



Fail-safe digital module DM-F PROFIsafe, for fail-safe shutdown via bus/PROFIsafe, Us: 24 V DC, 2 relay enabling circuits, 2 relay outputs, 3 inputs, maximum achievable SIL IEC 61508: 3, maximum achievable PL ISO 13849-1: E

product brand name	SIRIUS
product designation	Fail-safe digital module
design of the product	for fail-safe shutdown
product type designation	DM-FP

General technical data

product function	
• EMERGENCY OFF function	No
• automatic start	No
• light barrier monitoring	No
• light array monitoring	No
• protective door monitoring	No
• magnetically operated switch monitoring NC-NO	No
• magnetically operated switch monitoring NC-NC	No
• pressure-sensitive mat monitoring	No
• monitored start-up	No
product feature cross-circuit-proof	Yes
product component	
• input for thermistor connection	No
• digital input	Yes
• input for analog temperature sensors	No
• input for ground fault detection	No
• relay output	Yes
consumed active power	4 W
insulation voltage with degree of pollution 3 at AC rated value	300 V
surge voltage resistance rated value	4 000 V
protection class IP	IP20
shock resistance according to IEC 60068-2-27	15g / 11 ms
vibration resistance according to IEC 60068-2-6	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
operating frequency maximum	360 1/h
switching capacity current of the NO contacts of the relay outputs at AC-15	
• at 24 V	3 A
• at 120 V	3 A
• at 240 V	1.5 A
switching capacity current of the NO contacts of the relay outputs at DC-13	
• at 24 V	4 A
• at 60 V	0.55 A
• at 125 V	0.22 A
• at 250 V	0.11 A
switching capacity current of relay enabling circuits at AC-15	

<ul style="list-style-type: none"> • at 24 V • at 120 V • at 240 V 	3 A 3 A 1.5 A
switching capacity current of relay enabling circuits at DC-13	
<ul style="list-style-type: none"> • at 24 V • at 60 V • at 125 V • at 250 V 	4 A 0.55 A 0.22 A 0.11 A
mechanical service life (operating cycles) typical electrical endurance (operating cycles) typical	10 000 000 100 000
buffering time in the event of power failure backslide delay time in the event of power failure	60 ms
<ul style="list-style-type: none"> • typical • maximum 	40 ms 80 ms
reference code according to IEC 81346-2	F
type of input characteristic	Type 2 in accordance with EN 61131-2
Substance Prohibitance (Date) certificate of suitability according to ATEX directive 2014/34/EU	05/01/2012 BVS 06 ATEX F001
explosion device group and category according to ATEX directive 2014/34/EU	II (2) G, II (2) D, I (M2)
Electromagnetic compatibility	
EMC emitted interference according to IEC 60947-1 EMC immunity according to IEC 60947-1	class A corresponds to degree of severity 3
conducted interference	
<ul style="list-style-type: none"> • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000-4-6 	2 kV network connection / 1 kV control connection 1 kV 0.5 kV 10 V
field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 conducted HF interference emissions according to CISPR11 field-bound HF interference emission according to CISPR11	10 V/m 6 kV contact discharge / 8 kV air discharge corresponds to degree of severity A corresponds to degree of severity A
Inputs/ Outputs	
product function	
<ul style="list-style-type: none"> • parameterizable inputs • parameterizable outputs 	Yes Yes
number of inputs	4
input version with safety-related function	3 sensor inputs 24 V DC, 1 feedback circuit input
design of input	
<ul style="list-style-type: none"> • feedback input 	Yes
number of digital inputs	3
<ul style="list-style-type: none"> • with a common reference potential 	4
digital input version	
<ul style="list-style-type: none"> • type 1 acc. to IEC 61131 • type 2 acc. to IEC 61131 	No Yes
number of analog inputs	0
number of outputs	2
number of semiconductor outputs	0
number of outputs	
<ul style="list-style-type: none"> • as contact-affected switching element • as contact-affected switching element as NO contact safety-related instantaneous contact 	2 2
number of analog outputs	0
switching behavior	monostable
property of contacts of the relay outputs	Fail-safe NO contacts
wire length for digital signals maximum	300 m
Product Function	
suitability for use	

