



Fail-safe digital module DM-F PROFIsafe, for fail-safe shutdown via bus/PROFIsafe, Us: 110...240 V AC/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	
<ul style="list-style-type: none"> ● EMERGENCY OFF function ● automatic start ● light barrier monitoring ● light array monitoring ● protective door monitoring ● magnetically operated switch monitoring NC-NO ● magnetically operated switch monitoring NC-NC ● pressure-sensitive mat monitoring ● monitored start-up 	<ul style="list-style-type: none"> No No No No No No No No No
product feature cross-circuit-proof	Yes
product component	
<ul style="list-style-type: none"> ● input for thermistor connection ● digital input ● input for analog temperature sensors ● input for ground fault detection ● relay output 	<ul style="list-style-type: none"> No Yes No No Yes
apparent power consumption	11 VA
consumed active power	5.5 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
operating frequency maximum	360 1/y
switching capacity current of the NO contacts of the relay outputs at AC-15	
<ul style="list-style-type: none"> ● at 24 V ● at 120 V ● at 240 V 	<ul style="list-style-type: none"> 3 A 3 A 1.5 A
switching capacity current of the NO contacts of the relay outputs at DC-13	
<ul style="list-style-type: none"> ● at 24 V ● at 60 V ● at 125 V ● at 250 V 	<ul style="list-style-type: none"> 4 A 0.55 A 0.22 A 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 	<p>3 A</p> <p>3 A</p> <p>1.5 A</p>
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 	<p>4 A</p> <p>0.55 A</p> <p>0.22 A</p> <p>0.11 A</p>
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) typical	100 000
buffering time in the event of power failure	200 ms
backslide delay time in the event of power failure	
<ul style="list-style-type: none"> • typical • maximum 	<p>220 ms</p> <p>320 ms</p>
reference code according to IEC 81346-2	F
reference code according to IEC 81346-2:2019	F
type of input characteristic	Type 2 in accordance with EN 61131-2
Substance Prohibition (Date)	05/01/2012
SVHC substance name	Blei - 7439-92-1 Bleimonoxid (Bleioxid) - 1317-36-8 Bleitanzirkonoxid - 12626-81-2 2,2',6,6'-Tetrabrom-4,4'-isopropylidendi - 79-94-7
certificate of suitability according to ATEX directive 2014/34/EU	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	class A
EMC immunity according to IEC 60947-1	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 	<p>2 kV network connection / 1 kV control connection</p> <p>2 kV</p> <p>1 kV</p> <p>10 V</p>
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
conducted HF interference emissions according to CISPR11	corresponds to degree of severity A
field-bound HF interference emission according to CISPR11	corresponds to degree of severity A
Inputs/ Outputs	
product function	
<ul style="list-style-type: none"> • parameterizable inputs • parameterizable outputs 	<p>Yes</p> <p>Yes</p>
number of inputs	4
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 	<p>No</p> <p>Yes</p>
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 	<p>2</p> <p>2</p>
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 	<ul style="list-style-type: none"> No No No No No No No No No
Communication/ Protocol	
protocol is supported PROFI-safe 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 	<ul style="list-style-type: none"> 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 • for AWG cables solid • for AWG cables stranded 	<ul style="list-style-type: none"> 1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²) 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> -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 	<ul style="list-style-type: none"> 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	
safe state	Safety outputs switched off
stop category according to EN 60204-1	0
failure rate [FIT] at rate of recognizable hazardous failures (λ_{dd})	909 FIT
failure rate [FIT] at rate of non-recognizable hazardous	7 FIT

