



Edition

09/2024

RECYCLER GUIDE

SIMATIC

S7-1500/ET 200MP
I/O, system power supply

Reference product: 6ES7531-7KF00-0AB0

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Recycler Guide for S7-1500/ET 200MP I/O, system power supply

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Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

All names identified by ® are registered trademarks of Siemens Aktiengesellschaft. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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About this guide

In order to conserve important resources, we work on reducing the materials we use and supporting the recycling economy right from the product design stage. An important way to achieve this goal is the resource recovery of electronic products at the end of their service life.

The Siemens Recycler Guides provide recyclers of electronic products with instructions on how to disassemble products safely in order to maximize resource recycling. The Recycler Guides provide step-by-step disassembly instructions and material composition information to help recyclers direct specific materials to specialized recyclers.

Disassembly may only be carried out by specialists trained in the recycling of electronic devices. The recycler is responsible for independently evaluating and ensuring compliance with all applicable environmental, health and safety regulations. This includes, among other things, the legal requirements in the area of management, handling, shipping and disposal as well as applicable laws to ensure the health and safety of all employees involved.

If you have any questions or feedback regarding this Recycler Guide, please use this address: recycling@siemens.com

Safety instructions

The recycler is responsible for independently evaluating all activities of its employees in performing or supporting the work and ensuring compliance with all applicable legal requirements. This includes, but is not limited to, laws regarding the health and safety of all employees performing or assisting in that work. The recycler is also responsible for assessing the workplace and ensuring that the area in which the work is carried out meets all ergonomic requirements to ensure the protection of its employees.

Danger notice (DIN EN ISO 7010)



Warning against hand injuries



Warning against pointed/sharp objects

Wear personal protective equipment throughout the recycling process.



Wear hand protection



Wear a mask



Wear eye protection



Wear foot protection



Wear protective clothing

Recommended tool

For the disassembly of the product, we recommend using the following tool:

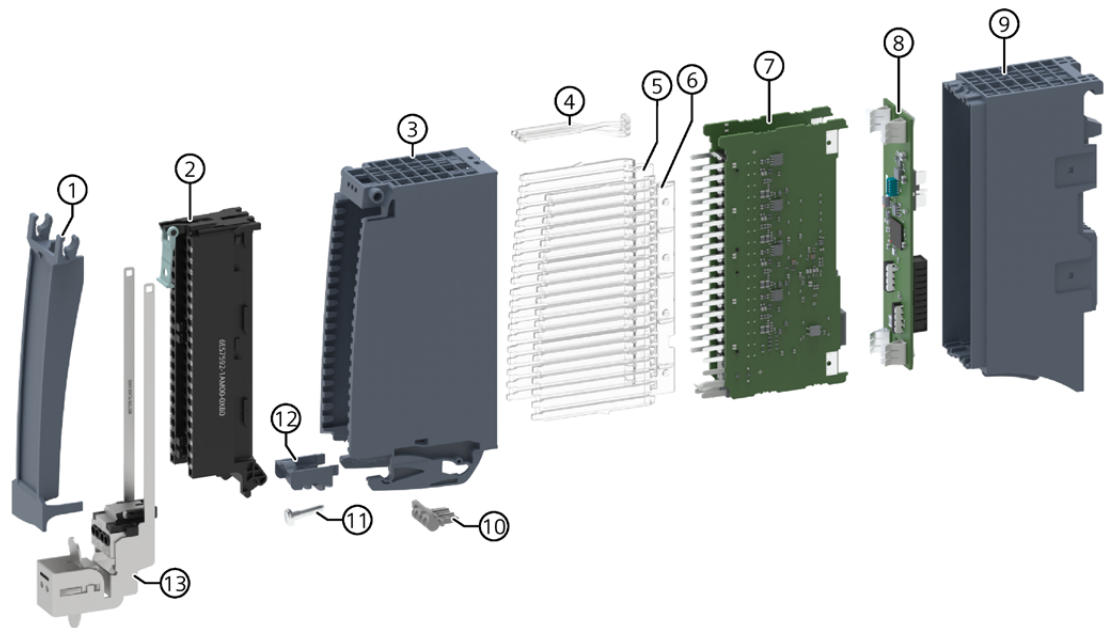


Slotted screwdriver 3 mm and 3.5 mm

Disassembly instructions

The following guide provides detailed information on how to disassemble the product at the end of its service life and on what materials you can collect and recycle. In doing so, you support the recycling economy.

