



fail-safe digital module DM-F local, for fail-safe shutdown via hardware signal Us: 110...240 V AC/DC 2 relay enabling circuits, 2 relay outputs, safety function can be set via DIP switch, maximum achievable SIL IEC 61508: 3, maximum achievable PL ISO 13849-1: E

product brand name	SIMOCODE
product designation	Fail-safe digital module
design of the product	for emergency off and safety doors
product type designation	DM-FL
General technical data	
product function	
• EMERGENCY OFF function	Yes
• automatic start	Yes
• light barrier monitoring	Yes
• light array monitoring	Yes
• protective door monitoring	Yes
• magnetically operated switch monitoring NC-NO	Yes
• magnetically operated switch monitoring NC-NC	Yes
• pressure-sensitive mat monitoring	Yes
• monitored start-up	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
apparent power consumption	9.5 VA
consumed active power	4.5 W
insulation voltage with degree of pollution 3 at AC rated value	300 V
surge voltage resistance rated value	4 000 V
shock resistance according to IEC 60068-2-27	15 g / 11 ms
vibration resistance according to IEC 60068-2-6	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2 g
operating frequency maximum	360 1/y
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	
• at 24 V	3 A
• at 120 V	3 A
• at 240 V	1.5 A
switching capacity current of relay enabling circuits 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
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
recovery time	
• after power failure typical	8 s
• after opening of the safety circuits typical	250 ms
make time with automatic start	
• typical	50 ms
• maximum	100 ms
• at DC maximum	100 ms
• at AC maximum	100 ms
• after power failure typical	8 000 ms
• after power failure maximum	8 200 ms
backslide delay time after opening of the safety circuits typical	50 ms
backslide delay time in the event of power failure	
• typical	220 ms
• maximum	320 ms
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 Prohibitance (Date)	05/01/2012
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol CAS-No. 79-94-7 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
Net Weight	0.354 kg
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	
• due to burst according to IEC 61000-4-4	2 kV network connection / 1 kV control connection
• due to conductor-earth surge according to IEC 61000-4-5	2 kV
• due to conductor-conductor surge according to IEC 61000-4-5	1 kV
• due to high-frequency radiation according to IEC 61000-4-6	10 V
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	
• parameterizable inputs	Yes
• parameterizable outputs	Yes
number of inputs	5
design of input	
• cascading input/functional switching	Yes

• feedback input • start input	Yes Yes
pulse duration	
• of the sensor input minimum • of the ON pushbutton input minimum • of the cascading input minimum	30 ms 0.2 s 0.2 s
number of digital inputs	0
• with a common reference potential	4
digital input version	
• type 1 acc. to IEC 61131 • type 2 acc. to IEC 61131	No Yes
number of analog inputs	0
number of sensor inputs	
• 1-channel or 2-channel • 2-channel	1 1
number of outputs	2
number of semiconductor outputs	0
number of outputs 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	1 500 m
Product Function	
suitability for use	
• 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	Yes Yes No Yes No Yes No Yes 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	
• 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 electrical connection for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
• solid • finely stranded with core end processing • for AWG cables solid • for AWG cables stranded	1x (0.5 ... 4.0mm²), 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	

