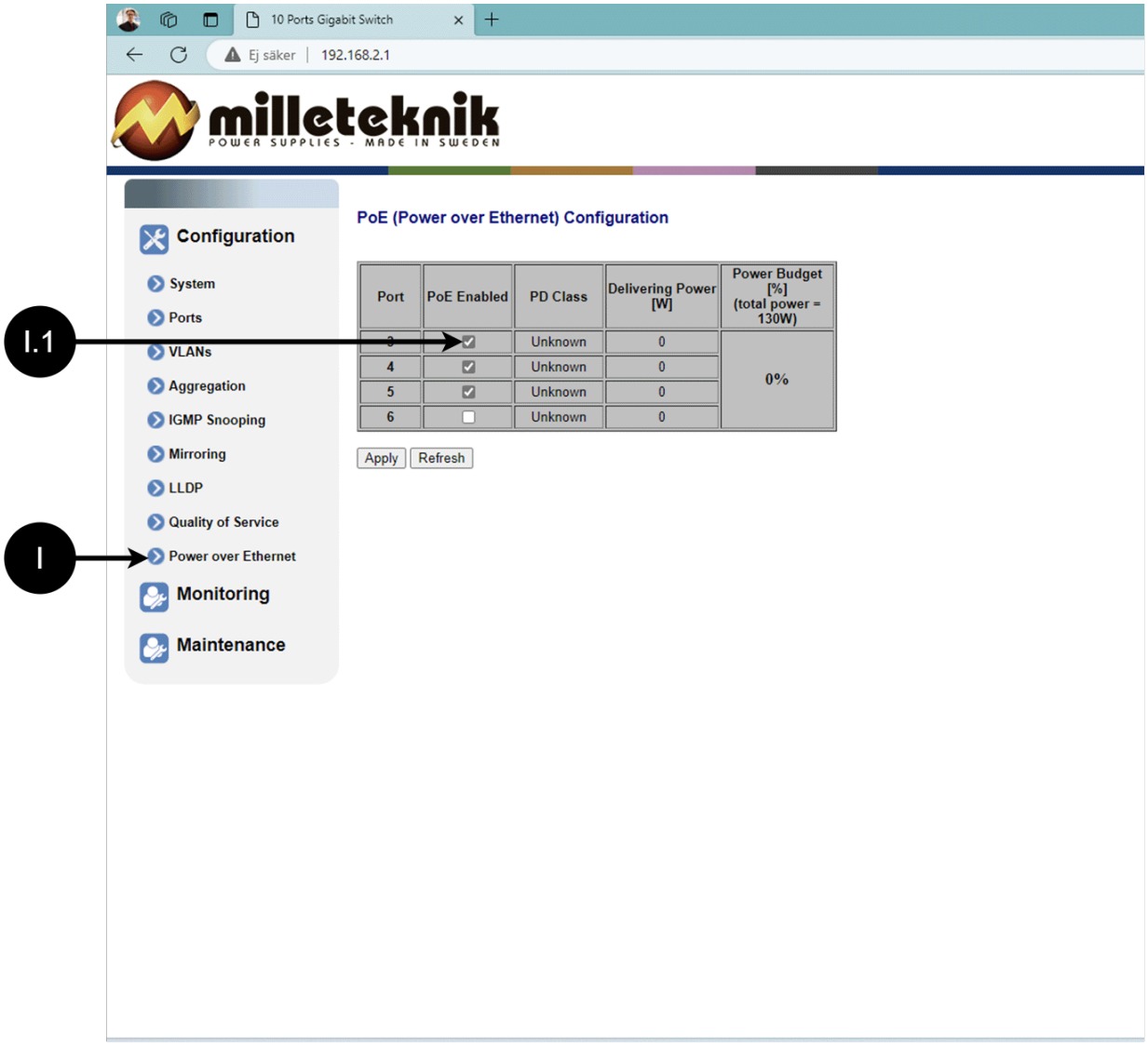


Table 11. PoE, configuration

Letter, number	Explanation
I	Power over Ethernet
I.1	Turns PoE function/port on or off. Remember to press "Apply" to save changes.

