

Plugging in I/O modules and BU covers

Watch video sequence: "Insert I/O modules"

(<https://support.automation.siemens.com/WW/view/en/95886218>)

Insert the I/O module or BU cover parallel into the BaseUnit until you hear both latches click into place.

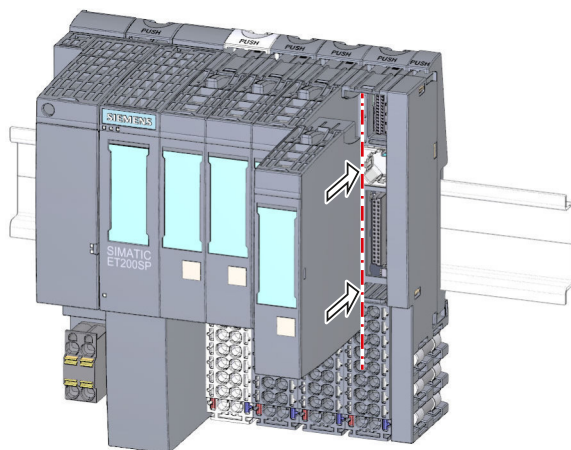


Figure 8-13 Plugging in I/O modules or BU covers (using an I/O module as example)

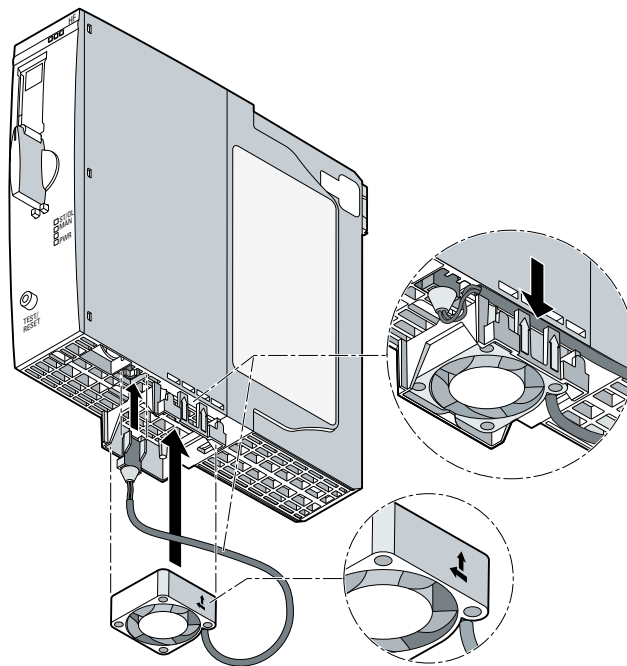
8.15 Mounting/disassembly of motor starters

8.15.1 Mounting the fan

Procedure

Proceed as follows to mount a fan on a SIMATIC ET 200SP motor starter:

1. Slide the fan onto the motor starter until you can hear the fan engage.
Observe the blowing direction of the fan when mounting. The air stream must be directed to the inside of the motor starter. The correct blowing direction is indicated by arrows on the bottom of the fan.
2. Insert the connection plug into the opening above the fan.



3. Secure the fan cable to the fixing eyes on the right-hand side of the fan cover.

NOTE

Specified ambient temperatures are not reached if the fan is incorrectly installed

If you do not observe the blowing direction of the fan when mounting, the specified ambient temperatures will not be reached. The device shuts down prematurely due to excessively high temperature.

