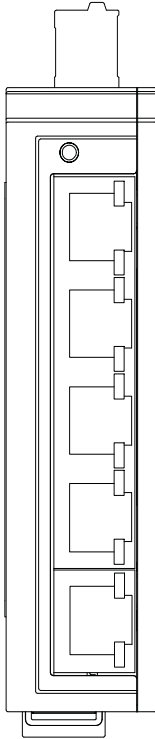
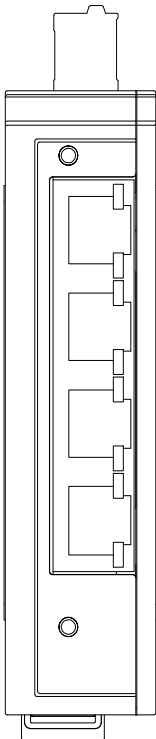


# Modicon

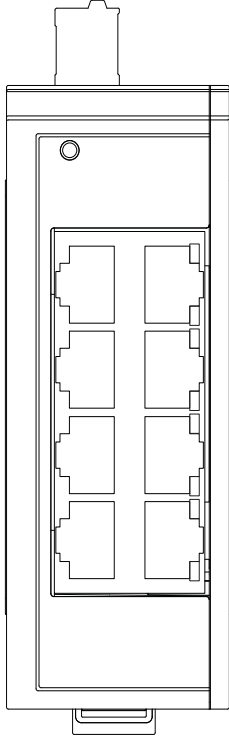
## MCSESU Unmanaged Switch Installation Manual



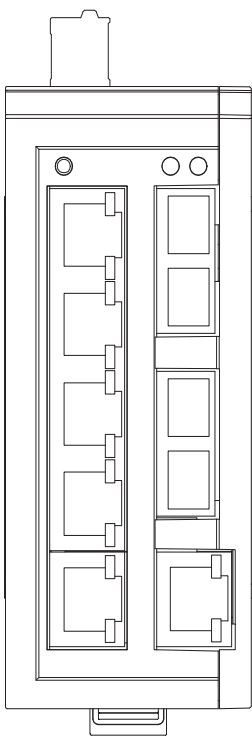
MCSESU053FN0



MCSESU053F1CU0



MCSESU083FN0



MCSESU083F2CS0  
MCSESU083F2CU0

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.

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All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer must perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed.

Failure to use Schneider Electric software or approved software with our hardware products may result in injury, harm, or improper operating results.

Failure to observe this information can result in injury or equipment damage.

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# Contents

	<b>Safety instructions</b>	<b>6</b>
<b>1</b>	<b>Description</b>	<b>14</b>
1.1	General device description	14
1.2	Device views	14
1.2.1	MCSESU053FN0	14
1.2.2	MCSESU053F1CU0	15
1.2.3	MCSESU083FN0	16
1.2.4	MCSESU083F2CS0, MCSESU083F2CU0	17
<b>2</b>	<b>Assembly and start-up</b>	<b>18</b>
2.1	Installing the device	18
2.1.1	Overview of installation	18
2.1.2	Unpacking and checking	18
2.1.3	Connecting the terminal block for supply voltage and grounding	19
2.1.4	Connecting the terminal block, start-up procedure	20
2.1.5	Installing the device on the DIN rail, grounding	20
2.2	Connecting the data lines	21
2.2.1	10/100 Mbit/s twisted pair port	21
2.2.2	100 Mbit/s F/O port	22
2.3	Display elements	22
2.3.1	Device state	22
2.3.2	Port status	23
<b>3</b>	<b>Monitoring the ambient air temperature</b>	<b>25</b>
<b>4</b>	<b>Maintenance</b>	<b>26</b>
<b>5</b>	<b>Disassembly</b>	<b>27</b>
<b>6</b>	<b>Technical data</b>	<b>28</b>

# About this Manual

## Validity Note

The technical characteristics of the devices described in this document also appear online. To access this information online:

Step	Action
1	Go to the Schneider Electric home page <a href="http://www.schneider-electric.com">www.schneider-electric.com</a> .
2	In the Search box type the reference of a product or the name of a product range. <input type="checkbox"/> Do not include blank spaces in the reference or product range. <input type="checkbox"/> To get information on grouping similar modules, use asterisks (*).
3	If you entered a reference, go to the Product Datasheets search results and click on the reference that interests you. If you entered the name of a product range, go to the Product Ranges search results and click on the product range that interests you.
4	If more than one reference appears in the Products search results, click on the reference that interests you.
5	Depending on the size of your screen, you may need to scroll down to see the data sheet.
6	To save or print a data sheet as a .pdf file, click Download XXX product datasheet.

The characteristics that are presented in this manual should be the same as those characteristics that appear online. In line with our policy of constant improvement, we may revise content over time to improve clarity and accuracy. If you see a difference between the manual and online information, use the online information as your reference.

## Related Documents

Title	Language	Reference Number
Modicon MCSESU Unmanaged Switch Installation Manual	English	NNZ7563401
	German	NNZ7563402
	Chinese	NNZ7563403
	French	NNZ7563404
	Spanish	NNZ7563405
	Italian	NNZ7563406

You can download these technical publications and other technical information from our website at <https://www.se.com/ww/en/download/>.

The Installation Manual contains a device description, safety instructions, a description of the display, and the other information that you need to install the device.

## Key

The symbols used in this manual have the following meanings:

▶	Listing
□	Work step
■	Subheading

# Safety instructions

## ■ Important Information

**Notice:** Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this documentation or on the equipment. The message warns of potential hazards or calls attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists, which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



## **DANGER**

**DANGER** indicates an imminently hazardous situation which, if not avoided, **will result in death or serious injury.**



## **WARNING**

**WARNING** indicates a potentially hazardous situation which, if not avoided, **can result in death or serious injury.**



## **CAUTION**

**CAUTION** indicates a potentially hazardous situation which, if not avoided, **can result in minor or moderate injury.**

## ***NOTICE***

***NOTICE*** is used to address practices not related to physical injury.

**PLEASE NOTE:** Electrical equipment must be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material. A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

■ **Before you begin**

Do not use this product on machinery lacking effective point-of-operation guarding. Lack of effective point-of-operation guarding on a machine can result in serious injury to the operator of that machine.



## **WARNING**

### **UNGUARDED EQUIPMENT**

- Do not use this software and related automation equipment on equipment which does not have point-of-operation protection.
- Do not reach into machinery during operation.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

This automation equipment and related software is used to control a variety of industrial processes. The type or model of automation equipment suitable for each application will vary depending on factors such as the control function required, degree of protection required, production methods, unusual conditions, government regulations, etc. In some applications, more than one processor may be required, as when backup redundancy is needed.