failures (λ_{du})		
average diagnostic coverage level (DCavg)	99 %	
ISO 13849		
performance level (PL) according to EN ISO 13849-1	e	
IEC 61508		
Safety Integrity Level (SIL)		
• according to IEC 61508	3	
safety device type according to IEC 61508-2	Type B	
PFDavg with low demand rate		
• according to IEC 61508	2E-5	
Safe failure fraction (SFF)	99 %	
hardware fault tolerance according to IEC 61508	1	
T1 value for proof test interval or service life according to IEC 61508	20 a	
Electrical Safety		
touch protection against electrical shock	finger-safe	
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	AC/DC	
control supply voltage at AC		
• at 50 Hz rated value	110 ... 240 V	
• at 60 Hz rated value	110 ... 240 V	
control supply voltage frequency 1	50 ... 60 Hz	
control supply voltage frequency		
• 1 rated value	50 Hz	
• 2 rated value	60 Hz	
control supply voltage at DC		
• rated value	110 ... 240 V	
operating range factor control supply voltage rated value at DC		
• initial value	0.85	
• full-scale value	1.1	
operating range factor control supply voltage rated value at AC at 50 Hz		
• initial value	0.85	
• full-scale value	1.1	
operating range factor control supply voltage rated value at AC at 60 Hz		
• initial value	0.85	
• full-scale value	1.1	
inrush current peak		
• at 240 V	24 A	
duration of inrush current peak		
• at 240 V	0.5 ms	
Approvals Certificates		
General Product Approval	EMC	For use in hazardous locations

[Confirmation](#)



For use in hazardous locations	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
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IECEX

[Explosion Protection Certificate](#)

[Type Examination Certificate](#)



EG-Konf.

[Type Test Certificates/Test Report](#)

Marine / Shipping	other
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ABS



RMRS



DNV GL

[Confirmation](#)



Profibus

[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=3UF7330-1AU00-0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7330-1AU00-0>

