

SIMATIC modules

We additionally use SIMATIC modules in the chromatograph as signal converters for analog and digital signals. The chromatograph can then, for example:

- Switch valves via digital outputs
- Scan the switches of pressure monitors via digital inputs
- Display results in the control room via analog outputs
- Calculate values from a scale with the analytical result via analog inputs.

The following modules can be used in our chromatographs:

- | | |
|---------------------------------|----------------|
| ▪ 32 digital outputs 24 V/0.5 A | 6ES5 451-4UA12 |
| ▪ 16 digital outputs 24 V/2 A | 6ES5 453-4UA12 |
| ▪ 16 digital outputs and | |
| 16 digital inputs 24 V/0.5 A | 6ES5 482-4UA12 |
| ▪ 32 digital inputs 24 V | 6ES5 430-4UA12 |
| ▪ 8 analog outputs 0 to 20 mA | 6ES5 470-4UA12 |
| ▪ 8 analog outputs 4 to 20 mA | 6ES5 470-4UC12 |
| ▪ 8 analog inputs | 6ES5 460-4UA12 |

All modules occupy one slot in the chromatograph computer, apart from the module 453 which requires two slots.

IMPORTANT:

SIMATIC-modules only function if they are correctly addressed and if their enable input is correctly connected. The following pages show how you must wire the modules.

Inserting or removing modules

Only insert or remove SIMATIC modules with the chromatograph switched off. You thus avoid damaging the modules. In addition, SIMATIC modules do not function if they are inserted when the chromatograph is on.

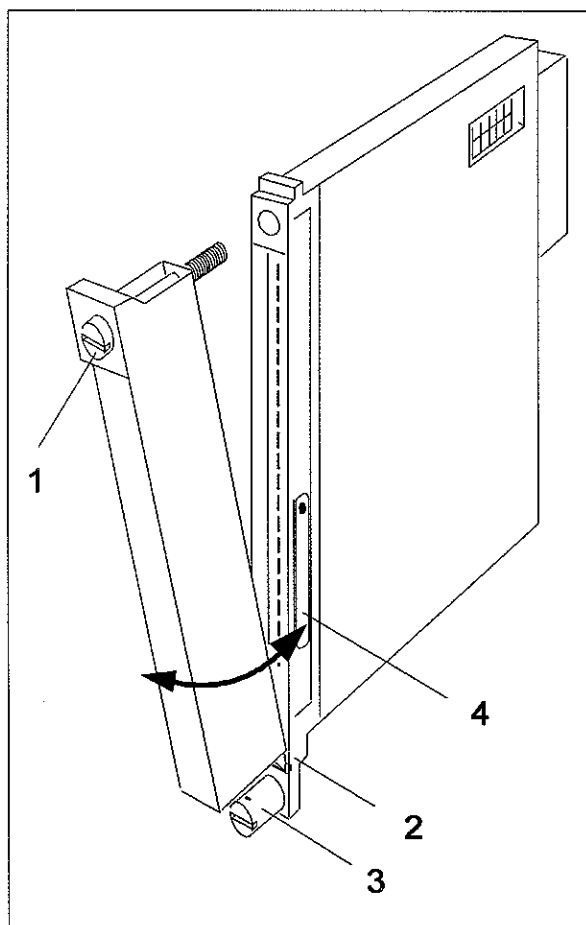
- Loosen the screw (1) on the front plug
- Swing out the top of the front plug and lift out of the bottom bearing (2)
- Rotate locking screw (3) by 90°
- Pull out the module using the handle (4). This handle is hidden. It can be extracted from below using a pointed object.

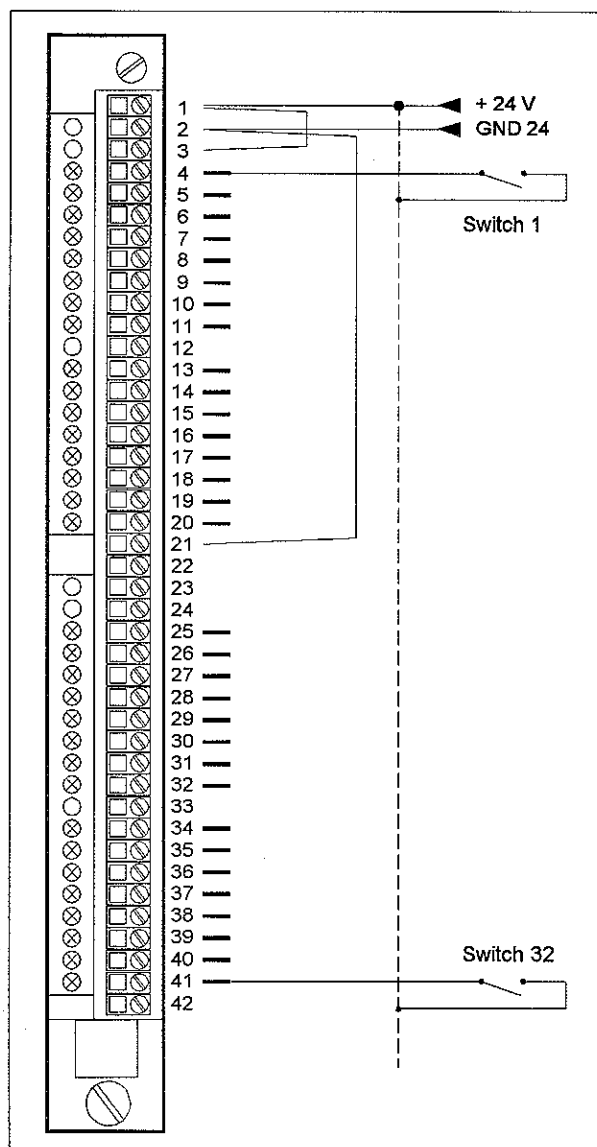
Install in the reverse order.

Electrical isolation

All inputs and outputs are electrically isolated from the module power supply which is applied at the rear. The inputs and outputs are nevertheless not electrically isolated in the chromatograph because the 24 V comes from the chromatograph power pack and all SIMATIC modules are connected to one another via their front panels.

If electrical isolation is required, use a separate module and provide an external voltage of 24 V. Individual floating digital inputs or digital outputs can be implemented using relays.





32 digital inputs 6ES5 430-4UA12

Digital inputs can be used to import status signals into the chromatograph. Example: carrier gas pressure monitoring.

The signal status of the digital inputs is identified by green lamps on the module.

Connection of switches

Connect one line directly to the front plug of the module, and the return line to the central +24 V terminal block.

Technical data

If you require detailed technical data, refer to e.g. Catalog *ST 54.1 SIMATIC S5*.

32 digital inputs

- Voltage for signal 0 33 to +7 V
- Voltage for signal 1 +13 to +33 V
- Input current with signal 1 7 mA
- Permissible cable length
 - Unscreened < 600 m
 - Screened < 1000 m
- Slots required 1