Only you, the user, machine builder or system integrator can be aware of all the conditions and factors present during setup, operation, and maintenance of the machine and, therefore, can determine the automation equipment and the related safeties and interlocks which can be properly used. When selecting automation and control equipment and related software for a particular application, you should refer to the applicable local and national standards and regulations. The National Safety Council's Accident Prevention Manual (nationally recognized in the United States of America) also provides much useful information.

In some applications, such as packaging machinery, additional operator protection such as point-of-operation guarding must be provided. This is necessary if the operator's hands and other parts of the body are free to enter the pinch points or other hazardous areas and serious injury can occur. Software products alone cannot protect an operator from injury. For this reason the software cannot be substituted for or take the place of point-of-operation protection.

Ensure that appropriate safeties and mechanical/electrical interlocks related to point-of-operation protection have been installed and are operational before placing the equipment into service. All interlocks and safeties related to point-of-operation protection must be coordinated with the related automation equipment and software programming.

**Note:** Coordination of safeties and mechanical/electrical interlocks for point-of-operation protection is outside the scope of the Function Block Library, System User Guide, or other implementation referenced in this documentation.

■ **Start-up and test**

Before using electrical control and automation equipment for regular operation after installation, the system should be given a start-up test by qualified personnel to verify correct operation of the equipment. It is important that arrangements for such a check be made and that enough time is allowed to perform complete and satisfactory testing.



**CAUTION**

**EQUIPMENT OPERATION HAZARD**

- Verify that all installation and set up procedures have been completed.
- Before operational tests are performed, remove all blocks or other temporary holding means used for shipment from all component devices.
- Remove tools, meters, and debris from equipment.

**Failure to follow these instructions can result in injury or equipment damage.**

Follow all start-up tests recommended in the equipment documentation. Store all equipment documentation for future references.

**Software testing must be done in both simulated and real environments.**



Verify that the completed system is free from all short circuits and temporary grounds that are not installed according to local regulations (according to the National Electrical Code in the U.S.A, for instance). If high-potential voltage testing is necessary, follow recommendations in equipment documentation to help prevent accidental equipment damage.

Before energizing equipment:

- Remove tools, meters, and debris from equipment.
- Close the equipment enclosure door.
- Remove all temporary grounds from incoming power lines.
- Perform all start-up tests recommended by the manufacturer.

## ■ **Operation and adjustments**

The following precautions are from the NEMA Standards Publication ICS 7.1-1995 (English version prevails):

- ▶ Regardless of the care exercised in the design and manufacture of equipment or in the selection and ratings of components, there are hazards that can be encountered if such equipment is improperly operated.
- ▶ It is sometimes possible to misadjust the equipment and thus produce unsatisfactory or unsafe operation. Always use the manufacturer's instructions as a guide for functional adjustments. Personnel who have access to these adjustments should be familiar with the equipment manufacturer's instructions and the machinery used with the electrical equipment.
- ▶ Only those operational adjustments actually required by the operator should be accessible to the operator. Access to other controls should be restricted to help prevent unauthorized changes in operating characteristics.

## ■ **General safety instructions**

Electricity is used to operate this equipment. Comply with every detail of the safety requirements specified in the operating instructions regarding the voltages to apply (see [“Supply voltage” on page 10](#)).

- Only appropriately qualified personnel should work on this device or in its vicinity. These personnel must be thoroughly familiar with the hazard messages and maintenance procedures in accordance with this operating manual.
- The proper and safe operation of this device depends on proper handling during transport, proper storage and assembly, and conscientious operation and maintenance procedures.
- Never start operation with damaged components.
- Only use the devices in accordance with this manual. In particular, observe the hazard messages and safety-related information.
- Any work that may be required on the electrical installation may only be carried out by personnel trained for this purpose.

## ■ **Staff qualification requirements**

Only appropriately qualified staff should work on or near this equipment. Such staff must be thoroughly acquainted with all the hazard messages and maintenance measures contained in these operating instructions. The proper and safe operation of this equipment assumes proper transport, appropriate storage and assembly, and careful operation and maintenance.

Qualified staff are persons familiar with setting up, assembling, installation, starting up, and operating this product, and who have appropriate qualifications to cover their activities, such as:

- ▶ knowledge of how to switch circuits and equipment/systems on and off, ground them, and identify them in accordance with current safety standards
- ▶ training or instruction in accordance with current safety standards of using and maintaining appropriate safety equipment
- ▶ first aid training

## ■ **Usage**

The device may only be employed for the purposes described in the catalog, technical description, and manuals.

## ■ **Supply voltage**

The devices are designed for operation with Safety Extra-low Voltage (SELV). Connect only SELV circuits with voltage restrictions according to IEC 60950-1 or ES1 according to IEC/EN 62368-1 to the supply voltage connections and to the signal contacts.

- Relevant for North America:

The device may only be connected to a Class 2 supply voltage that fulfills the requirements of the National Electrical Code, Table 11(b). If the voltage is being supplied redundantly (two different voltage sources), the combined supply voltages must fulfill the requirements of the National Electrical Code, Table 11(b).

- Relevant for North America: For use in Class 2 circuits.

Only use copper wire/conductors of class 1, 60/75 °C (140/167 °F) or 75 °C (167 °F).

## ■ **Shielding ground**

The shielding ground of the connectable twisted pair cables is connected to the ground connection as a conductor.

## ■ Device casing



### **DANGER**

#### **HAZARD OF ELECTRIC SHOCK**

Never insert sharp objects (small screwdrivers, wires, etc.) into the inside of the product.

**Failure to follow these instructions will result in death, serious injury, or equipment damage.**



### **WARNING**

#### **FIRE HAZARD**

Install the device in a fire enclosure according to IEC/EN 62368-1.

**Failure to follow this instruction can result in death, serious injury, or equipment damage.**



### **CAUTION**

#### **OVERHEATING OF THE DEVICE**

When installing the device, make sure any ventilation slots remain free. Maintain a clearance of at least 10 cm (3.94 in).

**Failure to follow these instructions can result in injury or equipment damage.**

Only technicians authorized by the manufacturer are permitted to open the casing.

- Verify that the electrical installation meets locally or nationally applicable safety regulations.
- Mount the device per instructions on page [20](#).

## ■ Installation site requirements

- Operate the device only at the specified ambient temperature (temperature of the ambient air at a distance of 5 cm (2 in) from the device) and at the specified relative humidity.
- When you are selecting the installation location, make sure you observe the climatic threshold values specified in the technical data.
- Use the device in an environment with a maximum pollution degree that complies with the specifications in the technical data.
- Install the device in a switch cabinet or on a wall.

## ■ Strain relief

**Note:** If the strain relief is insufficient, there is a potential risk of torsion, contact problems and creeping interruptions.

- Relieve the connection points of cables and lines from mechanical stress.
- Design strain reliefs in such a way that they help prevent any mechanical damage to cables, wires or conductors caused by external influences or their own weight.
- To help prevent damage to device connections, connectors and cables, follow the instructions for proper installation in accordance with DIN VDE 0100-520:2013-06, sections 522.6, 522.7 and 522.13.

