

SIEMENS

Product Information ET 200iSP

**4F-DO Ex 17,4V/40mA,
6ES7138-7FD00-0AB0**

A5E02913282-AG

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Technical data subject to change

4F-DO Ex 17.4V/40mA, 6ES7138-7FD00-0AB0**Product information leaflet**

This product information leaflet contains important information about the fail-safe electronic module 4F-DO Ex 17.4V/40mA.

Characteristics

- The electronic module is used to switch solenoid valves, DC relays, indicator lamps and actuators.
- The electronic module is plugged into the TM-IM/EM or TM-EM/EM terminal module.

Further information

Further information about the electronic module is provided in the *"SIMATIC Distributed I/O ET 200iSP Distributed I/O Device - Fail-safe Modules"* operating instructions. Information about the ET 200iSP system and its use in hazardous areas is provided in the *"SIMATIC Distributed I/O ET 200iSP"* operating instructions.

These operating instructions can be obtained free-of-charge on the Internet at:

<https://support.industry.siemens.com/cs/ww/en/my>

Maintenance

The module is maintenance-free. For repairs, you need to send the electronic module to the manufacturing location. Repairs may only be carried out there. If problems occur, please contact your local Siemens office:

<https://support.industry.siemens.com/cs/ww/en/sc>

Certification			
ATEX		II 2 G (1) G Ex ib [ia Ga] IIC T4 Gb II 2 G (1) D Ex ib [ia IIIC Da] IIC T4 Gb I M2 Ex ib [ia] I Mb KEMA 10 ATEX 0057	CE 0344
IECEX		IECEX KEM 10.0028	
INMETRO		UL-BR 11.0088	
UKCA		DEKRA 21UKEX0132 Importer UK: Siemens plc Manchester M20 2UR	
CCC		GB 3836.1-2010 (Explosive atmospheres - Part 1: Equipment - General requirements), GB 3836.4-2010 (Explosive atmospheres - Part 4: Equipment protection by intrinsic safety "i"), GB 12476.1-2013 (Electrical apparatus for use in the presence of combustible dust - Part 1: General requirements), GB 12476.4-2010 (Electrical apparatus for use in the presence of combustible dust - Part 4: Protection by intrinsic safety "ID")	
EACEx		1Ex ib [ia Ga] IIC T4 Gb PB Ex ib [ia Ma] I Mb [Ex ia Da] IIIC	

**Note**

The electronic submodule with device category 2G may be used in zone 1 hazardous areas. Actuators with device categories 1G, 2G and 3G for zones 0, 1, and 2 as well as device categories 1D, 2D and 3D for zones 20, 21 and 22 may be connected to the outputs of the electronic submodule

Installation**Danger**

It is possible that sparks or impermissibly high surface temperatures may occur during installation. Never perform an installation under explosive conditions!

- During installation, observe the EN 60079-14 regulations.
- The electronic submodule must be mounted in Zone 1 in an enclosure with the Ex e degree of protection.
- The device can only be used in an area with a pollution degree of maximum 2 according to IEC 60664-1.
- In Zone 2, the device must be installed in a suitable enclosure providing a degree of protection of at least IP54 according to IEC 60079-7

Wiring the TM-IM/EM, TM-EM/EM terminal submodule

- When laying the cable and connecting the submodule, observe the regulations in EN 60079-14 plus any applicable national regulations
- In wiring the submodule, you must strictly separate the intrinsically safe lines from the non-intrinsically safe. They must be laid in separate cable ducts.
- Actuators from Zone 0, Zone 1, Zone 2 as well as Zone 20, Zone 21, Zone 22 and the secured area may be connected to the terminal submodule. The terminal assignment of the

electronic submodule can be found in the *ET 200iSP - Fail-safe Modules* operating instructions.

- The safety data (maximum values) for the sensors/actuators must be adjusted to the electronic submodule's corresponding maximum values. The maximum values of the sensors/actuators can be found in the associated ex certificates. In accordance with EN 60079-14, the following applies:
 $U_0 \leq U_i$; $I_0 \leq I_i$; $P_0 \leq P_i$; $C_0 \geq C_i + C_{Line}$; $L_0 \geq L_i + L_{Line}$

Assembly

- Check the electronic submodule for damage. Only connect undamaged electronic submodules to the terminal module.
- The first time that an electronic submodule is inserted, the coding element on the terminal submodule will snap in, which prevents the insertion of an incorrect submodule. This mechanical coding may not be changed.
- In Zone 1 and Zone 2, the electronic submodule may be inserted and removed during operation. The enclosure (Ex e / IP 54) in which the ET 200iSP is found may only be opened briefly for this purpose (see the *ET 200iSP* operating instructions).
- In configuring the ET 200iSP, you must consider the permissible number of electronic submodules (see the *ET 200iSP* operating instructions, Chapter 3.6). Information on the required functional power consumption for this is provided in the *ET 200iSP - Fail-safe Modules* operating instructions.

Commissioning

- The relevant national regulations must be observed when commissioning the system.
- When checking the functionality of the equipment, observe the EN 60079-17 guidelines. This standard includes the regulations found in the international standard IEC 60 079-17.
- The parallel combination of output current circuits is permitted for a maximum of two power circuits which are wired in parallel. In this case, the separately listed electronic data on the EC special test certificate apply.

For use in the USA and Canada

The control drawing for the ET 200iSP system is provided with the power supply module. Alternatively, you can find the latest edition at

<https://support.industry.siemens.com/cs/ww/en/>

Reference A5E00455287.

Technical Data

Voltages, currents, potentials		
Isolation		
• between channels and the backplane bus		Yes
• between channels		No
• between channels and load voltage (power bus)		Yes
Current consumption		
• from load voltage L+ (power bus)		max. 510 mA
Power loss of the module		max. 5.3 W
Safety data		
Uo = 18.5 V		
Io = 112.2 mA		
Po = 0.519 W		
Co = 267 nF		
Lo = 3 mH		
See certificate IECEx KEM 10.0028 for more information		
https://www.iecex.com		
KEMA 10 ATEX0057		
INMETRO UL-BR 11.0088		
https://support.industry.siemens.com		