8.4. Monitoring

8.4.1. Statistics, overview

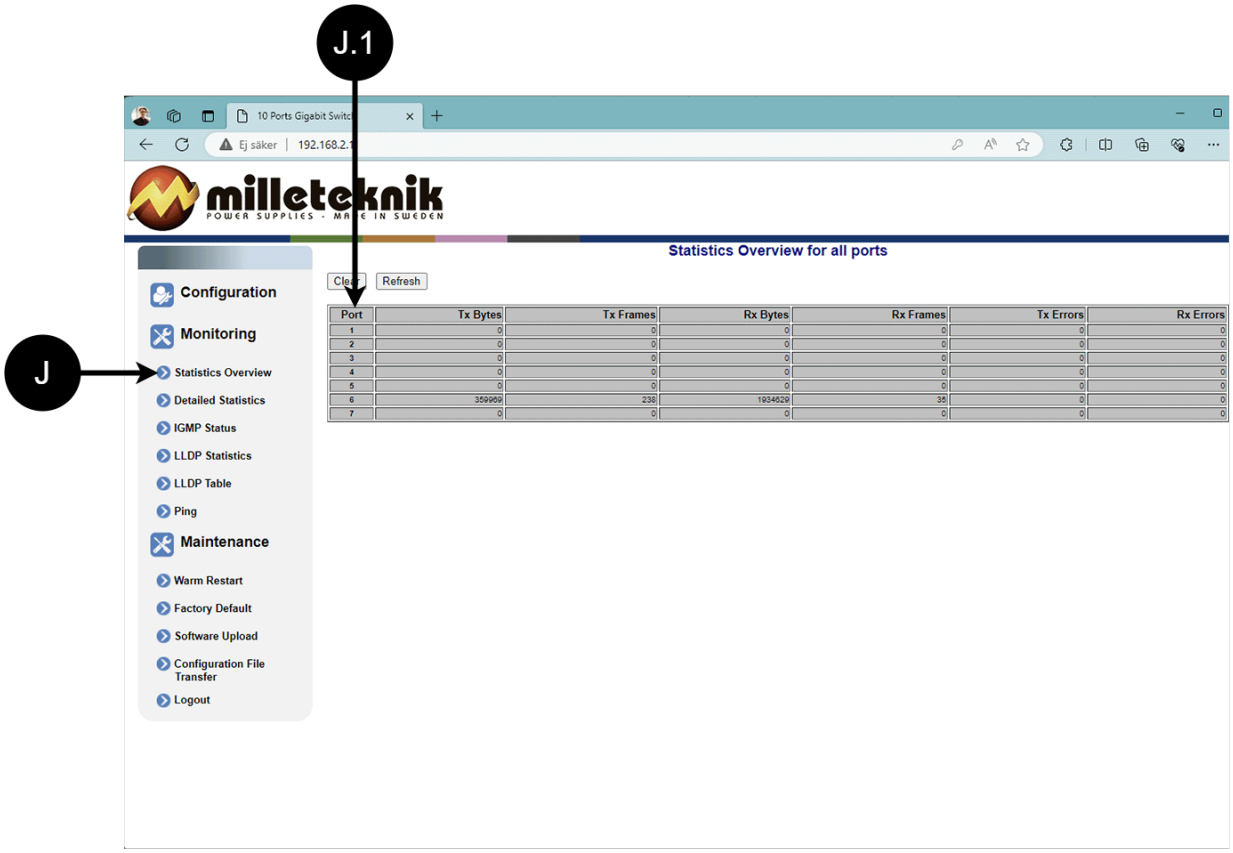


Table 12. Statistics, overview.

Letter, number	Explanation
J	Statistics, overview
J.1	Traffic per port.

8.4.2. Statistics, detailed

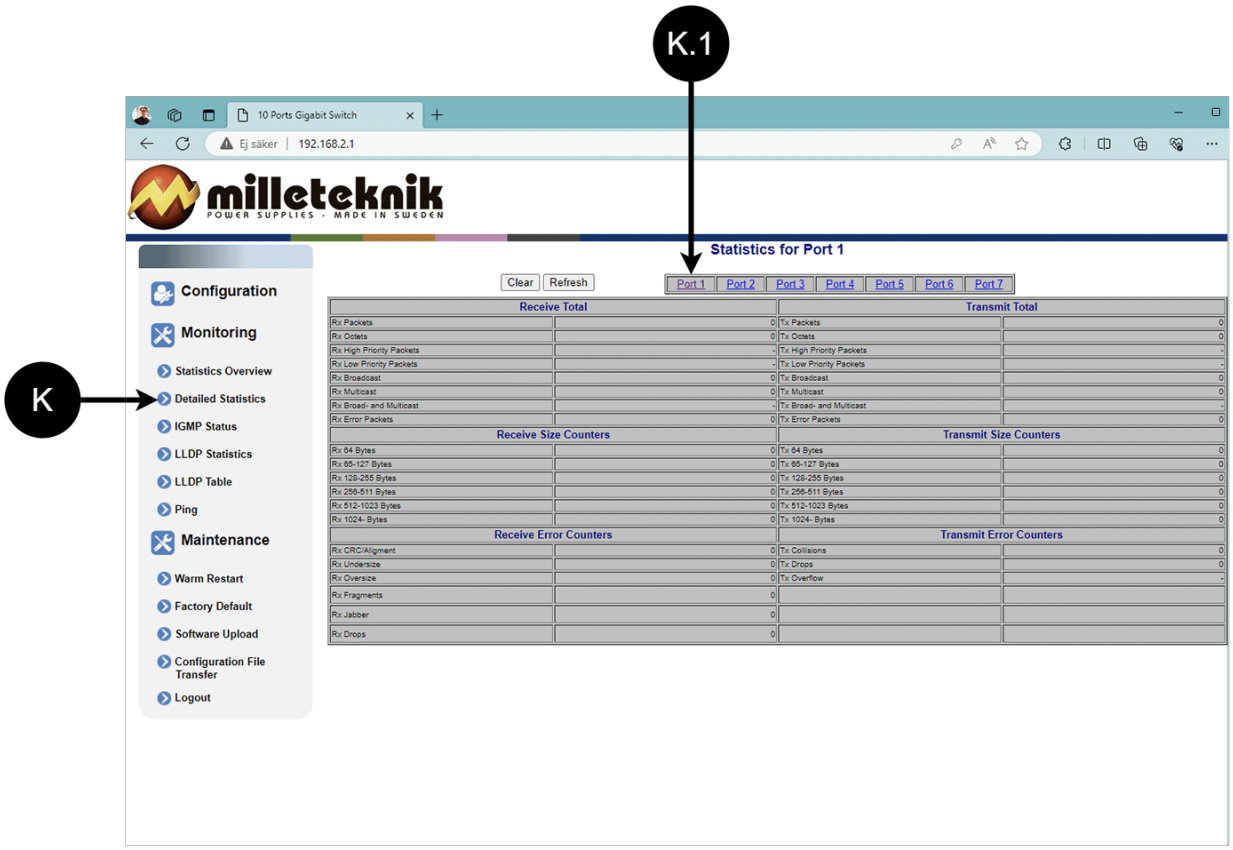


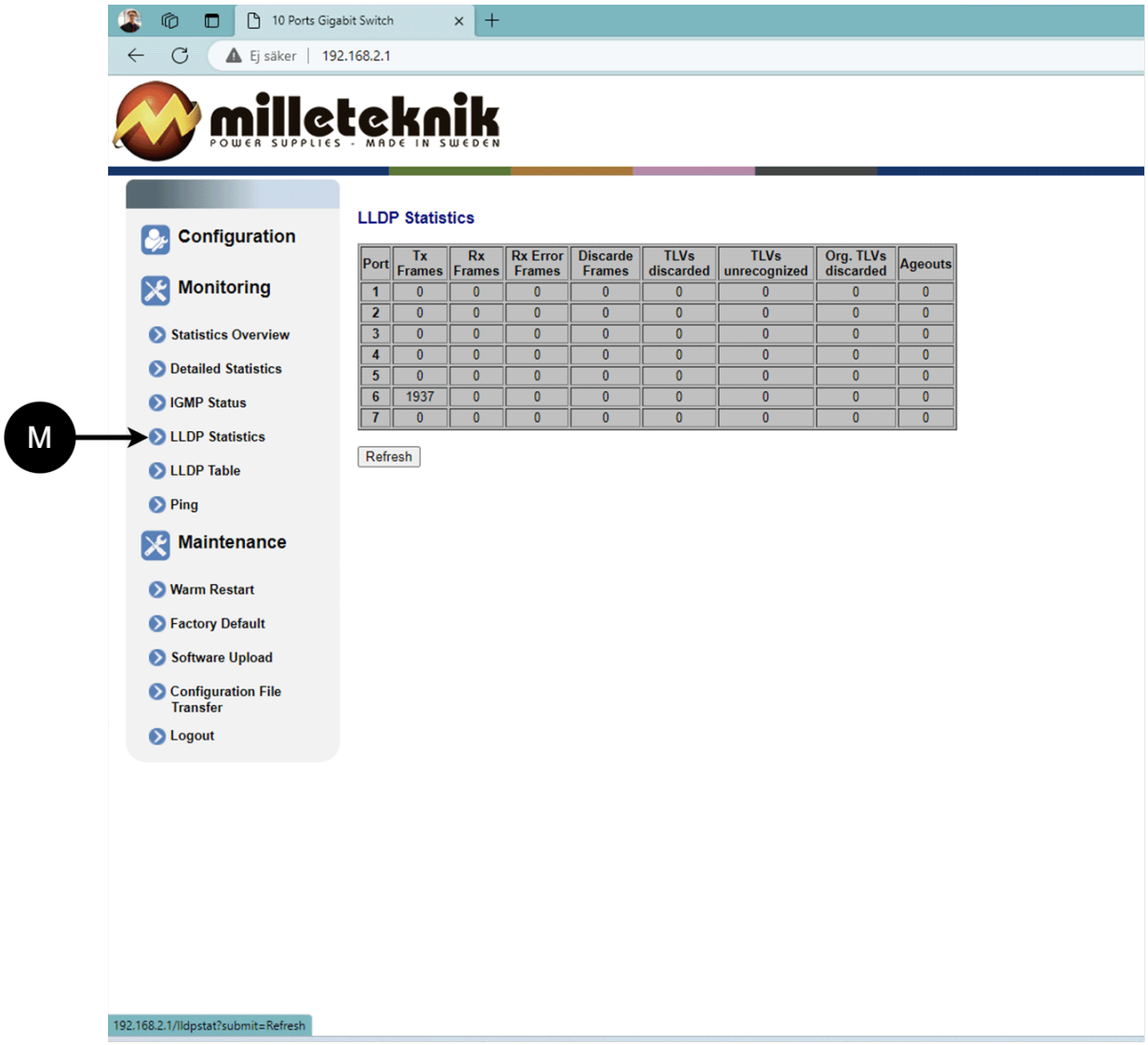
Table 13. Statistics, detailed.