## ■ **FCC note**

### **Supplier`s Declaration of Conformity 47 CFR § 2.1077 Compliance Information**

MCSESU

#### **U.S. Contact Information**

Schneider Electric United States

North American Division

Andover Research and Development Center (ARDC)

800 Federal Street

MA 01810, Andover, USA

[www.se.com/contact](http://www.se.com/contact)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**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 operated 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.

## ■ **Recycling note**

After usage, this device must be disposed of properly as electronic waste, in accordance with the current disposal regulations of your county, state, and country.

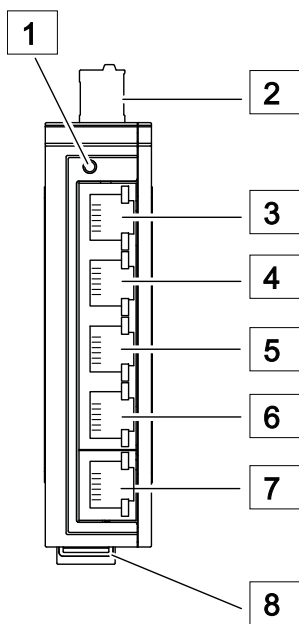
# 1 Description

## 1.1 General device description

The device is designed for the special requirements of industrial automation. The device meets the relevant industry standards, provides very high operational reliability, even under extreme conditions, and also long-term reliability and flexibility.

## 1.2 Device views

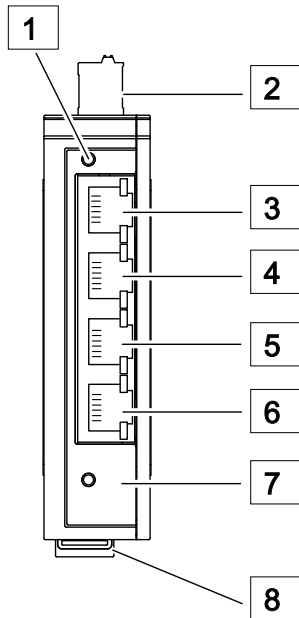
### 1.2.1 MCSESU053FN0



1	LED display element for device status
2	3-pin, pluggable terminal block for power supply
3 ... 7	5 × RJ45 socket for 10/100 Mbit/s Twisted pair connections
8	Rail lock slide for DIN rail mounting

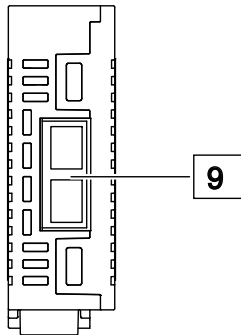
Table 1: Front view: MCSESU053FN0

## 1.2.2 MCSESU053F1CU0



1	LED display element for device status
2	3-pin, pluggable terminal block for power supply
3 ... 6	4 × RJ45 socket for 10/100 Mbit/s Twisted pair connections
7	LED display elements for port status
8	Rail lock slide for DIN rail mounting

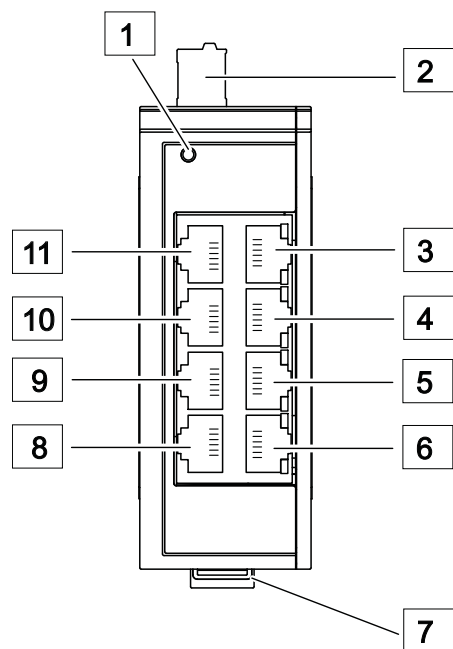
Table 2: Front view: MCSESU053F1CU0



9	1 × DSC multimode socket for 100 Mbit/s F/O connections
---	---

Table 3: Bottom view: MCSESU053F1CU0

### 1.2.3 MCSESU083FN0

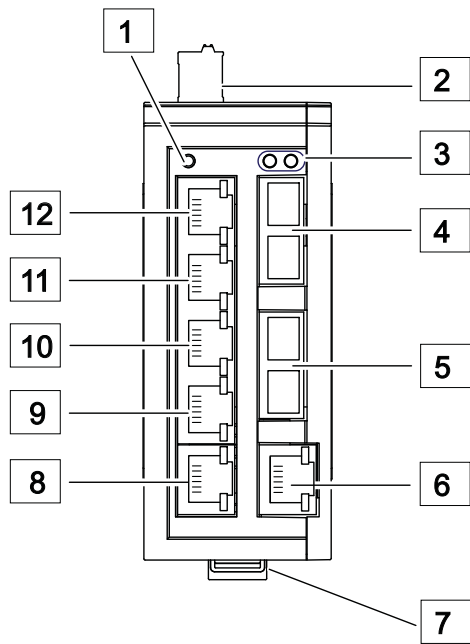


1	LED display element for device status
2	3-pin, pluggable terminal block for power supply
3 ... 6	4 × RJ45 socket for 10/100 Mbit/s Twisted pair connections
7	Rail lock slide for DIN rail mounting
8 ... 11	4 × RJ45 socket for 10/100 Mbit/s Twisted pair connections

Table 4: Front view: MCSESU083FN0



## 1.2.4 MCSESU083F2CS0, MCSESU083F2CU0



1	LED display element for device status
2	3-pin, pluggable terminal block for power supply
3	LED display elements for port status
4 ... 5	MCSESU083F2CS0 2 × DSC singlemode socket for 100 Mbit/s F/O connections MCSESU083F2CU0 2 × DSC multimode socket for 100 Mbit/s F/O connections
6	1 × RJ45 socket for 10/100 Mbit/s Twisted pair connections
7	Rail lock slide for DIN rail mounting
8 ... 12	5 × RJ45 socket for 10/100 Mbit/s Twisted pair connections

*Table 5: Front view: MCSESU083F2CS0, MCSESU083F2CU0*

## 2 Assembly and start-up

### 2.1 Installing the device

#### **WARNING**

##### **FIRE HAZARD**

Install the device in a fire enclosure according to IEC/EN 62368-1.

**Failure to follow this instruction can result in death, serious injury, or equipment damage.**

Before installing and starting up the device, note the safety instructions (see [“Safety instructions” on page 6](#)).

#### **2.1.1 Overview of installation**

The devices have been developed for practical application in a harsh industrial environment.