Components of the product



Position	Part	Material	Disassembly step
1	Front flap	Polycarbonate	Step 1
2	Front connector	Electronics	Step 2
3	Front cover	Polycarbonate	Step 3
4	Fiber-optic cable status	Polycarbonate	Step 4
5	Left 24 V channel display	Polycarbonate	Step 5
6	Right 24 V channel display	Polycarbonate	Step 6
7	Function board	Electronics	Step 8
8	Backplane bus board	Electronics	Step 9
9	Rear enclosure	Polycarbonate	Step 11
10	Coding element	ABS	Step 7
11	Fixing screw	Steel	Step 11
12	Screw cover part	Polycarbonate	Step 10
13	Shielding	Steel	Step 2

Product groups

This Recycler Guide covers two product groups. The devices in these two product groups differ in terms of their features but are similar in terms of their design. Follow steps 1 to 10 of this guide for the disassembly. Deviations that are specific to a particular product group are explicitly mentioned in the text.

Product group 1

S7-1500 I/Os

Designation	Article number
S7-1500, AI 24xCVM HF	6ES7531-7LK00-0AB0
S7-1500, AI 8xHART HF	6ES7531-7TF00-0AB0
S7-1500, DQ 8x24VDC/5A HS	6ES7522-5BF00-0AB0
S7-1500, F-AI 8xI 0(4)..20mA	6ES7536-1MF00-0AB0
S7-1500, F-DI 16X24VDC	6ES7526-1BH00-0AB0
S7-1500, F-DQ 8x24VDC 2A PPM	6ES7526-2BF00-0AB0
S7-1500, AI 16xI BA	6ES7531-7MH00-0AB0
SIPLUS S7-1500, AI 16xI BA	6AG1531-7MH00-7AB0
S7-1500, AI 16xU BA	6ES7531-7LH00-0AB0
SIPLUS S7-1500, AI 16xU BA	6AG1531-7LH00-7AB0
S7-1500, AI 4x U/I/RTD/TC/AQ 2x U/I ST	6ES7534-7QE00-0AB0
S7-1500, AI 4xU/I/RTD/TC ST	6ES7531-7QD00-0AB0
S7-1500, AI 8 X U/R/RTD/TC HF	6ES7531-7PF00-0AB0
S7-1500, AI 8xU/I HF	6ES7531-7NF00-0AB0
SIPLUS S7-1500, AI 8xU/I HF	6AG1531-7NF00-7AB0
S7-1500, AI 8xU/I HS	6ES7531-7NF10-0AB0
SIPLUS S7-1500, AI 8xU/I HS	6AG1531-7NF10-7AB0
SIPLUS S7-1500, AI 8xU/I HS TX RAIL	6AG2531-7NF10-4AB0
S7-1500, AI 8xU/I/R/RTD BA	6ES7531-7QF00-0AB0
S7-1500, AI 8xU/I/RTD/TC ST	6ES7531-7KF00-0AB0
SIPLUS S7-1500, AI 8xU/I/RTD/TC ST	6AG1531-7KF00-7AB0
SIPLUS S7-1500, AI 8xU/I/RTD/TC TX RAIL	6AG2531-7KF00-4AB0
SIPLUS S7-1500, AI 8xU/R/RTD/TC HF	6AG1531-7PF00-4AB0
S7-1500, AQ 2xU/I ST	6ES7532-5NB00-0AB0
S7-1500, AQ 4xU/I HF	6ES7532-5ND00-0AB0
S7-1500, AQ 4xU/I ST	6ES7532-5HD00-0AB0
SIPLUS S7-1500, AQ 4xU/I ST	6AG1532-5HD00-7AB0
SIPLUS S7-1500, AQ 4xU/I ST TX RAIL	6AG2532-5HD00-4AB0
S7-1500, AQ 8x HART HF	6ES7532-8TF00-0AB0
S7-1500, AQ 8xU/I HS	6ES7532-5HF00-0AB0
SIPLUS S7-1500, AQ 8xU/I HS	6AG1532-5HF00-7AB0
S7-1500, CM 8xIO-Link	6ES7547-1JF00-0AB0
S7-1500, CM PTP RS232 BA	6ES7540-1AD00-0AA0
S7-1500, CM PTP RS232 BA	6ES7540-1AD01-0AA0
SIPLUS S7-1500, CM PTP RS232 BA	6AG1540-1AD00-7AA0
S7-1500, CM PTP RS232 HF	6ES7541-1AD00-0AB0