Letter, number	Explanation
K	Detailed statistics
K.1	Select the port for which you want statistics.

8.4.3. IGMP status

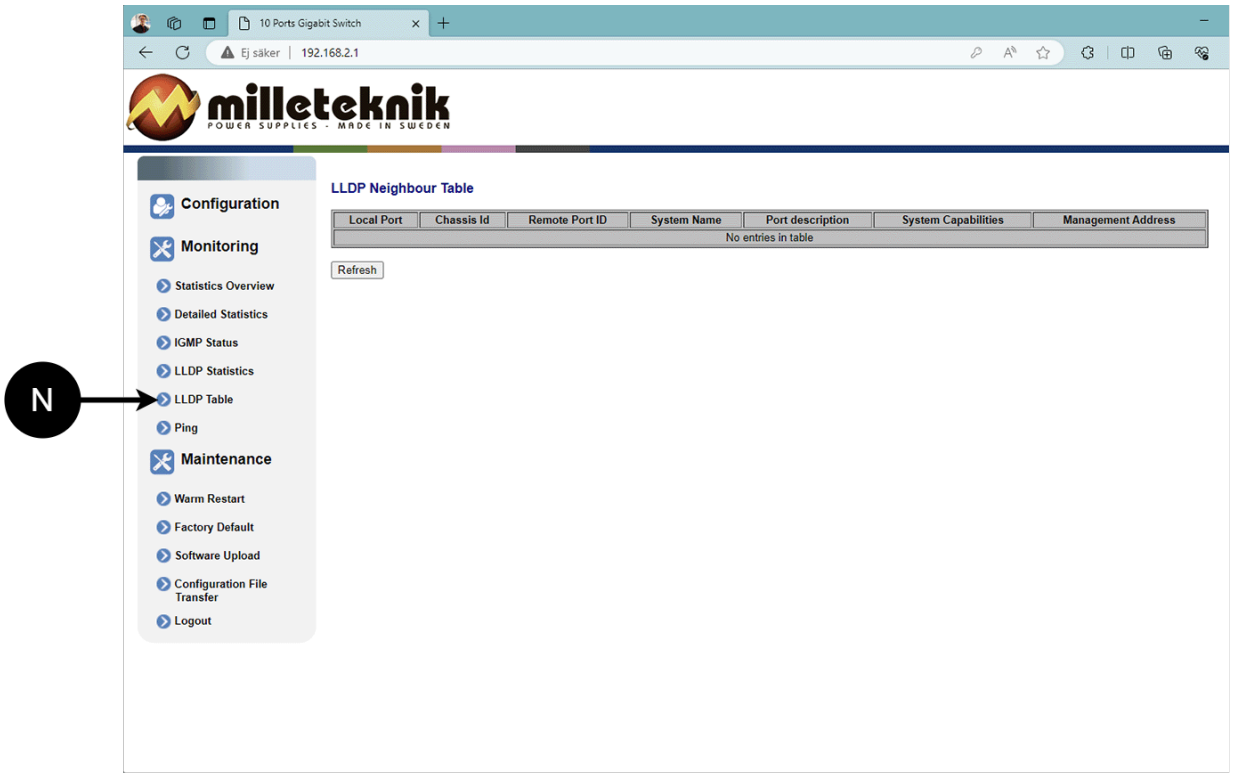
L: Status of IGMP

8.4.4. LLDP statistics



M: LLDP statistics

8.4.5. LLDP table



N: LLDP overview.