On delivery, the device is ready for operation.

The following steps should be performed to install a Modicon MCSESU product:



- ▶ Unpacking and checking
- ▶ Connect the terminal block for voltage supply and grounding
- ▶ Install the device on the DIN rail, grounding
- ▶ Connect the data lines

#### **2.1.2 Unpacking and checking**

- Check whether the package includes all items named in section [“Scope of delivery” on page 32](#).
- Check the individual parts for transport damage.

### 2.1.3 Connecting the terminal block for supply voltage and grounding

A 3-pin terminal block is used for the grounding and for connecting the supply voltage.



DANGER

**HAZARD OF ELECTRIC SHOCK OR BURN**

When the module is operated with direct plug-in power units, use only:

- SELV supply units that comply with IEC 60950-1 or ES1 according to IEC/EN 62368-1 and
- (in USA and Canada) Class 2 power units that comply with applicable national or regional electrical codes

Connect the ground wire to the PE terminal (where applicable) before you establish any further connections. When you remove connections, disconnect the ground wire last.

**Failure to follow these instructions will result in death, serious injury, or equipment damage.**

The supply voltage is only connected with the ground connection via protective elements.

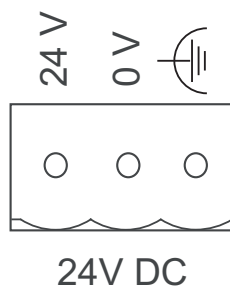


Figure 1: 3-pin, pluggable terminal block for power supply and grounding


Type of the voltages that can be connected	Specification of the supply voltage	Pin assignment
DC voltage	Rated voltage range 12 V DC ... 24 V DC Voltage range incl. maximum tolerances 9.6 V DC ... 32 V DC	24 V DC Plus terminal of the supply voltage
		0 V Minus terminal of the supply voltage
		 Functional ground connection

Table 6: Type and specification of the supply voltage and pin assignment on the device

## 2.1.4 Connecting the terminal block, start-up procedure

### ■ Connecting the terminal block

- Verify the required conditions for connecting the voltage supply.  
See “Supply voltage” on page 10.
- Pull the terminal block off the device.
- Connect the ground connection.
- Connect the power supply cables.
- Plug the terminal block into the connection on the housing.

### ■ Operating the device

By connecting the supply voltage via the terminal block, you start the operation of the device.

## 2.1.5 Installing the device on the DIN rail, grounding

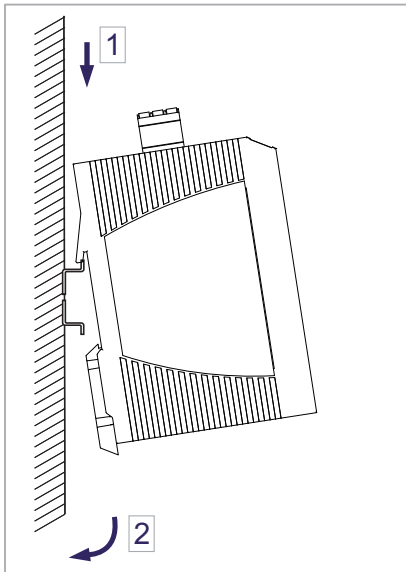


Figure 2: Mounting the device on the DIN rail

- Mount the device in a vertical position on a 35 mm DIN rail in accordance with DIN EN 60715.
- Slide the upper snap-in guide of the device into the DIN rail.
- Use a screwdriver to pull the rail lock slide downwards.
- Snap in the device by releasing the rail lock slide.

**Note:** The shielding ground of the connectable twisted pair cables is connected to the ground connection as a conductor.

## ■ Grounding

Use a wire diameter for the ground conductor that is no smaller than the diameter of the supply voltage connection, however of at least 0.5 mm<sup>2</sup> (AWG20).

The device is grounded by a 3-pin terminal block.

## 2.2 Connecting the data lines

You can connect end devices and other segments to the device ports using twisted pair cables or optical fibers (F/O).

### 2.2.1 10/100 Mbit/s twisted pair port

This port is an RJ45 socket.

The 10/100 Mbit/s twisted pair port allows you to connect network components according to the IEEE 802.3 10BASE-T/100BASE-TX standard.

This port supports:

- ▶ Autonegotiation
- ▶ Autopolarity
- ▶ Autocrossing
- ▶ 100 Mbit/s half-duplex mode, 100 Mbit/s full duplex mode
- ▶ 10 Mbit/s half-duplex mode, 10 Mbit/s full duplex mode

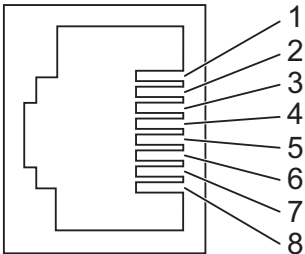
RJ45	Pin	10/100 Mbit/s
	<b>MDI mode</b>	
	1	TX+
	2	TX-
	3	RX+
	4	—
	5	—
	6	RX-
	7	—
8	—	
<b>MDI-X mode</b>		
1	RX+	
2	RX-	
3	TX+	
4	—	
5	—	
6	TX-	
7	—	
8	—	

Table 7: Pin assignment 10/100 Mbit/s twisted pair port, RJ45 socket, MDI-X mode

## 2.2.2 100 Mbit/s F/O port

The 100 Mbit/s F/O port allows you to connect network components according to the IEEE 802.3 100BASE-FX standard.

This port supports:

- ▶ Full duplex mode

## 2.3 Display elements

After the supply voltage is switched on, the device performs a self-test. During this process, various LEDs light up.

### 2.3.1 Device state

This LED provides information on the status of the power supply.

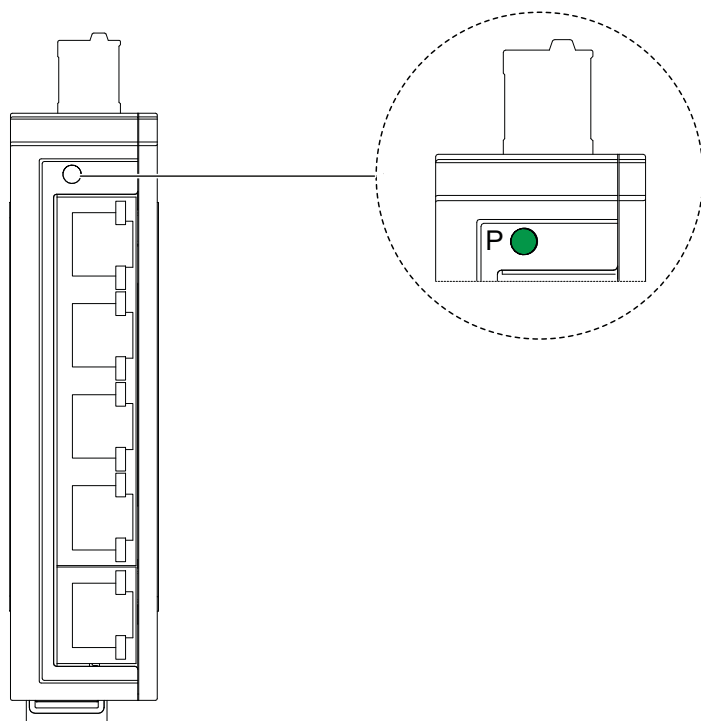


Figure 3: Display elements for device state

LED	Display	Color	Activity	Meaning
P	Supply voltage	green	lights up	Supply voltage is on Device is ready for operation
			none	Supply voltage is too low Device is not ready for operation

### 2.3.2 Port status

These LEDs provide port-related information.