Designation	Article number
S7-1500, CM PTP RS232 HF	6ES7541-1AD01-0AB0
SIPLUS S7-1500, CM PTP RS232 HF	6AG1541-1AD00-7AB0
SIPLUS S7-1500, CM PTP RS232 HF TX RAIL	6AG2541-1AD00-4AB0
S7-1500, CM PTP RS422/485 BA	6ES7540-1AB00-0AA0
S7-1500, CM PTP RS422/485 BA	6ES7540-1AB01-0AA0
SIPLUS S7-1500, CM PTP RS422/485 BA	6AG1540-1AB00-7AA0
S7-1500, CM PTP RS422/485 HF	6ES7541-1AB00-0AB0
S7-1500, CM PTP RS422/485 HF	6ES7541-1AB01-0AB0
SIPLUS S7-1500, CM PTP RS422/485 HF	6AG1541-1AB00-7AB0
SIPLUS S7-1500, CM PTP RS422/485 TX RAIL	6AG2541-1AB00-4AB0
S7-1500, DI 16 x 24...125V UC HF	6ES7521-7EH00-0AB0
SIPLUS S7-1500, DI 16x110VDC HF TX RAIL	6AG2521-7EH00-4AB0
S7-1500, DI 16x230VAC BA	6ES7521-1FH00-0AA0
SIPLUS S7-1500, DI 16x230VAC BA	6AG1521-1FH00-7AA0
S7-1500, DI 16x24VDC BA	6ES7521-1BH10-0AA0
S7-1500, DI 16x24VDC HF	6ES7521-1BH00-0AB0
SIPLUS S7-1500, DI 16x24VDC HF	6AG1521-1BH00-7AB0
SIPLUS S7-1500, DI 16x24VDC HF TX RAIL	6AG2521-1BH00-4AB0
S7-1500, DI 16x24VDC HS	6ES7521-7BH00-0AB0
S7-1500, DI 16x24VDC SRC BA	6ES7521-1BH50-0AA0
SIPLUS S7-1500, DI 16x24VDC SRC BA	6AG1521-1BH50-7AA0
S7-1500, DI 16x24VDC/DQ 16x24VDC/0.5A BA	6ES7523-1BL00-0AA0
S7-1500, DI 16xNAMUR HF	6ES7521-7TH00-0AB0
S7-1500, DI 32x24VDC BA	6ES7521-1BL10-0AA0
S7-1500, DI 32x24VDC HF	6ES7521-1BL00-0AB0
SIPLUS S7-1500, DI 32x24VDC HF	6AG1521-1BL00-7AB0
S7-1500, DI 32x24VDC/DQ 32x24VDC/0.3A BA	6ES7523-1BP50-0AA0
SIPLUS S7-1500, DI 48VUC/125VDC HF	6AG1521-7EH00-7AB0
S7-1500, DI 64x24VDC SNK/SRC BA	6ES7521-1BP00-0AA0
SIPLUS S7-1500, DQ 16x110VDC ST TX RAIL	6AG2522-5EH00-4AB0
SIPLUS S7-1500, DQ 16x230VAC 1A ST TRIAC	6AG1522-5FH00-7AB0
SIPLUS S7-1500, DQ 16x230VAC 2A RLY	6AG1522-5HH00-7AB0
S7-1500, DQ 16x230VAC/1A ST (Triac)	6ES7522-5FH00-0AB0
S7-1500, DQ 16x230VAC/2A ST (Relay)	6ES7522-5HH00-0AB0
S7-1500, DQ 16x24...48VUC/125VDC/0.5A ST	6ES7522-5EH00-0AB0
S7-1500, DQ 16x24V DC/0.5A HF	6ES7522-1BH01-0AB0
SIPLUS S7-1500, DQ 16x24VDC HF TX RAIL	6AG2522-1BH01-4AB0
S7-1500, DQ 16x24VDC/0.5A BA	6ES7522-1BH10-0AA0
SIPLUS S7-1500, DQ 16x24VDC/0.5A HF	6AG1522-1BH01-7AB0
SIPLUS S7-1500, DQ 16x48VUC/125VDC ST	6AG1522-5EH00-7AB0
S7-1500, DQ 32x24VDC/0.5A BA	6ES7522-1BL10-0AA0
S7-1500, DQ 32x24VDC/0.5A HF	6ES7522-1BL01-0AB0
SIPLUS S7-1500, DQ 32x24VDC/0.5A HF	6AG1522-1BL01-7AB0
S7-1500, DQ 64x24VDC/0.3A BA	6ES7522-1BP00-0AA0
S7-1500, DQ 64x24VDC/0.3A SNK BA	6ES7522-1BP50-0AA0
SIPLUS S7-1500, DQ 8x230VAC ST 5A T1 RAIL	6AG2522-5HF00-1AB0