8.4.6. Ping

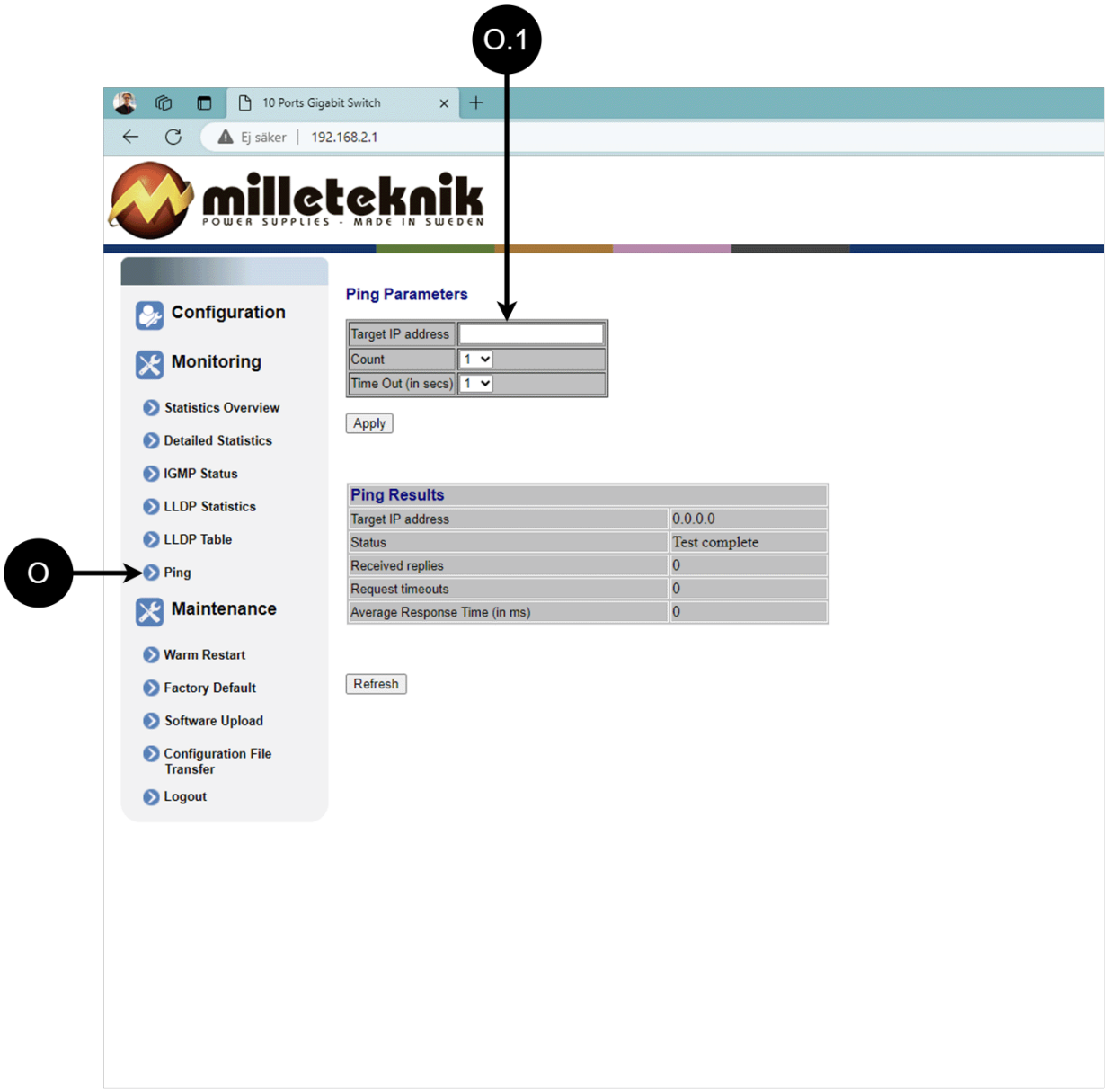


Table 14. Ping.

Letter, number	Explanation
O	Ping
[sv] O.1	Input address to test the connection and response time.

8.5. Maintenance

8.5.1. Reboot

WARNING

Restart is done by PoE switch, battery backup is not restarted. Upon reboot, connected devices will lose connection. Alarm can be set to battery backup, but it disappears when the PoE switch is back on.

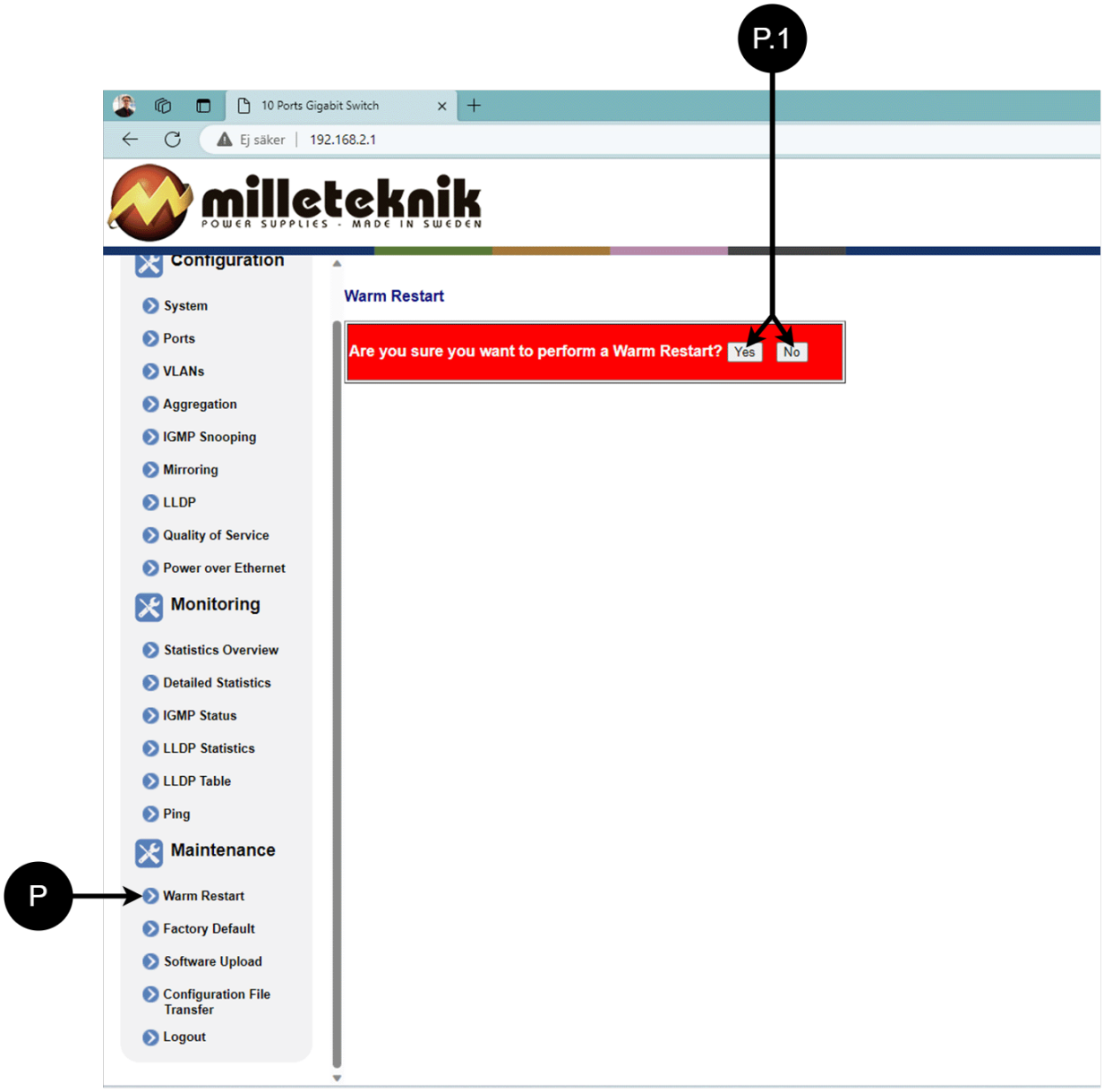


Table 15. Restarting the PoE switch.