<ul style="list-style-type: none"> • position switch monitoring • EMERGENCY-OFF circuit monitoring • valve monitoring • opto-electronic protection device monitoring • tactile sensor monitoring • magnetically operated switch monitoring • proximity switch monitoring • safety switch • safety-related circuits 	No
	No
	No
	No
	No
	No
	No
	No
	No
	No
	No
Communication/ Protocol	
protocol is supported PROFIsafe protocol	Yes
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting
height	106 mm
width	45 mm
depth	124 mm
required spacing	
<ul style="list-style-type: none"> • top • bottom • left • right 	40 mm 40 mm 0 mm 0 mm
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded 	1x (0.5 ... 4.0 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) 1x (20 ... 12), 2x (20 ... 14) 1x (20 ... 14), 2x (20 ... 16)
tightening torque with screw-type terminals	0.8 ... 1.2 N·m
tightening torque [lbf·in] with screw-type terminals	7 ... 10.3 lbf·in
Ambient conditions	
installation altitude at height above sea level	
<ul style="list-style-type: none"> • 1 maximum • 2 maximum • 3 maximum 	2 000 m 3 000 m; max. +50 °C (no protective separation) 4 000 m; max. +40 °C (no protective separation)
ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	-25 ... +60 °C -40 ... +80 °C -40 ... +80 °C
environmental category	
<ul style="list-style-type: none"> • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 	3K6 (no formation of ice, no condensation, relative humidity 10 ... 95%), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (no condensation, relative humidity 10 ... 95%), 1C2 (no salt mist), 1S2 (sand must not get into the devices), 1M4 2K2, 2C1, 2S1, 2M2
relative humidity during operation	5 ... 95 %
contact rating of auxiliary contacts according to UL	B300 / R300
Short-circuit protection	
design of the fuse link for short-circuit protection of relay enabling circuits required	gL/gG: 4 A
Safety related data	
safety device type according to IEC 61508-2	Type B
Safety Integrity Level (SIL)	
<ul style="list-style-type: none"> • according to IEC 61508 	3
SIL Claim Limit (subsystem)	
<ul style="list-style-type: none"> • according to EN 62061 	3
performance level (PL)	
<ul style="list-style-type: none"> • according to EN ISO 13849-1 	e
category	
<ul style="list-style-type: none"> • according to EN ISO 13849-1 	4
stop category according to EN 60204-1	0

average diagnostic coverage level (DCavg)	99 %
failure rate [FIT]	
• at rate of recognizable hazardous failures (λ_{dd})	897.34 FIT
• at rate of non-recognizable hazardous failures (λ_{du})	7.37 FIT
safe state	Safety outputs switched off
touch protection against electrical shock	finger-safe
contact reliability	0.1 million operating cycles (AC15, 230 V, 2 A)

Response times/ Monitoring times

PROFIsafe monitoring time F-WD-Time	250 ms
response time	
• in case of failure OFDT	200 ms
• in faultless state WCDT	150 ms

Galvanic isolation

(electrically) protective separation according to IEC 60947-1	All circuits in SIMOCODE pro are with protective separation, i.e. they are designed with doubled creepage paths and clearances. NOTICE: The information in the "Protective Separation" test report, No. 2668, must be observed.
design of the electrical isolation	Protective separation in accordance with IEC 60947-1 for all circuits, up to installation altitude of 2000 m

Control circuit/ Control

type of voltage of the control supply voltage	DC
control supply voltage at DC	
• rated value	24 V
operating range factor control supply voltage rated value at DC	
• initial value	0.8
• full-scale value	1.2
inrush current peak	
• at 24 V	8.3 A
duration of inrush current peak	
• at 24 V	1 ms

Certificates/ approvals

General Product Approval	EMC
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[Confirmation](#)



For use in hazardous locations	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
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[Type Examination Certificate](#)



[Type Test Certificates/Test Report](#)

Marine / Shipping	other
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[Confirmation](#)

[PROFIsafe-Certification](#)



Further information

Siemens has decided to exit the Russian market (see here).
<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.
Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UF7330-1AB00-0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7330-1AB00-0>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

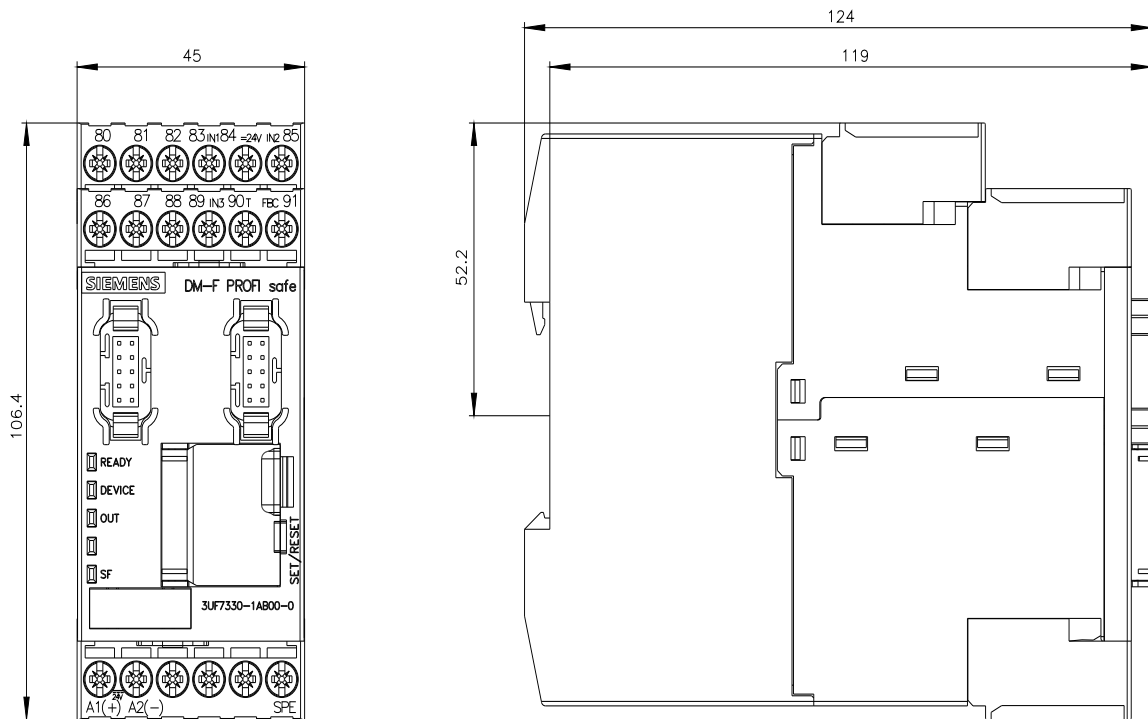
<https://support.industry.siemens.com/cs/ww/en/ps/3UF7330-1AB00-0>