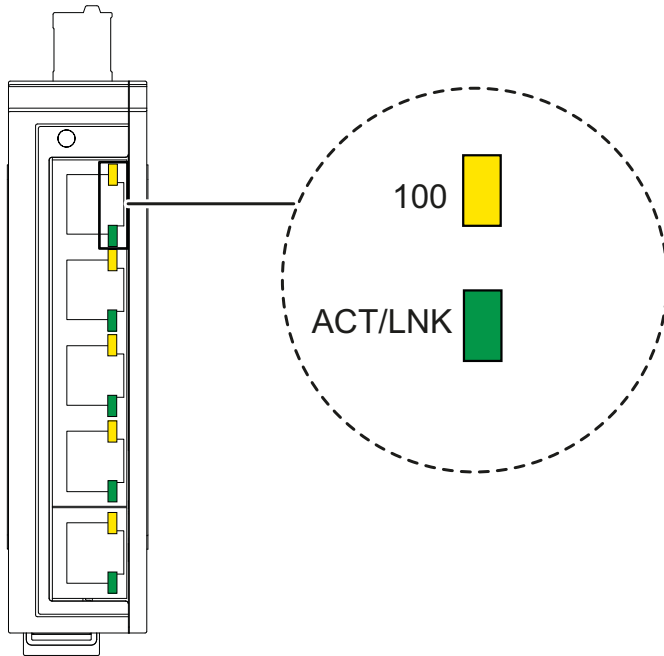


Figure 4: Display elements for port status MCSESU053FN0

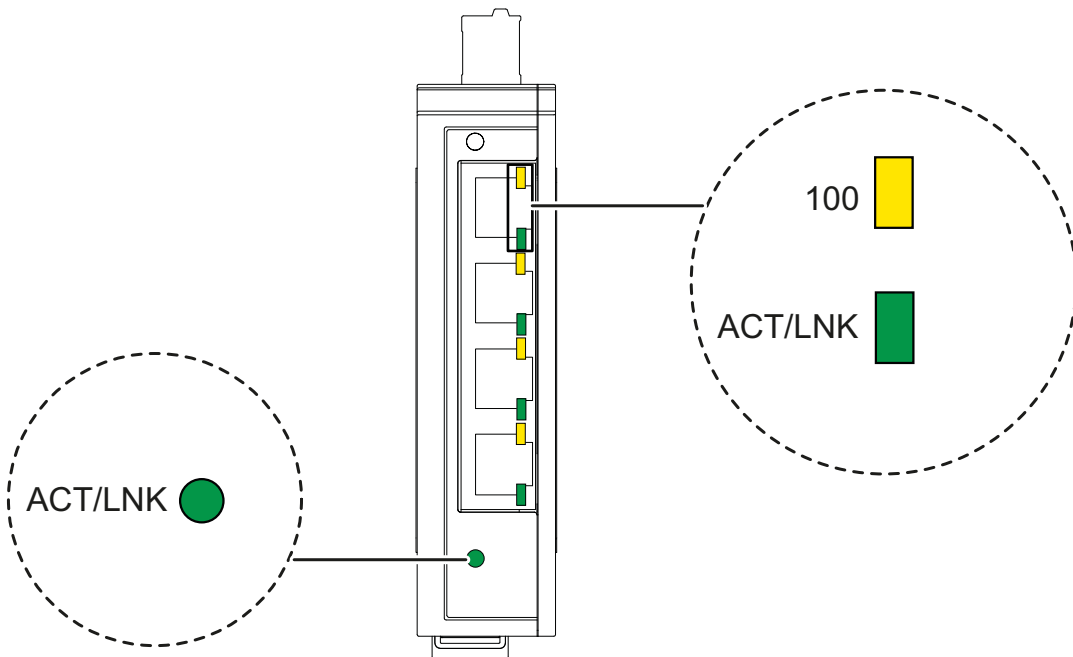


Figure 5: Display elements port status MCSESU053F1CU0

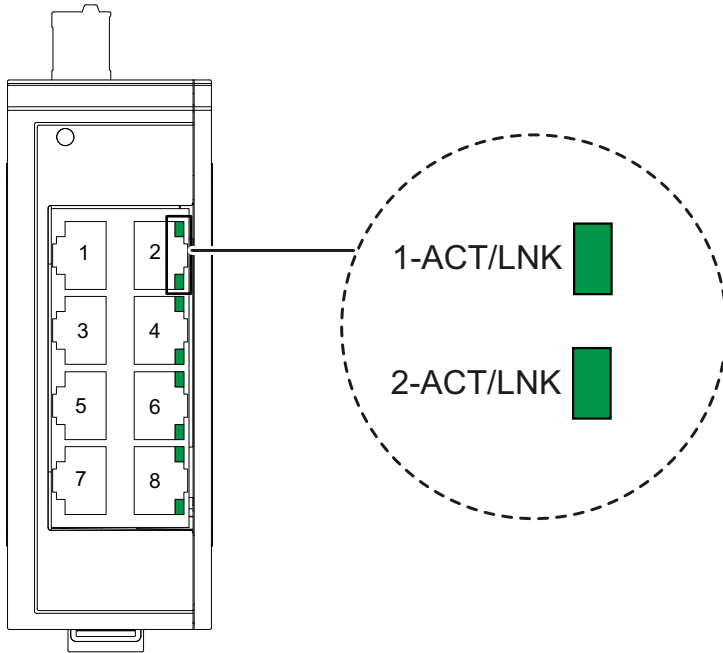


Figure 6: Display elements port status MCSESU083FN0

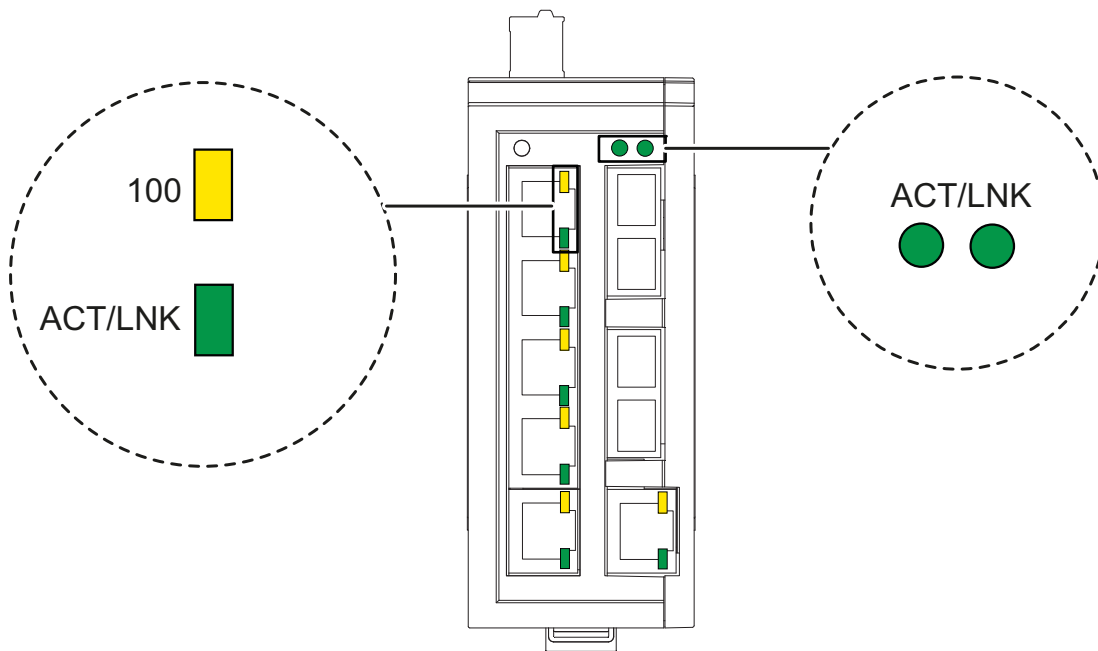


Figure 7: Display elements port status MCSESU083F2CS0, MCSESU083F2CU0

LED	Display	Color	Activity	Meaning
100	Data rate	yellow	flashes 1 time a period	10 Mbit/s connection
			flashes 2 times a period	100 Mbit/s connection
			none	no additional information
ACT/LNK	Link activity	green	lights up	Device detects a valid link
			flashing	Device is transmitting and/or receiving data
			none	Device detects an invalid or missing link



### **3 Monitoring the ambient air temperature**

Operate the device below the specified maximum ambient air temperature exclusively.

See [“General technical data” on page 28](#).

The ambient air temperature is the temperature of the air at a distance of 5 cm (2 in) from the device. It depends on the installation conditions of the device, for example the distance from other devices or other objects, and the output of neighboring devices.

## 4 Maintenance

- Depending on the degree of pollution in the operating environment, check at regular intervals that the ventilation slots in the device are not obstructed.
- Operate this device according to the specifications (see [“General technical data”](#)).