8.15.2 Mounting/disassembly of motor starters

Procedure

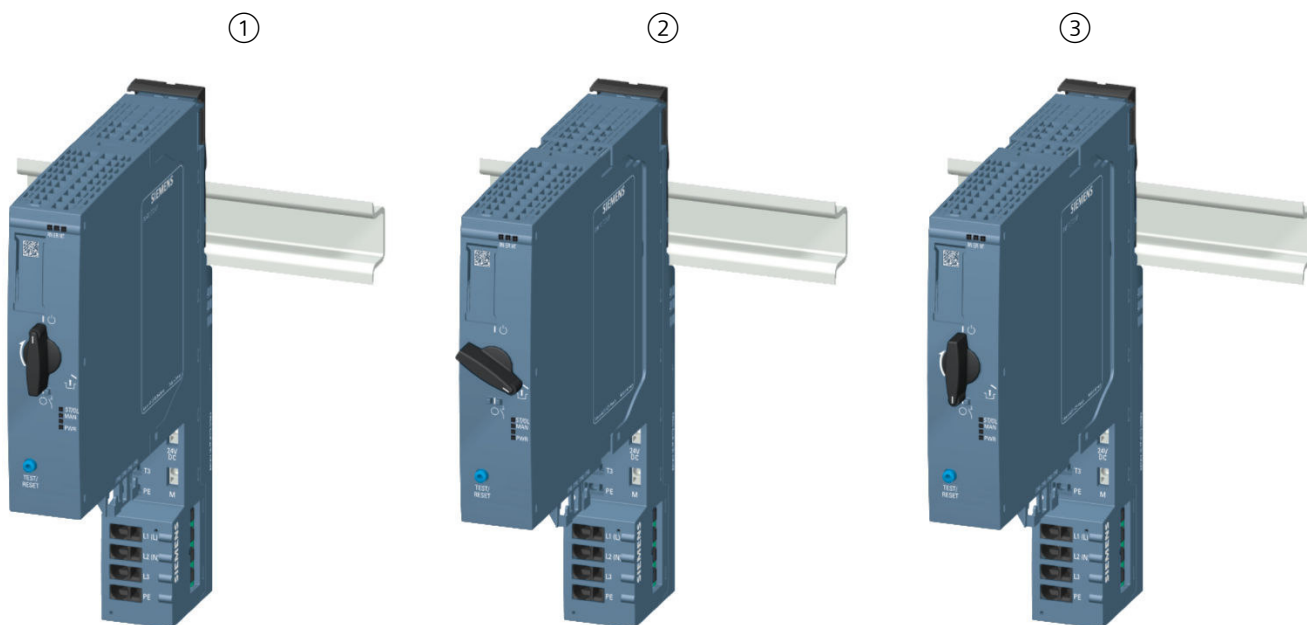
⚠ CAUTION

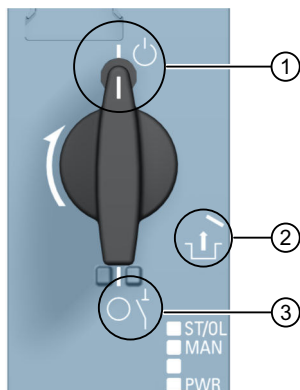
Protection against electrostatic charge

When handling and installing the SIMATIC ET 200SP motor starter, ensure protection against electrostatic charging of the components. Changes to the system configuration and wiring are only permissible after disconnection from the power supply.

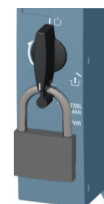
To assemble a SIMATIC ET 200SP motor starter, proceed as follows:

- Position the mechanical interlock of the SIMATIC ET 200SP motor starter in the assembly/disassembly position ②
- Place the SIMATIC ET 200SP motor starter onto the BaseUnit.
- Turn the mechanical interlock clockwise to the parking position ③
- Turn the mechanical interlock counterclockwise to the operating position (= end position) ①





- ① **Operating position/READY**
The motor starter is firmly locked in the BaseUnit, and all electrical contacts are connected.
- ② **Assembly/disassembly position**
All electrical contacts are open, and you can use the SIMATIC ET 200SP motor starter in the BaseUnit, or you can remove it from the BaseUnit.
- ③ **Parking position/OFF**
In this position, you cannot remove the SIMATIC ET 200SP motor starter from the BaseUnit, but all electrical contacts are open. In addition, you can open the locking lever on the mechanical rotary interlock in this position, and fix the position with a padlock (shackle diameter 3 mm). This ensures the isolating function in accordance with IEC 60947-1.
In the parking position, the motor starter counts as a disconnected element for the head module. During operation, the parking position is therefore a hot swapping state. See also Removing and inserting I/O modules/motor starters (hot swapping) (Page 283)



NOTE

Parking position/OFF

This position is only permissible for maintenance purposes and not for continuous operation. In this position, dust protection and mechanical durability are not ensured.

If you do not use the motor starter for an extended period, remove it and attach the BU cover (3RK1908-1CA00-0BP0).

Mount the touch protection cover for the infeed bus on the last BaseUnit.

NOTE

Touch protection cover for the infeed bus

You will find out how to mount the touch protection cover of the infeed bus on a SIMATIC ET 200SP motor starter in chapter "Mounting the cover for the 500 V AC infeed bus (Page 128)".

To connect the assembly, mount the server module after the last BaseUnit.

NOTE**Server module**

You can find out how to assemble/disassemble the server module in chapter "Installing the server module [\(Page 127\)](#)".