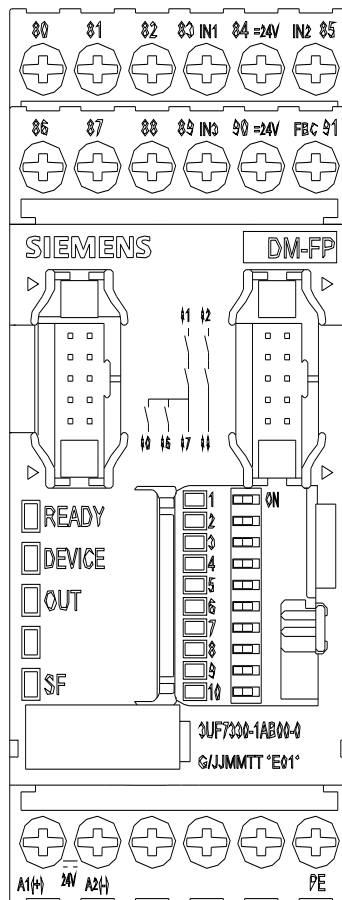
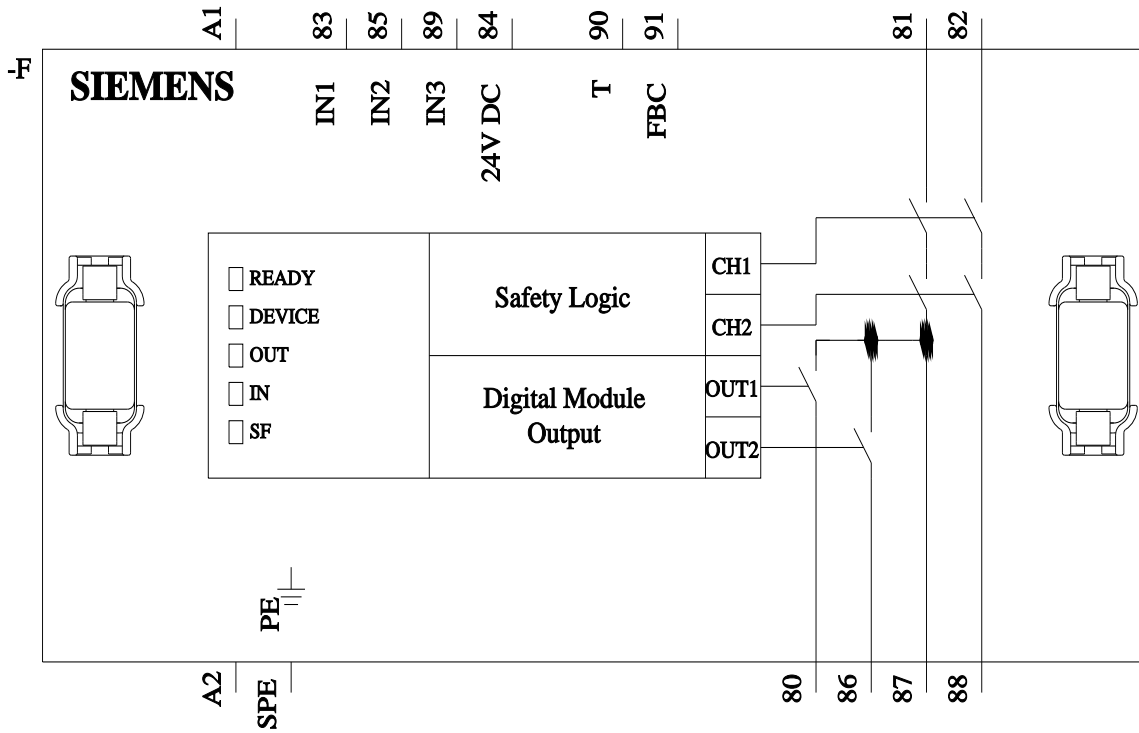
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7330-1AB00-0&lang=en

Test report No. A0258, protective separation

<https://support.industry.siemens.com/cs/ww/en/view/109748152>





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