## 5 Disassembly

### ■ Removing the device from the DIN rail

- In order to remove the device from the DIN rail, insert the screwdriver horizontally under the chassis in the locking slide, pull this down – without tilting the screwdriver – and lift the device upwards.

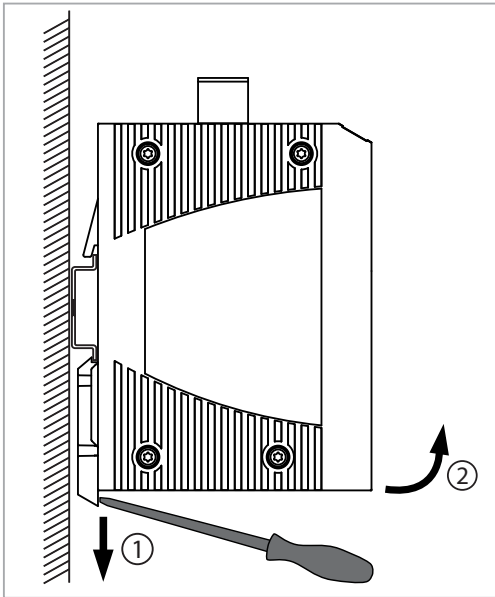


Figure 8: Removing the device from the DIN rail

## 6 Technical data

### ■ General technical data

Dimensions W × H × D	Modicon MCSESU	See "Dimension drawings" on page 29.
Weight	MCSESU053FN0	125 g (4.41 oz)
	MCSESU053F1CU0	130 g (4.59 oz)
	MCSESU083FN0	150 g (5.3 oz)
	MCSESU083F2CS0	235 g (8.3 oz)
	MCSESU083F2CU0	235 g (8.3 oz)
Power supply	▶ 1 voltage input	
	▶ 3-pin terminal block	
	▶ Safety extra-low voltage (SELV)	
	Rated voltage range	12 V DC ... 24 V DC Class 2
	Voltage range incl. maximum tolerances	9.6 V DC ... 32 V DC
	Power loss buffer	10 ms at 20.4 V DC
	Back-up fuse	≤ 4 A, slow blow
Potential difference between input voltage and ground connection	Potential difference from incoming voltage +24 V DC	+32 V DC
	Potential difference from incoming voltage, ground	-32 V DC
Climatic conditions during operation	Ambient air temperature <sup>a</sup>	0 °C ... +60 °C (+32 °F ... +140 °F)
	Humidity	10 % ... 95 % (non-condensing)
	Air pressure	min. 795 hPa (+2000 m; +6562 ft)
Climatic conditions during storage	Ambient temperature	-40 °C ... +85 °C up to 3 months (-40 °F ... +185 °F)
		-40 °C ... +70 °C up to 1 year (-40 °F ... +158 °F)
		-40 °C ... +50 °C up to 2 years (-40 °F ... +122 °F)
		0 °C ... +30 °C up to 10 years (+32 °F ... +86 °F)
	Humidity	10 % ... 95 % (non-condensing)
	Air pressure	min. 700 hPa (+3000 m; +9842 ft)
Pollution degree		2
Protection classes	Degree of protection	IP30