Letter, number	Explanation
P	Rebooting the PoE switch.
P.1	Select "Yes" to reboot the switch.

8.5.2. Factory reset

WARNING

Factory reset is done by PoE switch. Battery backup is not restored. On reset, connected devices will lose connection. Alarm can be set to battery backup, but it disappears when the PoE switch is back on.

Factory reset of the switch can only be done from the software's (this) interface.

Recommendation: Keep IP address 192.168.2.1 and note password.

IMPORTANT

During a factory reset, all settings, including IP settings, are lost. Save configuration before factory reset. See Upload new software [33]

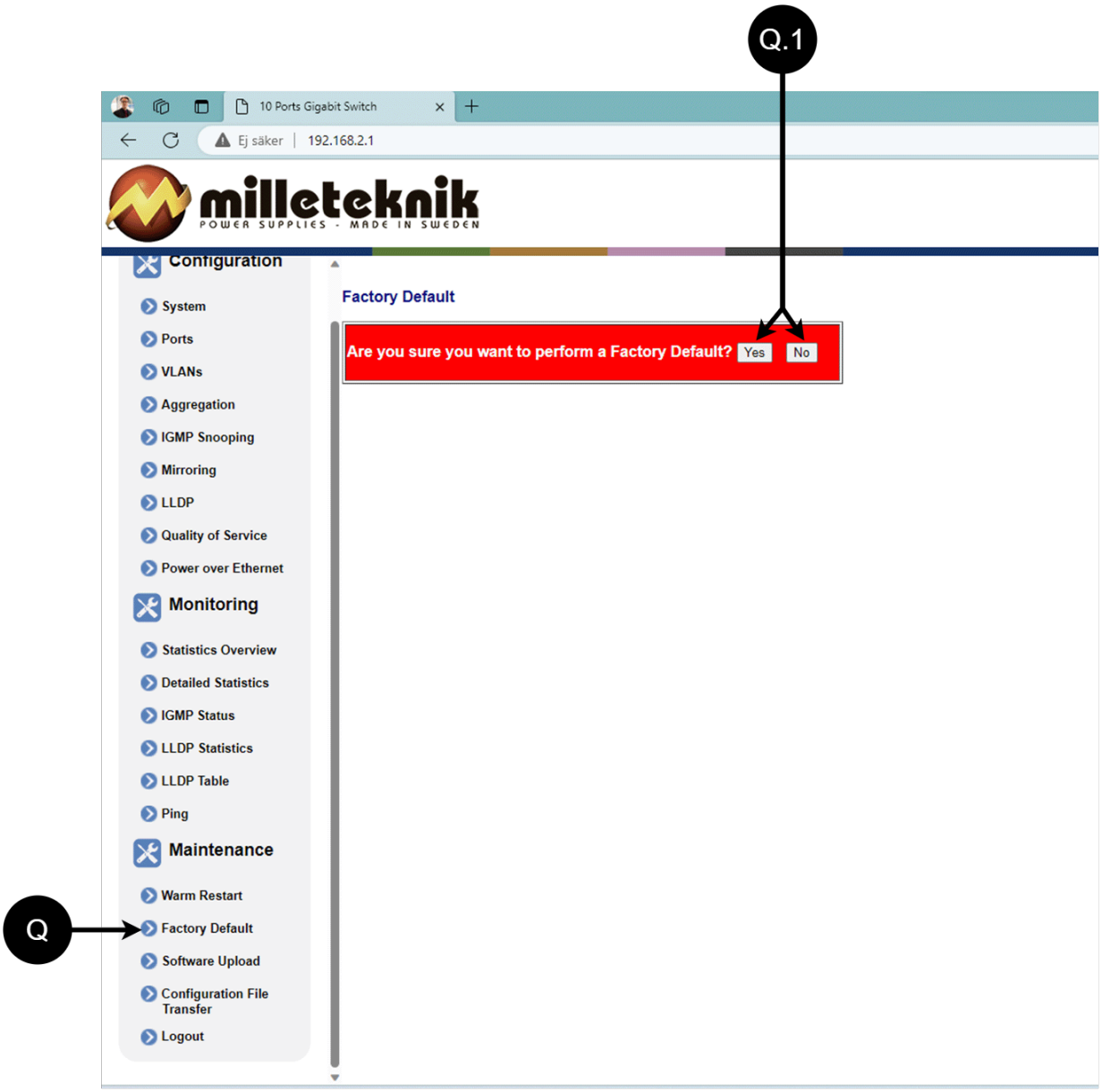


Table 16. PoE switch factory reset.

Letter, number	Explanation
Q	Factory reset the PoE switch.
Q.1	Select "Yes" to factory reset the PoE switch.

8.5.3. Upload new software

WARNING

Only use software you received from Milleteknik's support. Milleteknik assumes no responsibility for software or consequences such as damage to the device or peripheral equipment or other damage that may arise from uploading unapproved software.

