

# FSPS-21 PROFIsafe safety functions module

## Quick installation guide

### Safety instructions



**WARNING!** Obey the safety instructions. If you ignore them, injury or death, or damage to the equipment can occur. See the user's manual.

### Description of the FSPS-21 module

The FSPS-21 PROFIsafe safety functions module provides a safe Ethernet connection between the drive and a safety PLC using the PROFIsafe over PROFINET IO protocol. The module supports the Safe torque off (STO) and Safe stop 1 with time monitoring (SS1-t) safety functions.

#### ■ Intentional misuse

Use the module according to the instructions given in the user's manuals. ABB is not responsible for any damage caused by the misuse of the module. The module is not designed to protect a machine against intentional misuse or sabotage.

#### ■ Limitations for use

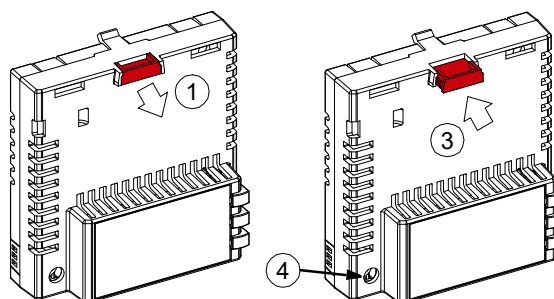
The FSPS-21 module is intended to be used together with ACS380, ACS580, ACS880 and DCS880 drives. The module must only be used in an environment where no conductive dust is present. For further information on environmental limits, see the FSPS-21 and drive hardware manuals.



**WARNING!** If you operate the drive system with a safety module in environmental conditions that are outside of the specified ranges for the safety module, this can cause that a safety function is lost.

### Mechanical installation

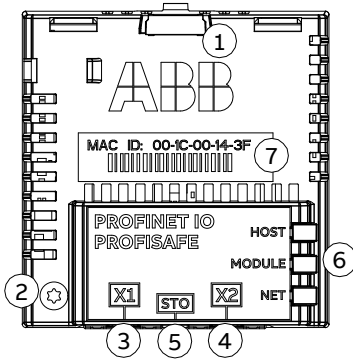
1. Pull out the lock.
2. Install the module carefully to an option module slot of the drive. See the drive hardware manual.
3. Push in the lock.
4. Tighten the screw to torque 0.8 N·m using a Torx TX10 screwdriver.



**WARNING!** Do not use excessive force, or leave the screw too loose. Over-tightening can damage the screw or module. A loose screw decreases the EMC performance, and can even cause an operation failure.

## Electrical installation

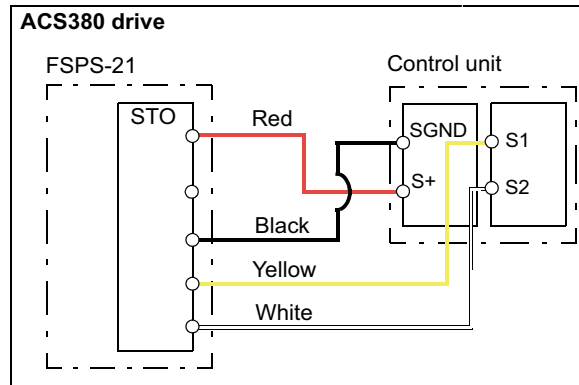
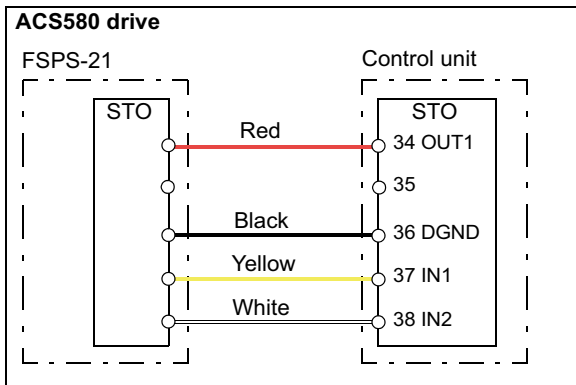
### Layout of the module



No.	Description
1	Lock
2	Mounting and grounding screw
3	RJ-45 connector [X1] to Ethernet
4	RJ-45 connector [X2] for chaining another module
5	STO connector (under connectors [X1] and [X2])
6	Diagnostic LEDs
7	MAC address

### Connection procedure

1. Connect the network cable to connector [X1] on the module.
2. If you want to create a daisy chain network with the FSPS-21 modules, connect connector [X2] of the first module to connector [X1] on the next module, and so on.
3. Connect the STO cable to the FSPS-21 module (black connector).
4. **ACS880/DCS880:** Connect the yellow connector to drive's STO connector.  
**ACS380/580:** Remove the yellow connector from the cable and connect the wires to drive's STO connectors (see figure below).



## Start-up

FSPS-21 will keep the drive's STO activated (safe state) until it has been properly configured and a proper safety program is in place in the safety PLC. See the user's manual for further information.

## Further information

See the latest version of *FSPS-21 PROFIsafe safety functions module user's manual* (3AXD50000158638 [English]) in ABB library [www.abb.com/drives/documents](http://www.abb.com/drives/documents)

*FSPS-21 manual*



For more information on ABB safety information and solutions, see ABB Safety information and solutions web page [new.abb.com/safety](http://new.abb.com/safety)

*ABB Safety information and solutions*



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