

Fail-safe digital expansion modules

Overview



Fail-safe digital inputs/outputs with degree of protection IP65/66/67 for application on the machine level without control cabinet

Fail-safe digital inputs

- For fail-safe reading of sensor information (1 or 2 channels)
- Provide integral discrepancy evaluation for 2-out-of-2 signals
- Internal sensor supplies (incl. test function) available

Fail-safe digital outputs

- Fail-safe 2-channel activation (sink/source output) by actuators
- Actuators can be driven by up to 2 A

All modules are certified up to Cat. 4 (EN 954-1) and up to SIL 3 (IEC 61508) and feature detailed diagnostics.

The modules support PROFIsafe, both in PROFIBUS, and in PROFINET configurations. They can be used with IM 151-7 F-CPU, CPU 31xF-2 DP, CPU 31xF-2 PN/DP and CPU 416F-2.

Application

The fail-safe modules of ET200pro can be used to implement the safety-related application requirements as an integral part of the overall automation. The safety functions required for fail-safe operation are integrated in the modules. The modules can be used for safety circuits up to Cat. 4/ SIL 3.

Communication to fail-safe SIMATIC S7 CPUs is performed by means of PROFIsafe.

The modules can be operated in a distributed configuration down-circuit of the IM 154-2 High Feature and IM 154-4 PROFINET High Feature interface modules.

A standard power module is required to supply the modules.

Ordering data

Order No.

Fail-safe digital input module 8/16 F-DI PROFIsafe

6ES7 148-4FA00-0AB0

24 V DC, including bus module
Connecting module must be ordered separately

Fail-safe digital input/output module 4/8 F-DI, 4 F-DO 2 A

6ES7 148-4FC00-0AB0

24 V DC, including bus module
Connecting module must be ordered separately

Accessories

Connection module

6ES7 194-4DC00-0AA0

For the fail-safe electronic module 4/8 F-DI/4 F-DO, 24 V DC/2 A

Connection module

6ES7 194-4DD00-0AA0

For the fail-safe electronic module 8/16 F-DI, 24 V DC/2 A

IM 154-2 High Feature interface module

6ES7 154-2AA00-0AB0

For ET 200pro, incl. termination module

PROFINET interface module IM 154-4 PN

6ES7 154-4AB00-0AB0

Including termination module

M12 covering cap

3RX9 802-0AA00

For protection of unused M12 connections with ET 200pro

M12 connector, can be assembled in the field

3RX1 667

5-pin, for connecting digital sensors and actuators, 1 unit

M12 connecting cable

With PUR sheath, for connecting digital sensors and actuators, pre-assembled, with connector and socket at each end

- 3 x 0.34 mm², fixed lengths, 1 unit

- 0.6 m
- 1 m
- 1.5 m

3RX1 633
3RX1 634
3RX1 635

- 4 x 0.34 mm², fixed lengths, 1 unit

- 0.6 m
- 1 m
- 1.5 m

3RX1 640
3RX1 641
3RX1 642