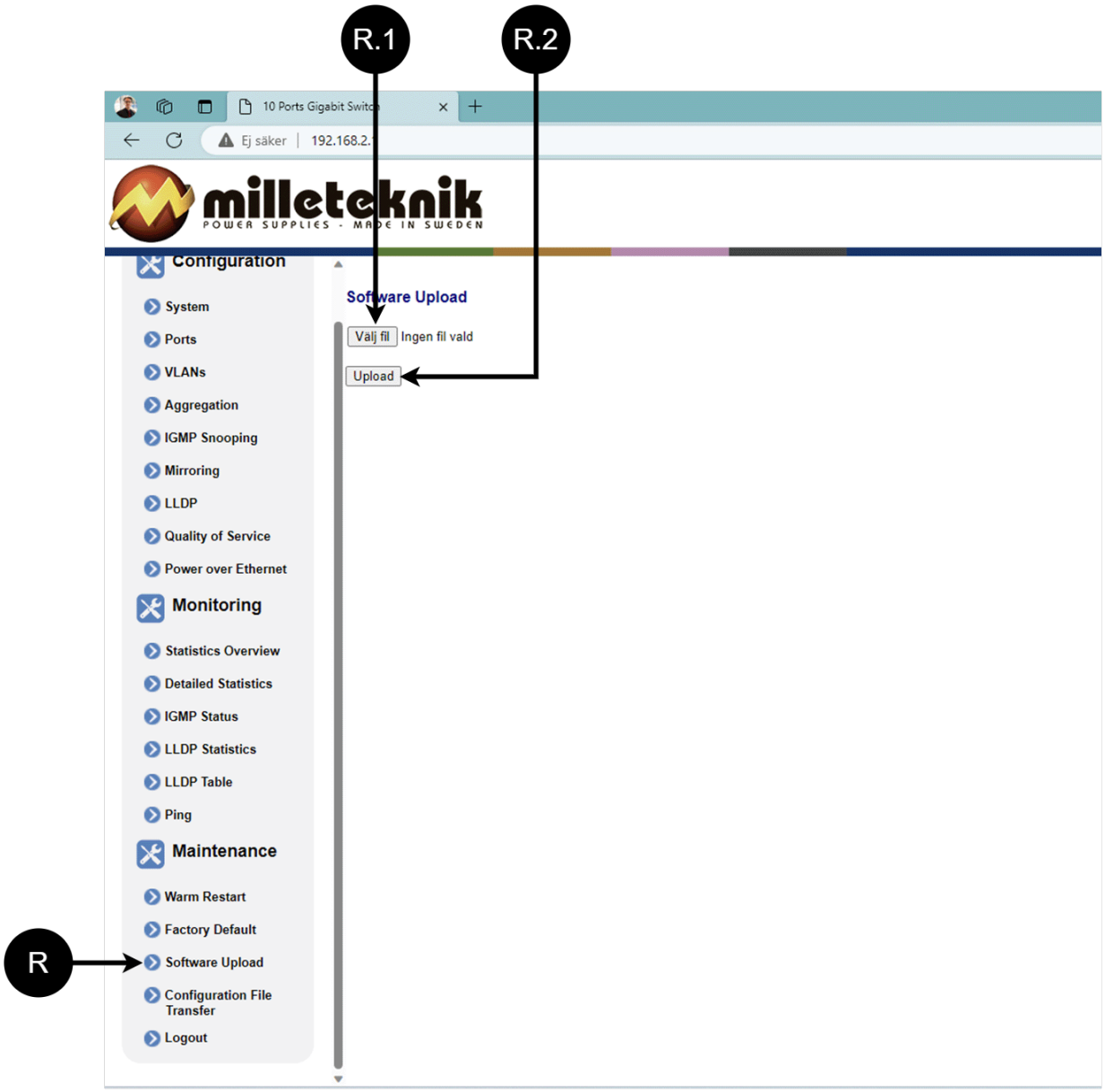


Table 17. Upload new software.

Letter, number	Explanation
R	Upload new software to the Switch.
R.1	Navigate to the location on your computer where you saved the file.
R.2	Click "Upload" to upload the software.