Designation	Article number
S7-1500, DQ 8x230VAC/2A ST (Triac)	6ES7522-5FF00-0AB0
SIPLUS S7-1500, DQ 8x230VAC/2A ST TRIAC	6AG1522-5FF00-7AB0
S7-1500, DQ 8x230VAC/5A ST (Relay)	6ES7522-5HF00-0AB0
S7-1500, DQ 8x24VDC/2A HF	6ES7522-1BF00-0AB0
SIPLUS S7-1500, DQ 8x24VDC/2A HF	6AG1522-1BF00-7AB0
S7-1500, DQ 8x24VDC/5A HS	6ES7522-5BF00-0AB0
SIPLUS S7-1500, F-DI 16x24VDC	6AG1526-1BH00-2AB0
SIPLUS S7-1500, F-DI 16x24VDC T1 RAIL	6AG2526-1BH00-1AB0
SIPLUS S7-1500, F-DQ 8x24VDC 2A T1 RAIL	6AG2526-2BF00-1AB0
S7-1500, TM Count 2x24V	6ES7550-1AA01-0AB0
SIPLUS S7-1500, TM COUNT 2X24V	6AG1550-1AA01-7AB0
S7-1500, TM FAST	6ES7554-1AA00-0AB0
S7-1500, TM PosInput 2	6ES7551-1AB01-0AB0
SIPLUS S7-1500, TM POSINPUT 2	6AG1551-1AB01-7AB0
S7-1500, TM PTO 4	6ES7553-1AA00-0AB0
S7-1500, TM SIWAREX WP521 ST	7MH4980-1AA01
S7-1500, TM SIWAREX WP522 ST	7MH4980-2AA01
S7-1500, AI 24xCVM HF	6ES7531-7LK00-0AB0
SIPLUS S7-1500 16DQ 230VAC 1A ST TRIAC	6AG1522-5FH00-7AB0
SIPLUS S7-1500 CM 1542-5	6AG1542-5DX10-7XE0
SIPLUS S7-1500 F-DQ 8x24VDC/2A	6AG1526-2BF00-2AB0