NOTE**Removing the motor starter**

You will find out how to remove the motor starter in chapter "Replacing a motor starter [\(Page 289\)](#)".

8.15.3 3DI/LC module

Introduction

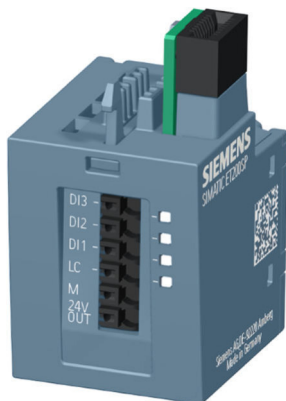
The optional 3DI/LC module with three inputs and one further LC input can be connected to the motor starter. The status of the inputs of the 3DI/LC module can be seen via the process image input (PII) of the motor starter.

NOTE

The 3DI/LC module can be used for the motor starter and the fail-safe motor starter.

The input actions can be parameterized. For reasons of operational safety, the LC input is permanently set to manual local mode. For example, by parameterizing the inputs DI1 - DI3 with motor CLOCKWISE or motor COUNTER-CLOCKWISE, you can control the motor in manual local mode.

The figure below shows the 3DI/LC module.



Assembly

! WARNING

Risk of injury from automatic restart

When you mount the the 3DI/LC module, the motor starter can switch on autonomously if an ON command (DI1 to DI3) is active. This can result in property damage or serious injury caused by connected devices that are automatically started up.

Revoke the ON commands at DI1 to DI3 before mounting the 3DI/LC module.

Proceed as follows to mount a 3DI/LC module onto a motor starter:

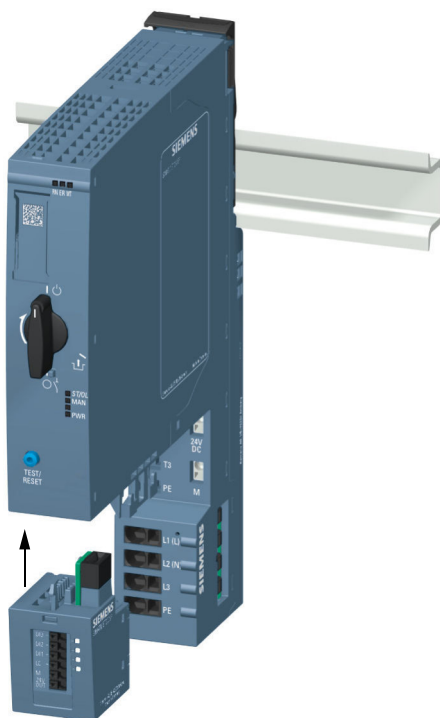
1. Wire the 3DI/LC module according to the connection diagram.

NOTE

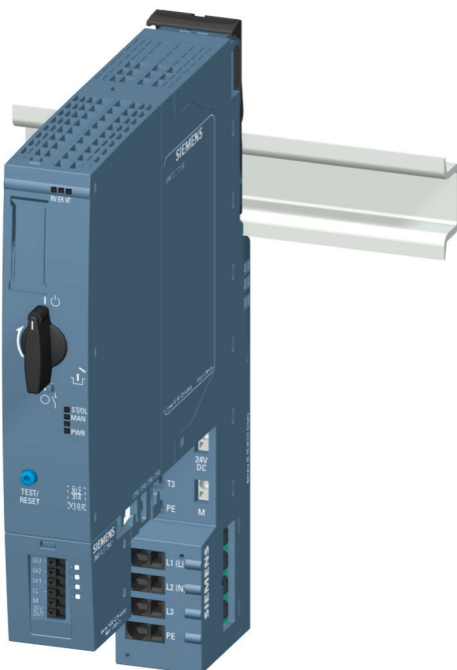
Connecting the 3DI/LC module

You will find out how to connect the 3DI/LC module in chapter "Connecting the 3DI/LC module for the motor starter" ([Page 157](#))".

2. Slide the 3DI/LC module into the motor starter until the 3DI/LC module engages.



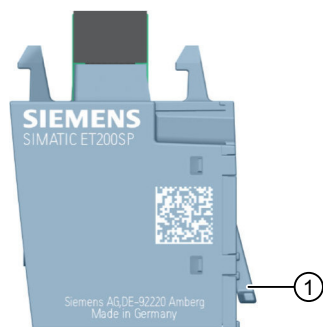
The figure below shows a motor starter with a mounted 3DI/LC module.