8.5.4. Load and save configuration file

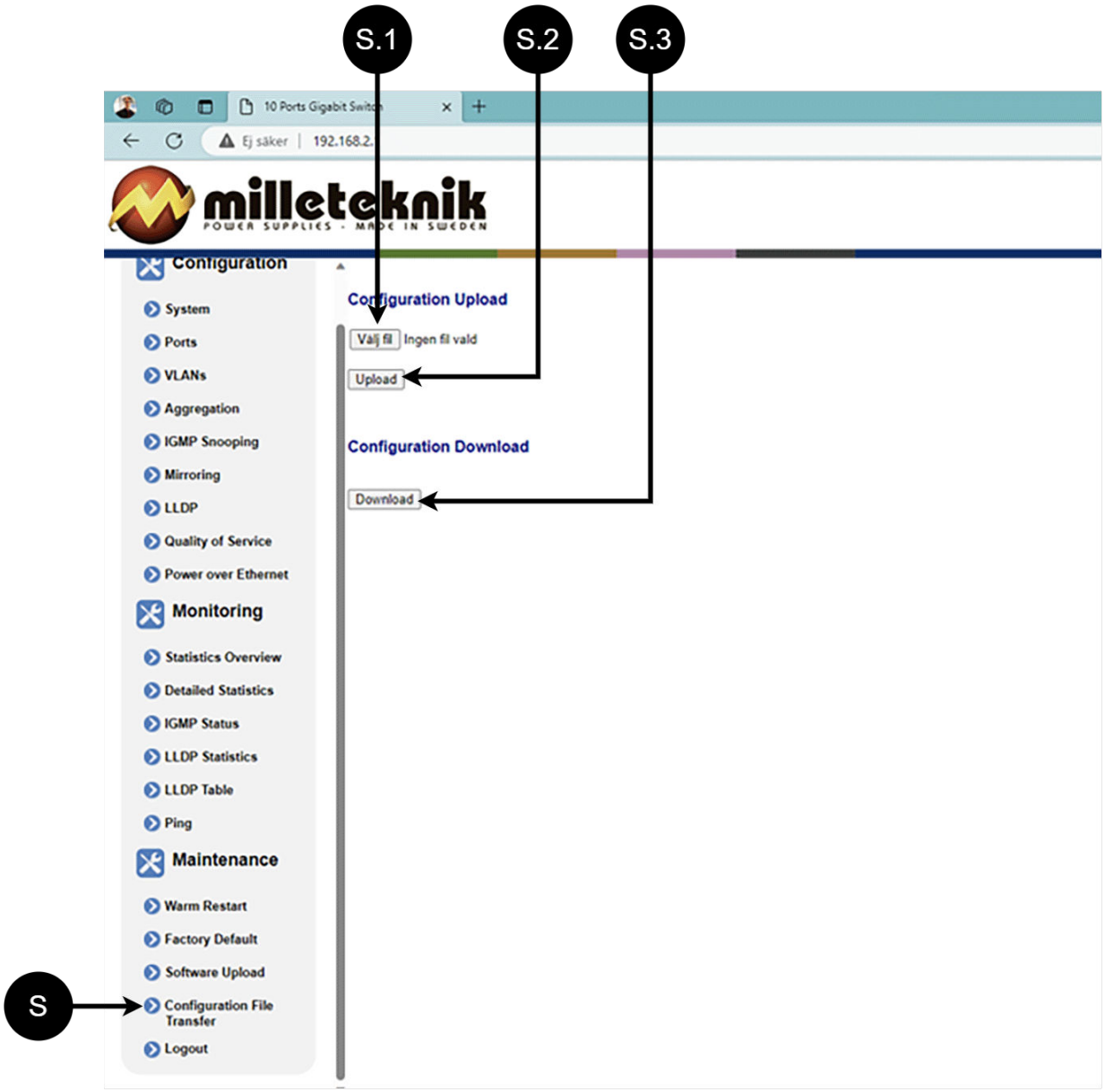
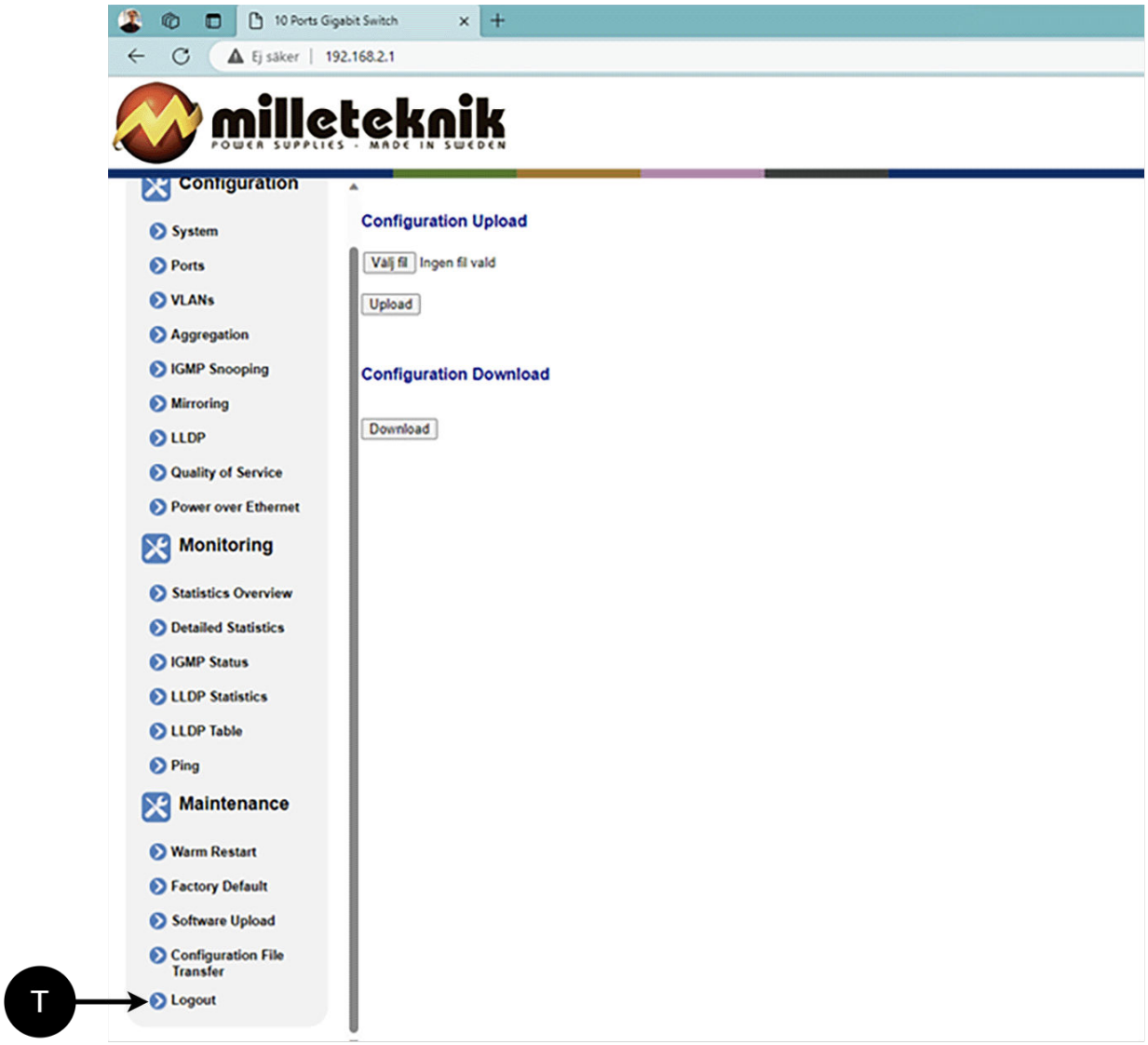


Table 18. Load and save configuration file.

Letter, number	Explanation
S	Upload or download the switch's configuration.
S.1	Select new configuration file.
S.2	Upload new configuration file.
S.3	Download configuration file to computer[a.].

[a.]Newer Windows computers do not allow *.cfg files to be downloaded without additional approval in the browser when downloading. Antivirus programs may delete the file during download.

8.5.5. Sign out



T: Log out of the switch. This does not affect the operation of the switch.

8.6. About this information

All information is published subject to possible errors. Information is updated without prior notice.

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9. COMMISSIONING - HOW TO START THE DEVICE

1. Connect batteries.
2. Switch on the battery fuse.

3. Connect load.
4. Connect mains voltage.
5. Connect mains voltage.

It can take up to 72 hours before batteries are fully charged.

10. ALARM DISPLAYED ON CABINET DOOR

In normal mode, the indicator LED shows a solid green light.

When operating system: If the indicator LED is off, deep discharge protection has come into force.

NOTICE
If the indicator light flashes every 15 seconds, the battery is fully charged and the charge is in rest phase to extend battery life. In the event of a power failure during the rest phase, the battery backup switches to battery operation as usual

11. MAINTENANCE

The system, with the exception of the fan and batteries, is maintenance-free.

12. TRANSPORT INSTRUCTIONS WHEN MOVING INSTALLED UNIT.

DANGER
Personal injury or death can occur if the device is connected to the mains or live when disassembling / moving.

If the unit is to be moved, do the following:

- Disconnect the incoming mains.
- Disconnect battery fuse.
- Disconnect connected load and alarm.
- Mount the unit down from the pole.

CAUTION
If the device is to be transported, batteries must be removed to protect the electronics.

13. PRODUCT SHEET - POWER SUPPLY / BATTERY BACKUP

13.1. Product sheet - power supply from Milleteknik

13.1.1. PoE

13.1.2. Name, article number and e-number

Table 19. Name, article number and email number.

Name	Article number	E-number (SV)
PoE Managed switch 4p 24V 5A UT L	SA54P30024P050P-UT01	51 731 58

13.1.3. Description

Outdoor PoE power supply, 24 V, 5 A, with space for two 45 Ah batteries.

13.1.4. Area of use

Power supply with backup power to power PoE devices such as surveillance cameras, 3-5G routers and has a 24 V output to be able to power other alarm components. Remote monitoring and control of PoE ports is possible. Batteries are located in a heated, thermostatically controlled and insulated part of the enclosure.

Long life, energy efficient and support is available if something goes wrong, now or in 10 years.

13.1.5. Common uses

- Supports IP cameras, readers, door centers and other networked security devices
- Power and data distribution over a single network cable for simplified installation.
- Used to power IP-based access systems where both data and power go through network cabinets.

