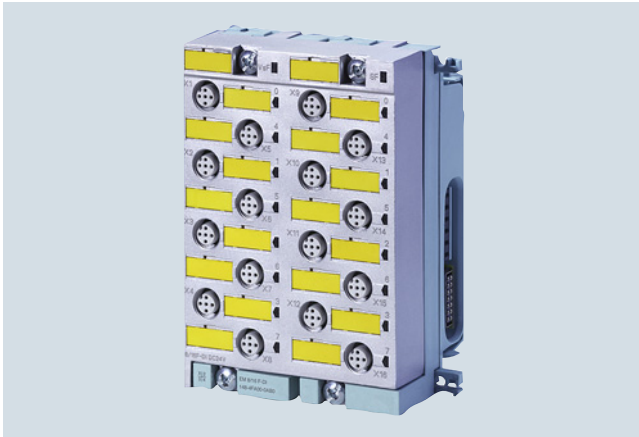


Overview



Fail-safe digital inputs/outputs with IP65/66/67 degree of protection 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 SIL 3 (IEC 61508) and feature detailed diagnostics.

The modules support PROFIsafe, both in PROFIBUS, and in PROFINET configurations. They can be used with IM151-7 F-CPU, CPU31xF-2 DP, CPU31xF-2 PN/DP and CPU416F-2.

Technical specifications

Article number	6ES7148-4FA00-0AB0 ET 200PRO, EL-MOD., 8/16 F-DI 24V DC
Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes
Power loss	
Power loss, typ.	4.5 W
Digital inputs	
Number of digital inputs	16
Input current	
• for signal *1*, typ.	3.7 mA
Dimensions	
Width	90 mm
Height	130 mm
Depth	65 mm

Article number	6ES7148-4FC00-0AB0 ET 200PRO,EL-MOD,4/8 F-DI/4 F-DO 24VDC/2A	6ES7148-4FS00-0AB0 ET 200PRO,EL-MOD, F-SWITCH PROFISAFE
Supply voltage		
Rated value (DC)	24 V	24 V
Power loss		
Power loss, typ.	5.8 W	3 W
Digital inputs		
Number of digital inputs	8	2
Input current		
• for signal *1*, typ.	3.7 mA	3.5 mA
Digital outputs		
Number of digital outputs	4	3
Short-circuit protection	Yes	Yes
Output current		
• for signal *1* rated value	2 A	
Dimensions		
Width	90 mm	45 mm
Height	130 mm	130 mm
Depth	65 mm	65 mm

I/O systems

SIMATIC ET 200 systems without control cabinet

SIMATIC ET 200pro

I/O modules > Fail-safe expansion modules > Fail-safe digital expansion modules

Ordering data	Article No.		Article No.
Fail-safe digital input module 8/16 F-DI PROFIsafe 24 V DC, including bus module. Connection module must be ordered separately	6ES7148-4FA00-0AB0	Accessories	
Fail-safe digital input/output module 4/8 F-DI, 4 F-DO 2 A 24 V DC, including bus module. Connection module must be ordered separately	6ES7148-4FC00-0AB0	Connection module For the fail-safe electronic module F-Switch PROFIsafe	6ES7194-4DA00-0AA0
Fail-safe electronic module F-Switch PROFIsafe Three fail-safe PP-switching outputs for safe switching of the rear panel busbar (2L+, F0, F1); two fail-safe digital inputs, 45 mm; usable up to SIL3 (IEC 61508)	6ES7148-4FS00-0AB0	Connection module For the fail-safe electronic module 4/8 F-DI/4 F-DO, 24 V DC/2 A	6ES7194-4DC00-0AA0
		Connection module For the fail-safe electronic module 8/16 F-DI, 24 V DC	6ES7194-4DD00-0AA0
		PROFIBUS DP interface module IM154-2 Including termination module	6ES7154-2AA01-0AB0
		PROFINET interface module IM154-4 PN Including termination module	6ES7154-4AB10-0AB0
		M12 sealing cap For protection of unused M12 connections with ET 200pro	3RX9802-0AA00