Disassembly

Proceed as follows to remove a 3DI/LC module from a motor starter:

1. Push the release lever on the rear of the 3DI/LC module.



① Release lever

2. Remove the 3DI/LC module from the motor starter while pressing the release lever.

8.16 Labeling ET 200SP

8.16.1 Factory markings

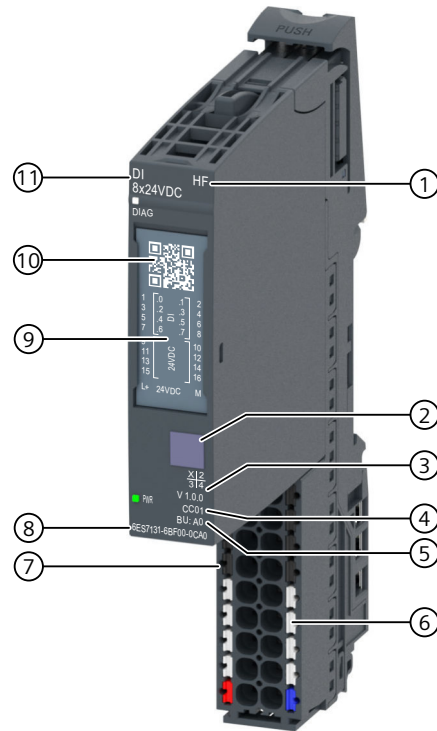
Introduction

For better orientation, the ET 200SP is equipped with various markings ex factory, which help in the configuration and connection of the modules.

Factory markings

- Module labeling
- Color coding of module type
 - Digital input modules: white
 - Digital output modules: black
 - Analog input modules: light blue
 - Analog output modules: dark blue
 - Technology module: turquoise
 - Communication module: light gray
 - Special module: mint green
- Module information
 - Functional version of the module, e.g. "X/2/3/4" (= functional version 1)
 - Firmware version of the module at delivery, e.g. "V1.0.0"
 - Color code for usable color identification label, e.g. "CC0"
 - Usable BaseUnit type, e.g. "BU: A0"
- Color coding of the potential group
 - Opening the potential group: Light-colored terminal box and light-colored mounting rail release button
 - Further conduction of the potential group: Dark-colored terminal box and dark-colored mounting rail release button
- Color coding of the spring releases
 - Process terminals: gray, white
 - AUX terminals: turquoise
 - Additional terminals: red, blue

- Terminals for self-assembling voltage buses P1, P2: red, blue



- ① Function class
- ② Color coding of module type
- ③ Function and firmware version
- ④ Color code for selection of the color coding labels
- ⑤ BU type
- ⑥ Color coding of the spring releases (by group)
- ⑦ Color coding of the potential group
- ⑧ Article number
- ⑨ Wiring diagram
- ⑩ 2D matrix code
- ⑪ Module type and designation

Figure 8-14 Factory markings

8.16.2 Optional markings

Introduction

In addition to the factory markings, there are also other options for labeling and/or marking terminals, BaseUnits and I/O modules for the ET 200SP distributed I/O system.

Optional markings

Color identification labels

The color identification labels are module-specific labels for color coding the potentials of the I/O modules. A color code (e.g. 01) is printed on each color identification label and I/O module. The color code allows you to read which color identification label is required for the terminals of the associated BaseUnit directly from the I/O module.

The following versions of color coded labels are available:

- Module-specific color combinations for the process terminals (see the device manuals I/O modules (<https://support.automation.siemens.com/WW/view/en/55679691/133300>)). The different colors have the following meaning: Gray = input or output signal, red = potential +, blue = ground.
- For the AUX terminals in the colors yellow-green, blue or red
- For the add-on terminals in the colors blue-red
- For the potential distributor modules (see manual BaseUnits (<https://support.automation.siemens.com/WW/view/en/59753521>)):
 - For PotDis-BaseUnit PotDis-BU-P1/x-R: red
For PotDis-BaseUnit PotDis-BU-P2/x-B: blue
 - For PotDis-TB-P1-R: red or gray
For PotDis-TB-P2-B: blue or gray
For PotDis-TB-BR-W: depending on application, yellow/green, blue, red or gray
For PotDis-TB-n.c.-G: gray

Reference identification labels

The reference identification labels (in accordance with EN 81346) can be inserted onto each CPU/interface module, BusAdapter, BaseUnit, I/O module and PotDis-TerminalBlock. This makes it possible to create a fixed assignment between the reference identification label of the BaseUnit and the I/O module/PotDis-TerminalBlock.

With the standard plotter setting, the reference identification label is suitable for automatic labeling with E-CAD systems.