13.1.6. Technical description

Contains a 4-port managed Gbit PoE+ switch with 30.8W per port, a total of 150W including battery recharge. Can be managed over VPN[1] for control and status monitoring including power consumption per port. Equipped with total alarm and 24V output from the backup for operation of other equipment. Thermostatically controlled, insulated compartment for batteries and temperature sensor for protection against overcharging. Works in temperatures from -15°C to +35°C, IP65 rated. Prepared for mounting on a pole and prepared for logger function for collecting data.

13.1.7. Voltage, current and power

Mains voltage: 230 V AC - 240 V AC, 47 Hz - 63 Hz.

Self-consumption is the power outlet the circuit board has when the system is deployed and in battery operation.

Table 20. Self-consumption

Circuit Boards	Self-consumption (in battery operation)	Comments

Voltage out: 24 V DC. Auxiliary voltage 24 V DC.

Voltage output in battery operation: 24 V DC.

Current: 2.5 A. PoE / 48 V DC gives 130 W. 24 V gives a maximum of 1 A at maximum load on all four PoE ports.

Charging current: Depending on the power outlet. 1-5 A.

Effect: 150W. [2].

Max power per port: 30.8 W.

Number of PoE Ports: + two ethernet not PoE-fed.

13.1.8. Load outputs

PoE switch can drive load to PoE devices and motherboard can drive one (1) 24V load output to drive other applications. Cabling is available for installation of options.

13.1.9. Alarm

Alarms are given for: Delayed power failure alarm or low battery voltage, disconnected batteries, fuse failure and overcharging of batteries.

Alarm over RJ-45, see manual for alarms that PoE switch can give.

13.1.10. Protection

Protection against overload, overvoltage, overtemperature, short circuit and deep discharge.

[1]VPN requires externally connected hardware and software (PC) connected to the PoE switch.
[2]For charging batteries, operation of managed PoE switch with four controlled ports and operation of 3-5G router and 24 V auxiliary output.

13.1.11. Fuses

Mains fuse: 2.5 A.

Battery protection: 16 A and 30 A.

13.1.12. Indications and communication

PoE power supply can as an option, communicate via protocol (RS-485/I^2C) against UC. (ASSA ABLOY, RCO, Sentrion, Unison, Bravida, Vanderbilt/ACRE and Tidomat - this can only be set from the factory and cannot be changed by users or technicians).

Indicator diode shows the status of the device.

13.1.13. Battery and battery type

Battery type: 12 V, AGM lead-acid battery, maintenance-free. Batteries not included. Battery sizes must not be mixed.[3].

Two 45 Ah batteries.

Table 21. Batteries.

Item number	Ah	Net weight pcs.	Weight w. package

13.1.14. Backup operating time on batteries

The reserve operating time in battery operation depends on how large a load is connected to the power supply. If the load varies, as with frequent opening of door locks, the time that batteries can continue to power the security system decreases. To get an estimate of reserve operating times see: www.milleteknik.se/Manualer/FaQ/Reservdrifttider/

13.1.15. Enclosure

Table 22. Dimensions, with and without packaging.

Dimensions, height x width x depth.[a.]	Dimensions with packaging.
500 x 400 x 250 mm	515 x 415 x 308 mm

[a.] Dimensions of product and packaging may differ, this is because the product may lie differently in the packaging.

Table 23. Height units, fan and IP class.

HE	Built-in fan	IP class
12[a.]	Yes	IP65

[a.] Cannot be mounted in a 19" rack.

13.1.16. Weight

Table 24. Weight.

Name	Net weight	Weight incl. packaging
PoE Managed switch 4p 24V 5A UT L	14.5 kg	15 kg

[3] The number of batteries listed represents the maximum number that the device can handle at the same time. If multiple battery sizes are specified, this means that the device can only accommodate one battery size at a time.

13.1.17. Installation requirements

The device is intended for fixed installation. Ambient temperature: – 15°C to +35°C.

13.1.18. Requirements that the product meets

Table 25. The product meets the following requirements.

EMC:	EMC Directive 2014 / 30EU
Electricity:	Low voltage directive: 2014/35 / EU
CE:	EC Directive in force: 765/2008
Emissions:	EN61000-6-:2001 EN 55022:1998: -A 1:2000, A 2:2003 Class B, EN61000-3-2:2001, EN 55032 (replaces EN 55022)
Immunity:	EN61000-6-2:2005, EN61000-4-2, -3, 4, -5, -6, -11 SS-EN 50 130-4:2011 Edition 2, EN50131-6
Machinery Directive	The product is part of electrical systems, is subject to the relevant electrical and safety directives and is not a machine according to the Machinery Directive (2006/42/EC).
Ecodesign	Milleteknik's products are intended for professional use and are therefore not directly covered by the Ecodesign Regulation (EU 2019/1782). As some components may be covered, we nevertheless disclose relevant information to give our customers confidence in their choice

Efficiency (%)[a.]	Standby consumption, typical (W):

[a.] At rated load.

CE

13.1.19. Guarantee

The product has a two-year warranty for manufacturing defects. Batteries and wearing parts are not covered by warranty. Components that are manufactured by a manufacturer other than Milleteknik are not covered by Milleteknik's warranty.

13.1.20. Expandable, options and accessories

The product can be extended with a: Voltage Converter 24V-12V 2A and various 3-5G routers.

13.1.21. Manufacturing, lifespan, environmental impact and recycling

Manufactured by Milleteknik in Partille, Sweden.

The product is designed for a long service life, which reduces the environmental impact. End-of-life products are handed over to the nearest recycling centre.

13.1.22. Link to technical specifications

LINKS TO MANUALS AND PRODUCT SHEETS

You can find manuals and product sheets at: www.milleteknik.se The QR code below takes you to the product page.

Name	Dimensions	Batteries that fit	Link
PoE Managed 4p 24V 5A OUT L	500 x 400 x 250 mm.	2 pieces 45 Ah.	

Batteries are only included if specified, otherwise batteries will need to be purchased separately.

13.1.23. Miscellaneous

The difference between PoE, PoE+ and PoE++.

Table 26. Max power PoE.

-	PoE	Poe+	PoE++
Compatible[a.]	-	PoE	PoE, PoE+
Official name	IEEE 802.3af	IEEE 802.3at	IEEE 802.3bt
Maximum power	13 W	25 W	71 W

[a.] The power supply follows "up", but not "down". A PoE can never power a PoE+/PoE++ device that requires more than 13 W.

13.1.24. About this information

All information is published subject to possible errors. Information is updated without prior notice.

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