Product group 2

S7-1500 system power supply

Designation	Article number
S7-1500, PS 25W 24V DC	6ES7505-0KA00-0AB0
S7-1500, PS 25W 24V DC	6ES7505-0KA01-0AB0
S7-1500, PS 60W 120/230VAC	6ES7507-0RA00-0AB0
S7-1500, PS 60W 24/48/60VDC	6ES7505-0RA00-0AB0
S7-1500, PS 60W 24/48/60VDC HF	6ES7505-0RB00-0AB0
S7-1500, PS 1505 25W 24VDC	6AG1505-0KA00-7AB0
S7-1500, PS 1505 60W 24VDC	6AG1505-0RA00-7AB0
S7-1500, PS 1507 60W 230VAC	6AG1507-0RA00-7AB0

Product group 3

Front connector

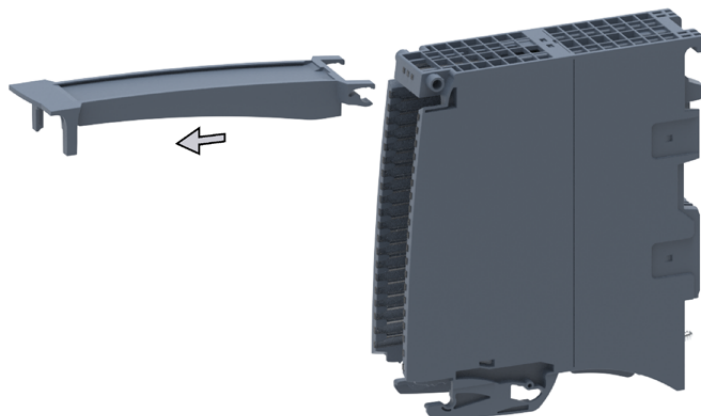
Designation	Article number
SIMATIC S7-1500, front connector screw-type connection, 35 mm	6ES7592-1AM00-0XB0
SIMATIC S7-1500, front connector in push-in technology, 35 mm	6ES7592-1BM00-0XB0
SIMATIC S7-1500, front connector in push-in technology, 25 mm	6ES7592-1BM00-0XA0

Dismantling the product

Follow these steps for disassembly:

1. Remove the front flap

Pull the front flap up 90 degrees. Pull off the front flap.



2. Remove the front connector

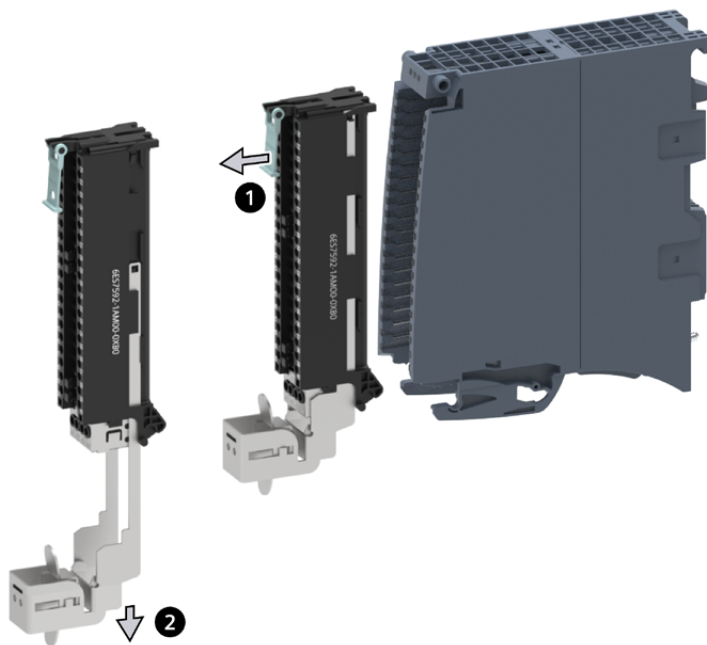
Note

Follow this step if the front connector (product group 3) is present.

