

LOW VOLTAGE AC DRIVES

# ABB all-compatible drives

## PROFIsafe safety functions module, FSPS-21



ABB offers a wide selection of all-compatible drives with the same user interface and tools for various power ranges and requirements. By integrating the FSPS-21 module into the drive it is possible to employ safety functions through PROFIsafe and control the drive through PROFINET.

### Seamless safety functionality and communication

#### Maximized safety and conformity

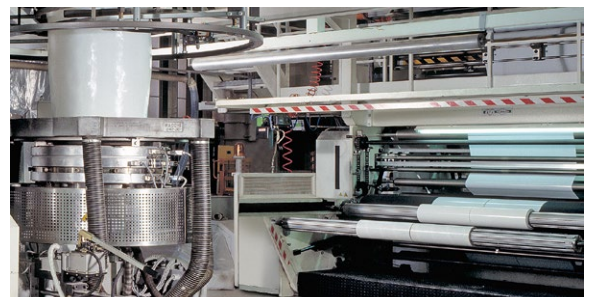
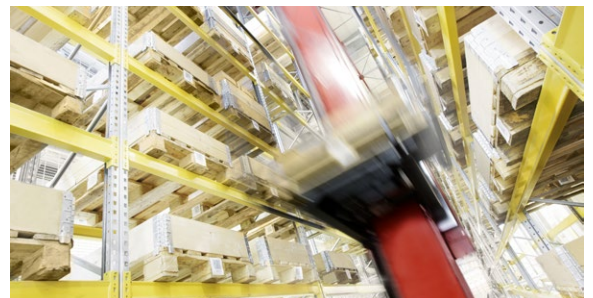
ABB drives with the integrated TÜV certified PROFIsafe safety functions module make your machines and processes safe. The module can be used in the most demanding applications (SIL3/PL e) without compromising safety.

#### Seamless integration

With the FSPS-21 you can seamlessly combine different types and sizes of drives with any safety PLC which supports PROFIsafe over PROFINET IO. Safety communication, drive control and PC tool communication can be established using only one Ethernet cable.

#### Cost effectiveness through simplicity

The total cost of the system is minimized by the reduced component costs, simplified engineering and space requirements. This is achieved by the integrated FSPS-21 inside the drive, eliminating the need for external components like safety relays and contactors. Also, the ready-made safety functions make safety configuration in the drive unnecessary.

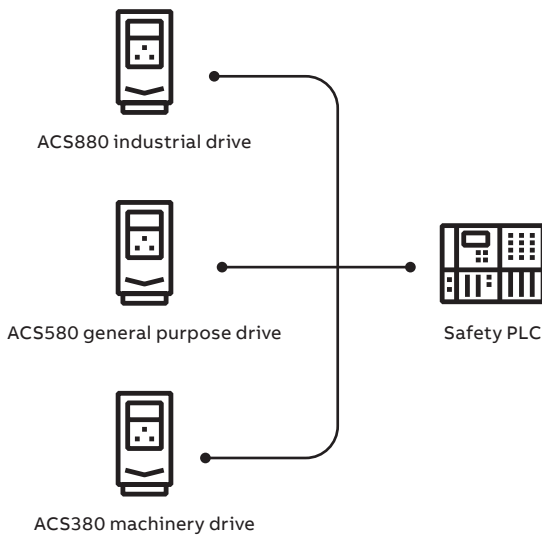


## Technical data

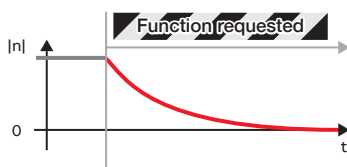
PROFIsafe safety functions module, FSPS-21	
Safety functions	Safe torque off (STO) Safe stop 1, time controlled (SS1-t)
Safety data *)	Performance level, PL e / cat.3 (EN ISO 138491-1) Safety integrity level, SIL 3 (IEC 61508, 62061, 61511, 61800-5-2)
Communication protocol	PROFINET IO PROFIsafe over PROFINET
Control profiles	ABB Drive and PROFIdrive
Connectors for communication	Integrated switch with two ports (RJ45)
Certificates	PROFINET (conformance class B (CC B)) PROFIsafe certified TÜV-certifications for safety
Configuration tools	Drive control panel, Drive composer PC tool or Drive Manager for PLC
Supported ABB drives	ACS380, ACS580 and ACS880 series drives

\*) Safety data can be found in ABB Drives VDMA safety data library file (in ABB Library) or in the user manual of FSPS-21. ABB has Functional safety design tool (FSDT-01) for SIL and PL verification.

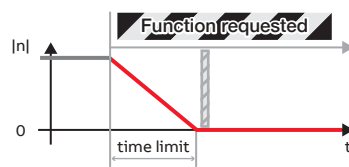
## Safe stopping functions through PROFIsafe



## Safe Torque Off (STO)



## Safe stop 1, time controlled (SS1-t)



For more information please contact your local ABB representative or visit:

[new.abb.com/drives](http://new.abb.com/drives)  
[new.abb.com/drives/drivespartners](http://new.abb.com/drives/drivespartners)  
[new.abb.com/drives/functional-safety](http://new.abb.com/drives/functional-safety)

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## Key features

**Integrated PROFIsafe controlled STO & SS1-t**  
Functional safety, PROFIsafe and PROFINET IO built-in inside the drive.

**For most demanding applications**  
SIL 3 and PL e (TÜV-certified)

**One module supporting several drive types**  
ACS380, ACS580 & ACS880. Same tools and user interface for all the supported drives.

**“One wire” for safety, control and PC tool**  
Safety communication, drive control, and PC tool communication can be done through the same Ethernet cable.

**Ready-made safety functions**  
No need for separate safety configuration in the drive.

**Other advanced PROFINET IO features**  
Support for Shared Device, enabling use of several controllers for one drive. Supports ring topology – Media Redundancy Protocol (MRP).

**Engineering tools to support PLC integration**  
Drive manager for various PLCs. Ready made function blocks for the PLC program for easy integration.