a. Temperature of the ambient air at a distance of 5 cm (2 in) from the device

## ■ Dimension drawings

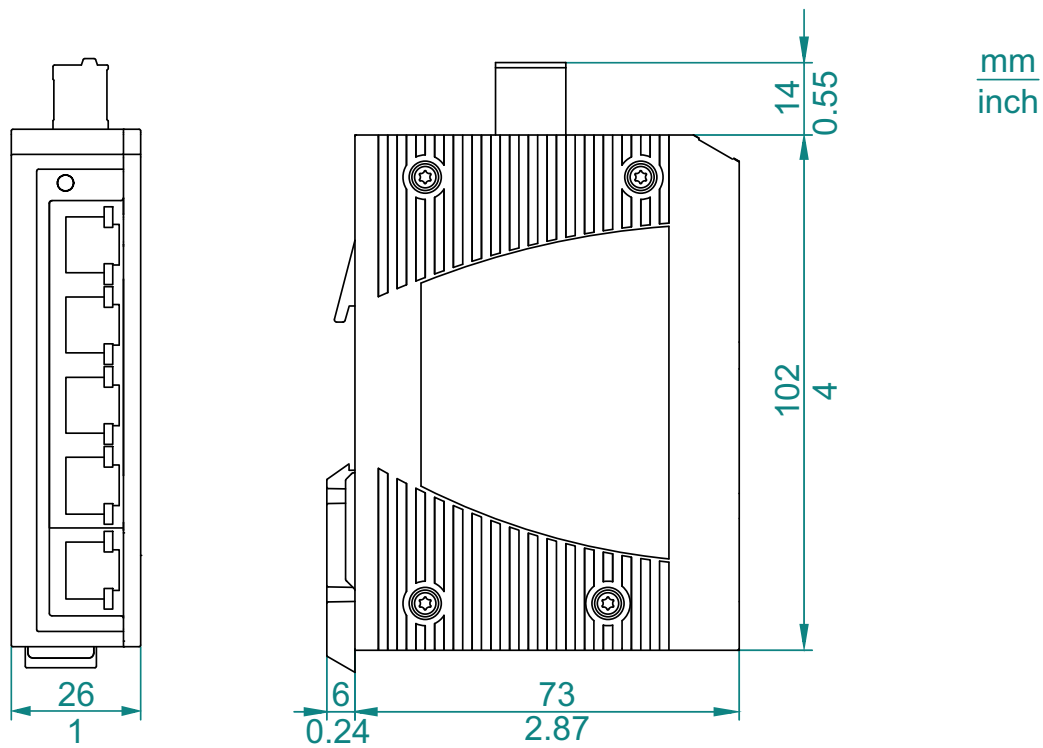


Figure 9: Device variant: MCSESU053FN0

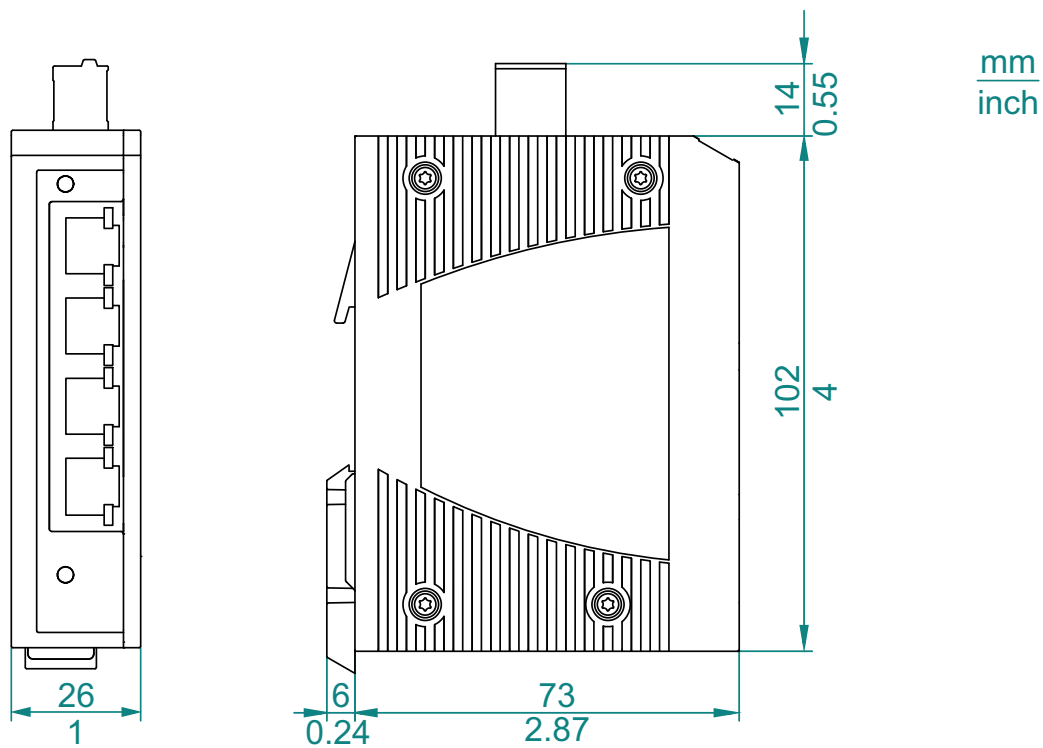


Figure 10: Device variant: MCSESU053F1CU0

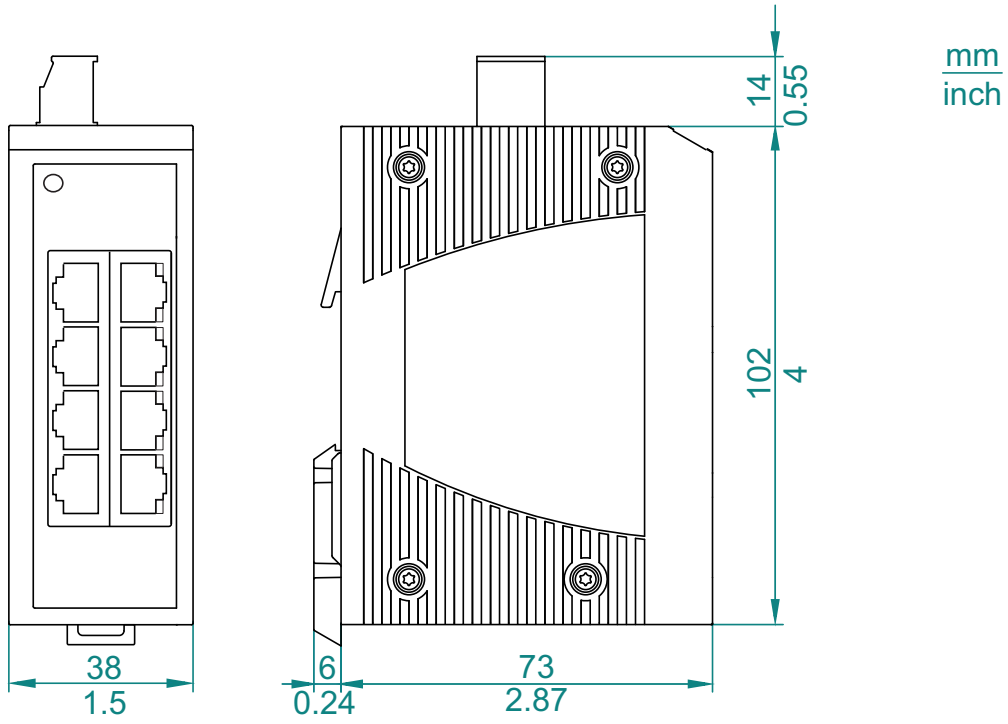


Figure 11: Device variant: MCSESU083FN0

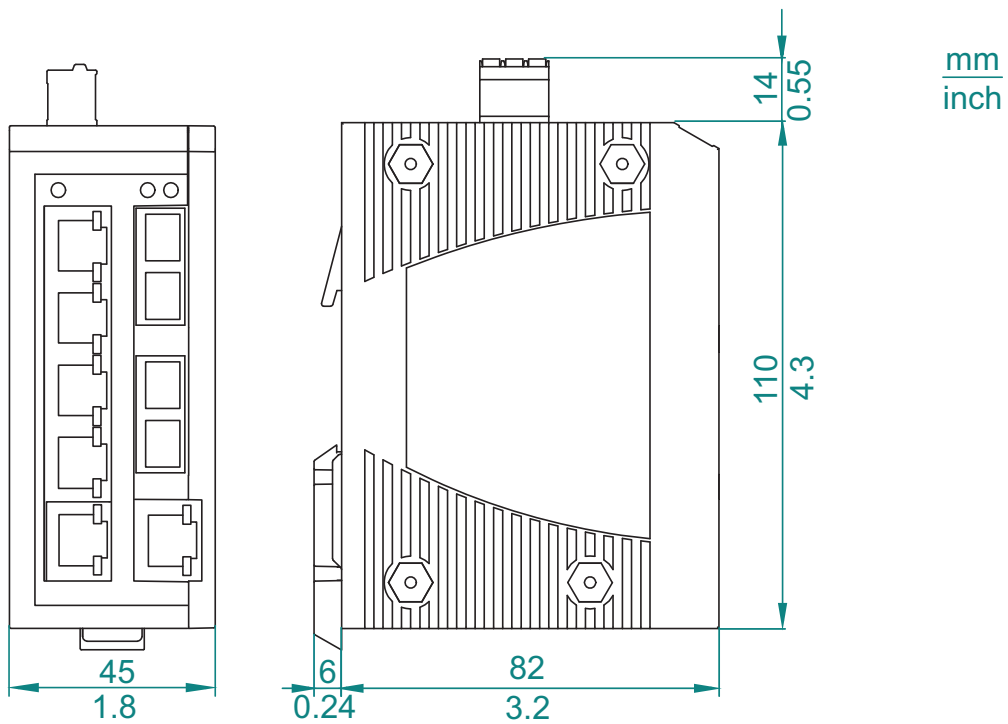


Figure 12: Device variants: MCSESU083F2CS0 and MCSESU083F2CU0

## ■ EMC and immunity

**Note:** Only use shielded data cables to meet EMC requirements according to EN 50121-4 and marine applications.

<b>EMC interference emission</b>		
<b>Radiated emission</b>		
FCC 47 CFR Part 15		Class A
EN 55032		Class A
<b>Conducted emission</b>		
FCC 47 CFR Part 15		Class A
EN 55032		Class A
<b>EMC interference immunity</b>		
<b>Electrostatic discharge</b>		
EN 61000-4-2	Contact discharge	±4 kV
IEEE C37.90.3		
EN 61000-4-2	Air discharge	±8 kV
IEEE C37.90.3		
<b>Electromagnetic field</b>		
EN 61000-4-3	80 MHz ... 3000 MHz	max. 10 V/m
<b>Fast transients (burst)</b>		
EN 61000-4-4	DC supply connection	2 kV
IEEE C37.90.1		
EN 61000-4-4	Data line	4 kV
IEEE C37.90.1		
<b>Voltage surges - DC supply connection</b>		
EN 61000-4-5	line/ground	2 kV
EN 61000-4-5	line/line	1 kV
<b>Voltage surges - data line</b>		
EN 61000-4-5	line/ground	1 kV
<b>Conducted disturbances</b>		
EN 61000-4-6	150 kHz ... 80 MHz	10 V
<b>Immunity</b>		
IEC 60068-2-6, test Fc	Vibration	5 Hz ... 8.4 Hz with 3.5 mm amplitude 8.4 Hz ... 150 Hz with 1 g
IEC 60068-2-27, test Ea	Shock	15 g at 11 ms

## ■ Network range

<b>10/100 Mbit/s twisted pair port</b>	
Length of a twisted pair segment	max. 100 m (328 ft) (for Cat5e cable)

Table 8: Network range: 10/100 Mbit/s twisted pair port