• 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	
• during operation • during storage • during transport	-25 ... +60 °C -40 ... +80 °C -40 ... +80 °C
environmental category	
• 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	
safe state	Safety outputs switched off
diagnostics test interval by internal test function maximum	28 800 s
stop category according to IEC 60204-1	0
failure rate [FIT] at rate of recognizable hazardous failures (λ_{dd})	879 FIT
failure rate [FIT] at rate of non-recognizable hazardous failures (λ_{du})	7 FIT
average diagnostic coverage level (DCavg)	
• at single-channel evaluation • at 2-channel evaluation	90 % 99 %
IEC 62061	
Safety Integrity Level (SIL)	
• at single-channel evaluation according to IEC 62061 • at 2-channel evaluation according to IEC 62061	1 3
ISO 13849	
performance level (PL)	
• at single-channel evaluation according to ISO 13849-1 • at 2-channel evaluation according to ISO 13849-1	d e
category	
• at single-channel evaluation according to ISO 13849-1 • at 2-channel evaluation according to ISO 13849-1	2 4
IEC 61508	
Safety Integrity Level (SIL)	
• at single-channel evaluation according to IEC 61508 • at 2-channel evaluation according to IEC 61508	1 3
safety device type according to IEC 61508-2	Type B
PFDavg with low demand rate	
• at single-channel evaluation according to IEC 61508 • at 2-channel evaluation according to IEC 61508	0.00065 2E-5
Safe failure fraction (SFF)	99 %
hardware fault tolerance	
• at single-channel evaluation according to IEC 61508 • at 2-channel evaluation according to IEC 61508	0 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
ATEX	
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)
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				
Environment		General Product Approval		
Environmental Confirmations		    		
General Product Approval		EMV		For use in hazardous locations
TUEV		    		
For use in hazardous locations		Functional Safety	Test Certificates	Maritime application
		Miscellaneous	Type Examination Certificate	Type Test Certificates/Test Report
				
Maritime application		other		Industrial Communication
			Confirmation	Confirmation
				

Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3UF7320-1AU00-0>

Cax online generator

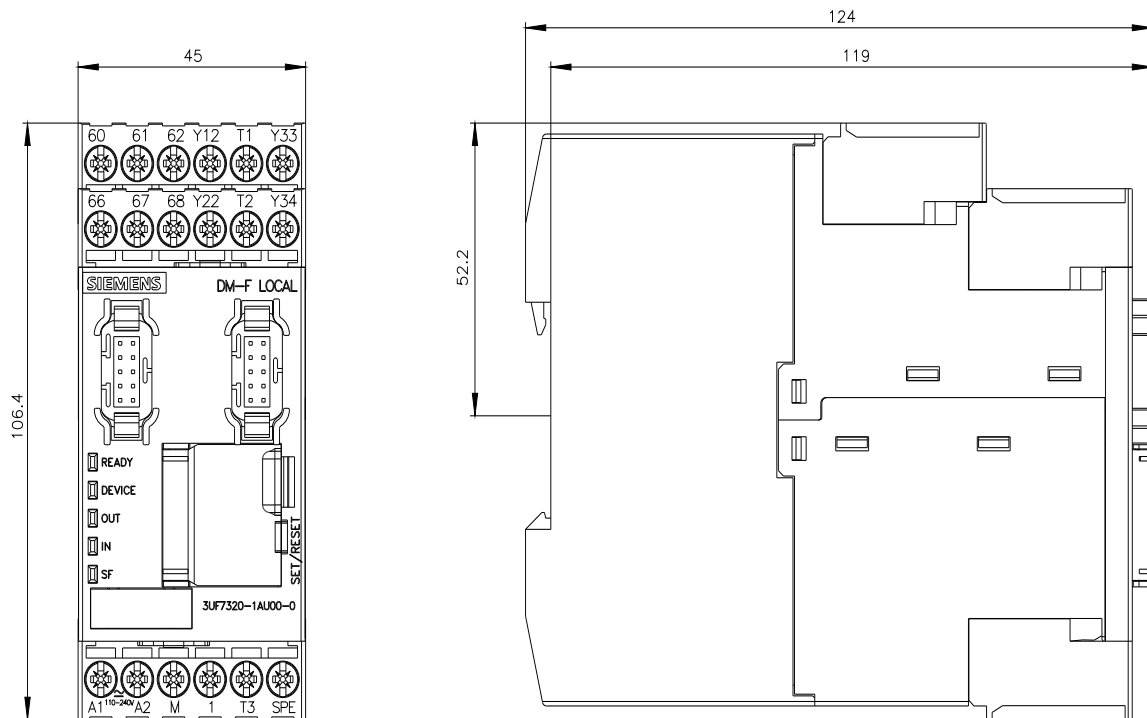
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7320-1AU00-0>