1. Pull the lug and remove the front connector from the enclosure.
2. Pull the shielding down and remove the shielding from the front connector.

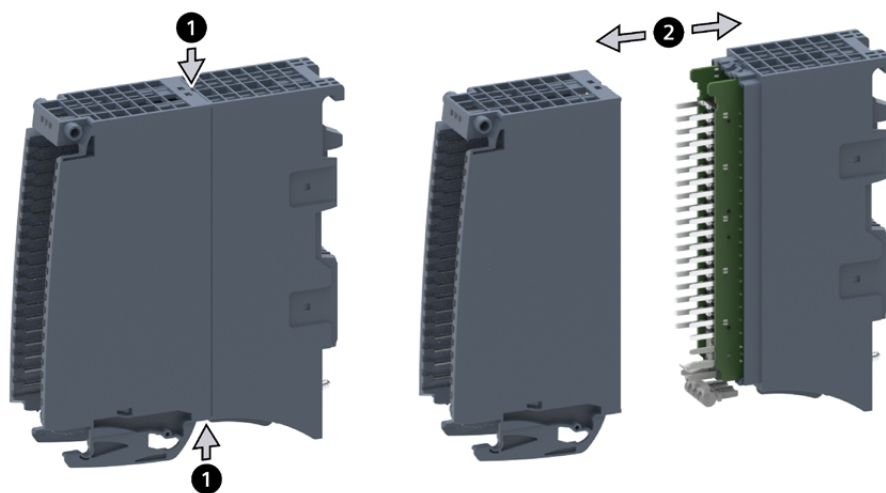
Note

The shielding is only present on analog modules and TM modules.



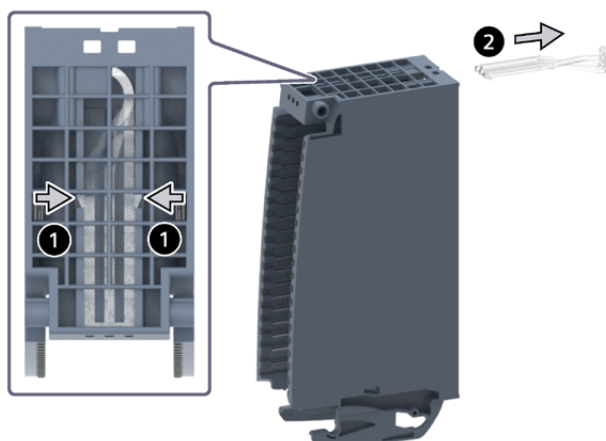
3. Remove the enclosure

1. Press the snap locks at the top and bottom of the enclosure to release them. Use a slotted screwdriver to do this.
2. Pull the front cover to separate it from the rear enclosure.