## ■ Power consumption/power output

Device variant	Max. power consumption	Power output
MCSESU053FN0	1.3 W	4.6 Btu (IT)/h
MCSESU053F1CU0	2.4 W	8.3 Btu (IT)/h
MCSESU083FN0	1.5 W	5.3 Btu (IT)/h
MCSESU083F2CS0	3.8 W	12.8 Btu (IT)/h
MCSESU083F2CU0	3.8 W	12.8 Btu (IT)/h

## ■ Interfaces

MCSESU053FN0	5 × 10/100 Mbit/s twisted pair with RJ45 sockets, 3-pin terminal block for power supply and grounding
MCSESU053F1CU0	4 × 10/100 Mbit/s twisted pair with RJ45 sockets, 1 x 100 Mbit/s Fast Ethernet with SC socket Multimode, 3-pin terminal block for power supply and grounding
MCSESU083FN0	8 × 10/100 Mbit/s twisted pair with RJ45 sockets, 3-pin terminal block for power supply and grounding
MCSESU083F2CS0	6 × 10/100 Mbit/s twisted pair with RJ45 sockets, 2 x 100 Mbit/s Fast Ethernet with SC sockets Singlemode, 3-pin terminal block for power supply and grounding
MCSESU083F2CU0	6 × 10/100 Mbit/s twisted pair with RJ45 sockets, 2 x 100 Mbit/s Fast Ethernet with SC sockets Multimode, 3-pin terminal block for power supply and grounding

## ■ Scope of delivery

Amount	Article
1 ×	Device
1 ×	3-pin, pluggable terminal block for power supply
1 ×	Readme document

## ■ Product/product code/product description

Product	Part Number	Product description
Modicon MCSESU	MCSESU053FN0	5 × 10/100 TX
	MCSESU053F1CU0	4 × 10/100 TX, 1 x 100 FX MM
	MCSESU083FN0	8 × 10/100 TX
	MCSESU083F2CS0	6 × 10/100 TX, 2 x 100 FX SM
	MCSESU083F2CU0	6 × 10/100 TX, 2 x 100 FX MM



## ■ Approvals and self-declarations

Certificates and declarations	MCSESU device variants <sup>a</sup>
UL 61010	X
UL cULus certification according to UL 61010-2-201	X
UL 121201 / CSA C22.2 No. 213	X
RCM	X
CE	X
EAC	X
UKCA	X

a. x = Certificate or declaration present