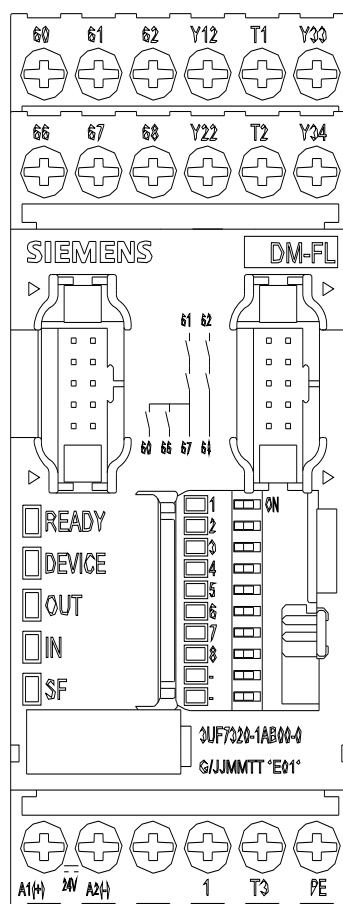
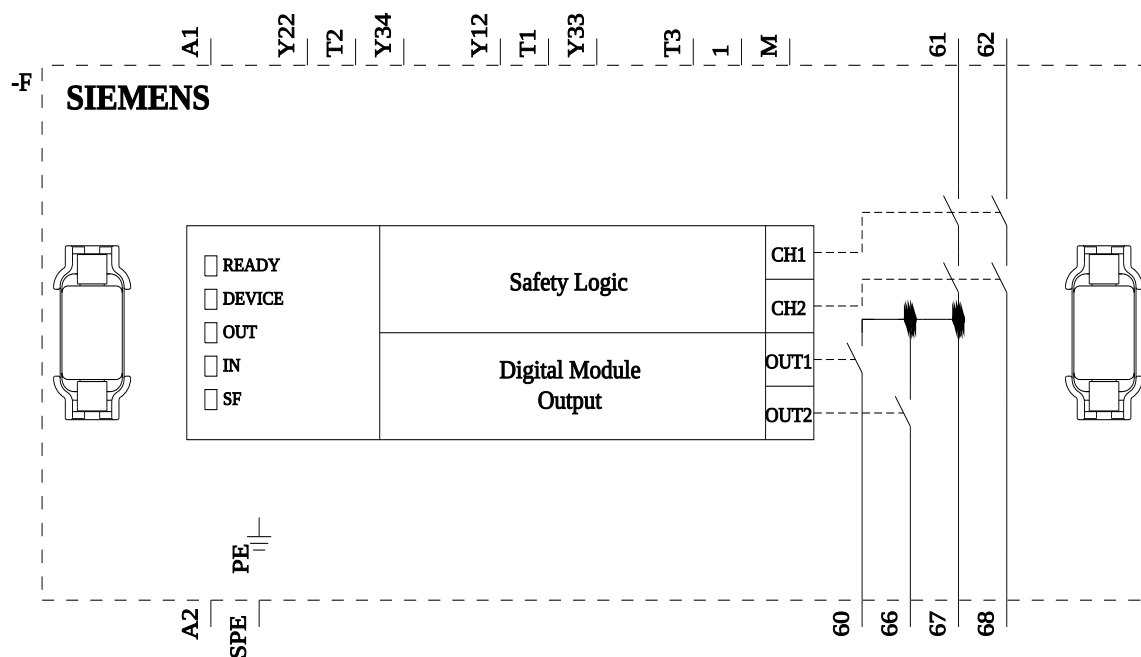
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3UF7320-1AU00-0>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7320-1AU00-0&lang=en





last modified:

4/4/2026