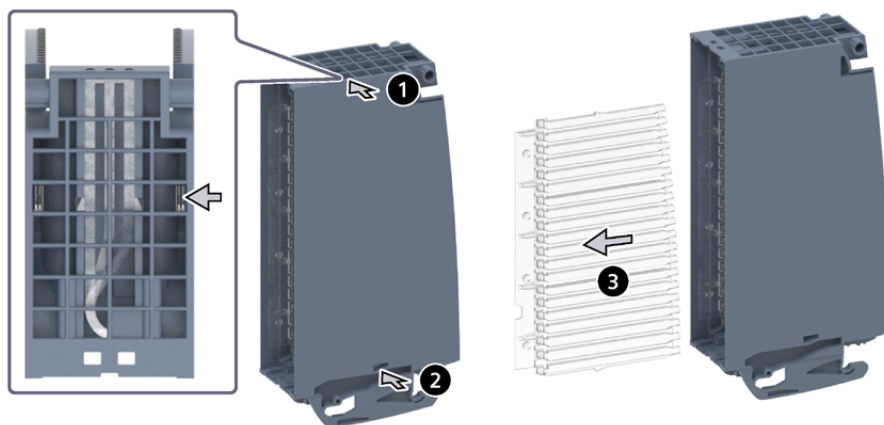
4. Remove the fiber-optic cable status

1. Press the snap locks on the fiber-optic cable status with a slotted screwdriver.
2. Pull off the fiber-optic cable status.



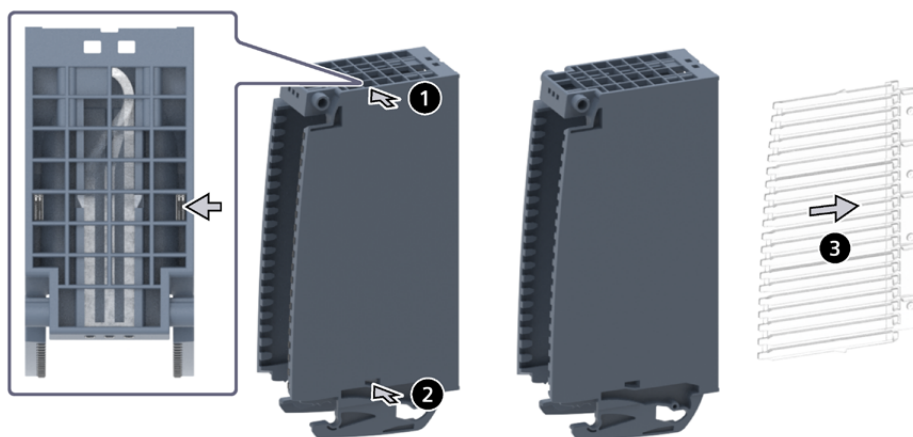
5. Remove the left 24 V channel display

1. Press the top snap lock on the left 24 V channel display with a slotted screwdriver.
2. Press the bottom snap lock on the left 24 V channel display with a slotted screwdriver.
3. Pull off the left 24 V channel display.



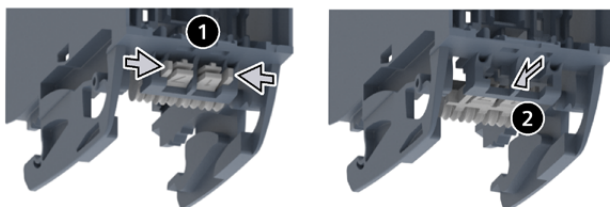
6. Remove the right 24 V channel display

1. Press the top snap lock on the right 24 V channel display with a slotted screwdriver.
2. Press the bottom snap lock on the right 24 V channel display with a slotted screwdriver.
3. Pull off the right 24 V channel display.



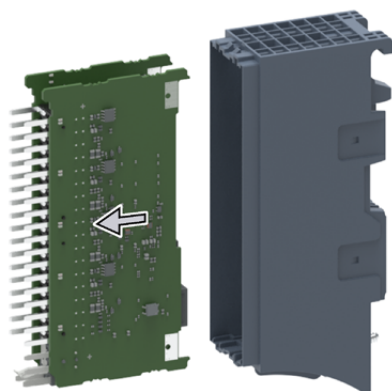
7. Remove the coding element

1. Press the snap locks together.
2. Pull off the coding element.



8. Remove the function board

Pull off the function board from the rear enclosure.