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

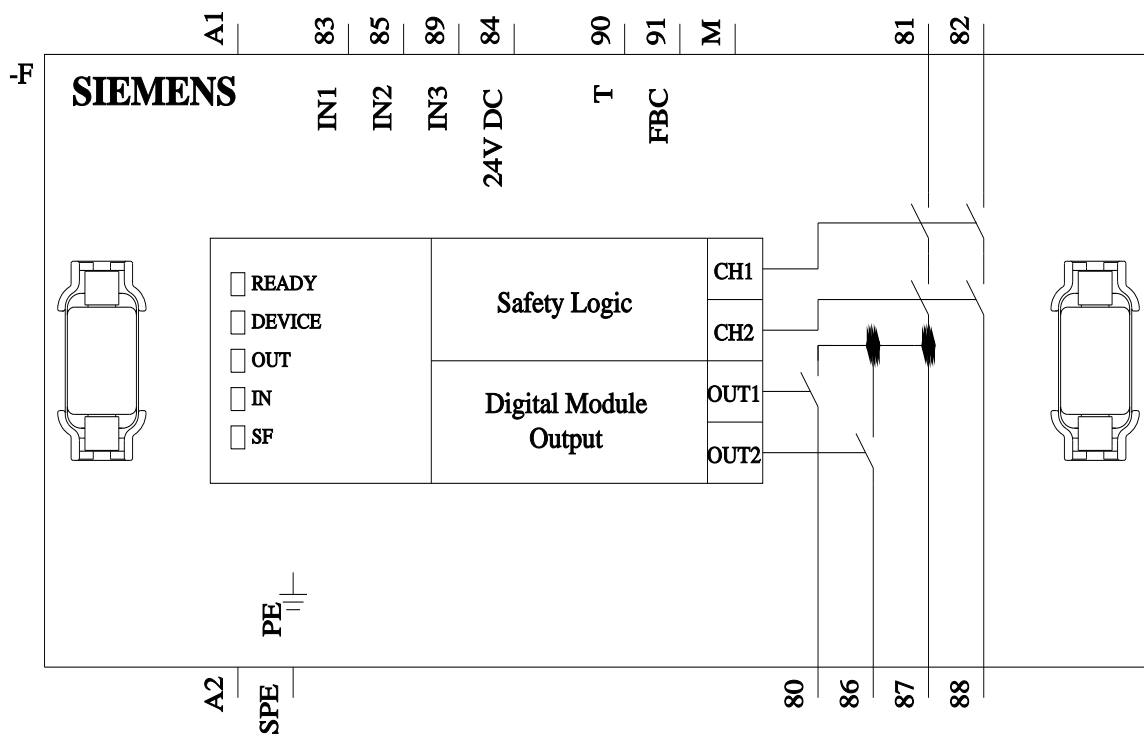
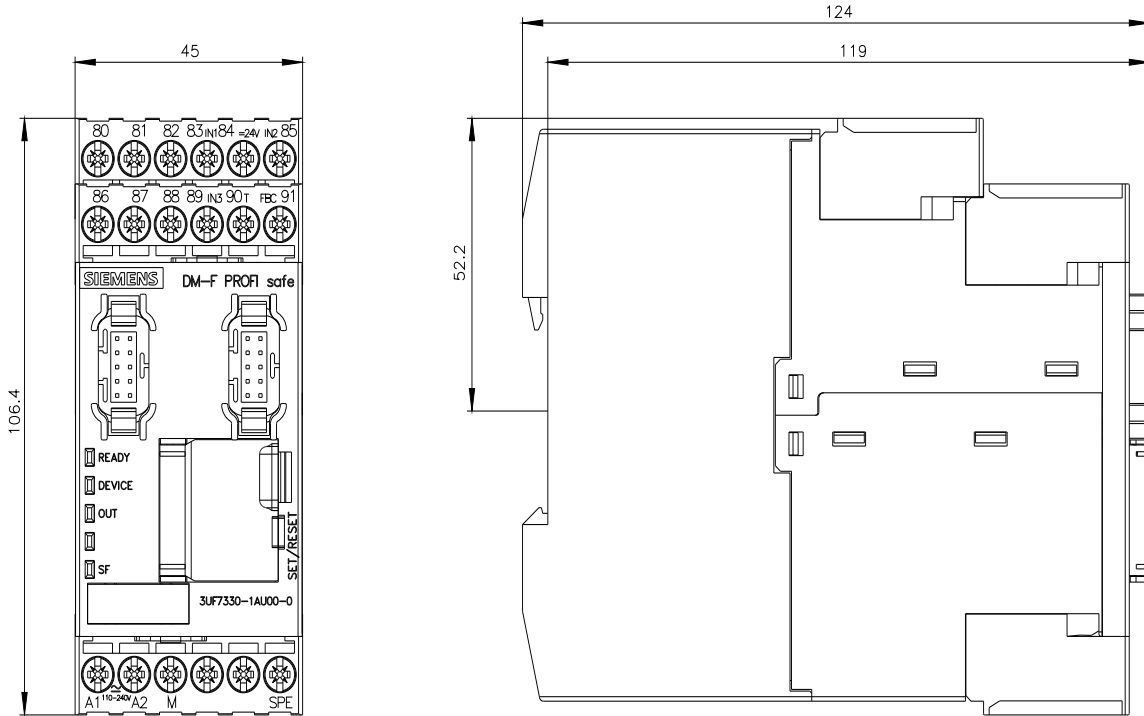
<https://support.industry.siemens.com/cs/ww/en/ps/3UF7330-1AU00-0>

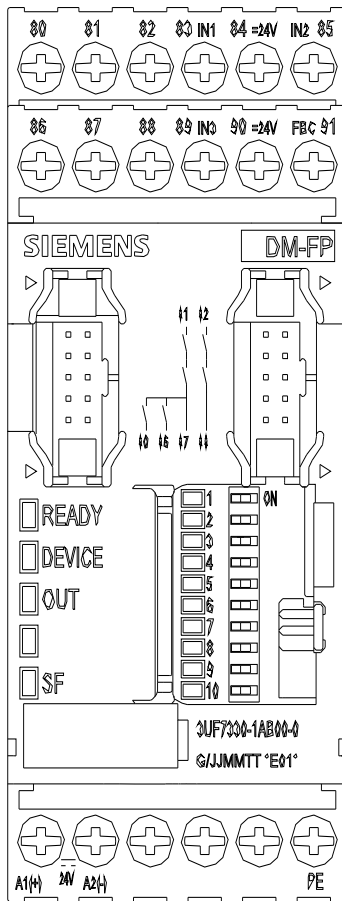
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7330-1AU00-0&lang=en

Test report No. A0258, protective separation

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





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