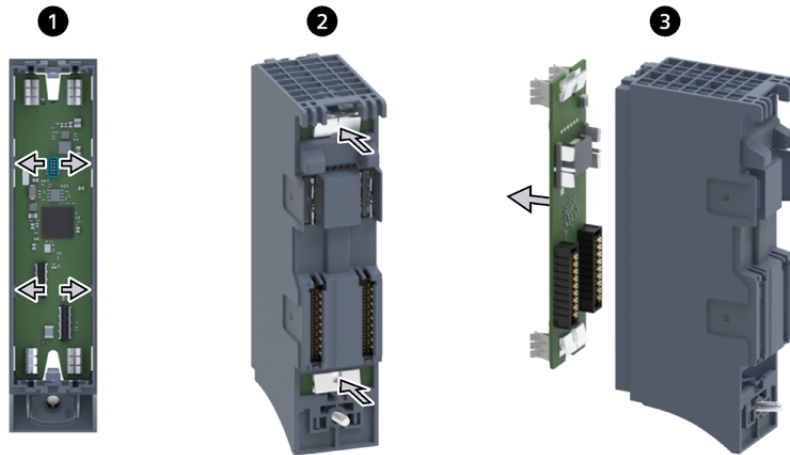


Note

Depending on the configuration, between one and three function boards can be contained.

9. Remove the backplane bus board

1. Press the backplane bus board into the enclosure with a slotted screwdriver and bend the enclosure open slightly.
2. With sufficient pressure, the backplane bus board can be released from its position and removed.

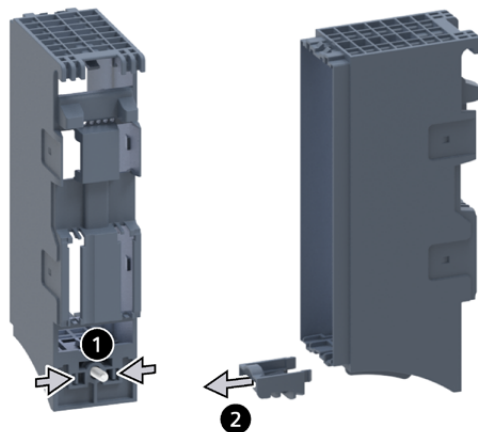


10. Remove the screw cover

Note

Product group 2 contains a screw cover which should be removed in the same way, but differs with respect to the screw length.

1. Press the snap locks of the screw cover together with a slotted screwdriver.
2. Pull off the screw cover.



11. Remove the fixing screw

Remove the fixing screw with a slotted screwdriver.



Explanation of substances and components

Components according to Directive 2012/19/EU Annex VII

You must remove at least the following substances, mixtures and components from the product:

Substance/mixture/component	Position	Disassembly step
PCBs with a surface area greater than 10 cm ²	7, 8	Steps 8 and 9
Plastic with brominated flame-retardants	7, 8	Steps 8 and 9

Received material fractions

All results from this process must be managed, handled, and disposed of in accordance with applicable waste laws and regulations including, but not limited to, the Waste Framework Directive and its national legislation in Europe and worldwide.

The following table contains the main material fractions. The table does not claim to be complete.

Position	Possible material fractions (not exhaustive)
1, 3, 4, 5, 6, 9, 12	Polycarbonate
7, 8	Copper, precious metals, tin
2	Polycarbonate, copper, precious metals, tin
13	Steel

Disclaimer of liability

The Recycler Guide is for information purposes only.

This Recycler Guide does not guarantee the composition of any product or that the product will retain a specific composition for a specific period of time. Therefore, all warranties, assurances, conditions implied by statute or common law are excluded to the fullest extent permitted by applicable law.

The Recycler Guide provides information about the disassembly process of an appliance so that the components can be assigned to the correct recycling channels. Reuse of dismantled components is not permissible.

Siemens therefore assumes no liability for errors or consequences that may result from the use of this information to the greatest possible legal extent.

Please note that the data in this Recycler Guide cannot be compared to data calculated based on product category rules (PCRs) other than the above standards. The values given are only valid in the specified context and cannot be used directly to create the environmental compatibility assessment of a plant.