

Multifunctional module, 4 inputs and 2 relay outputs, input voltage 24 V DC, relay outputs monostable, analog residual current detection, with residual-current transformer 3UL23 Connection temperature sensor Pt100/Pt1000/KTY/NTC, max. 1 multifunctional module per basic unit SIMOCODE pro S



Figure similar

Product brand name	SIRIUS
Product designation	Multifunction module
Manufacturer's article number	
• 1 of residual current transformer connectable	3UL2302-1A
• 2 of residual current transformer connectable	3UL2303-1A
• 3 of residual current transformer connectable	3UL2304-1A
• 4 of residual current transformer connectable	3UL2305-1A
• 5 of residual current transformer connectable	3UL2306-1A
• 6 of residual current transformer connectable	3UL2307-1A
General technical data	
Type of current for monitoring	Type A (alternating currents and pulsing DC residual currents)
Response time maximum	0.1 s
Product function	
• difference current indication	Yes
Adjustable pick-up value current	40 ... 0.03 A
Product component	
• input for thermistor connection	No

• Digital input • input for residual current converter • input for analog temperature sensors • input for ground fault detection • Relay output	Yes Yes Yes Yes Yes
Insulation voltage	
• with degree of pollution 3 rated value	300 V
Surge voltage resistance rated value	4 000 V
Protection class IP	IP20
Shock resistance	
• when mounted on current measuring module acc. to IEC 60068-2-27	10 g / 11 ms
• acc. to IEC 60068-2-27	15g / 11 ms
Vibration resistance	
• acc. to IEC 60068-2-6	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
• when mounted on current measuring module acc. to IEC 60068-2-6	1 ... 4 Hz / 15 mm, 4 ... 500 Hz / 1g
Switching capacity current of the NO contacts of the relay outputs at AC-15	
• at 24 V	6 A
• at 120 V	6 A
• at 230 V	3 A
Switching capacity current of the NO contacts of the relay outputs at DC-13	
• at 24 V	2 A
• at 60 V	0.55 A
• at 125 V	0.25 A
Mechanical service life (switching cycles)	
• typical	10 000 000
Electrical endurance (switching cycles)	
• typical	100 000
Buffering time in the event of power failure	0.02 s
Reference code acc. to DIN EN 81346-2	F
Reference code acc. to DIN EN 61346-2	B
Continuous current of the NO contacts of the relay outputs	
• at 50 °C	6 A
• at 60 °C	5 A
Measurable temperature	
• with NTC minimum	80 °C
• with NTC maximum	160 °C
• with KTY 84 minimum	-40 °C
• with KTY 84 maximum	300 °C

• with KTY 83-110 minimum • with KTY 83-110 maximum • with Pt 1000 minimum • with Pt 1000 maximum • with Pt 100 minimum • with Pt 100 maximum	-50 °C 175 °C -50 °C 500 °C -50 °C 500 °C
Relative temperature-related measurement deviation at 20 °C	2 %
Sensor current for Pt 100 typical	1 mA
Sensor current for Pt 1000/KTY 83-110/KTY 84/NTC typical	0.2 mA
Diagnostics function at sensor input with residual current transformer	
• Short-circuit detection • Cable break detection	Yes Yes
Diagnostics function at sensor input with Pt 100	
• Short-circuit detection • Cable break detection	Yes Yes
Diagnostics function at sensor input with Pt 1000	
• Short-circuit detection • Cable break detection	Yes Yes
Diagnostics function at sensor input with KTY 83-110	
• Short-circuit detection • Cable break detection	Yes Yes
Diagnostics function at sensor input with KTY 84	
• Short-circuit detection • Cable break detection	Yes Yes
Diagnostics function at sensor input with NTC	
• Short-circuit detection • Cable break detection	Yes No
Type of connection of sensor circuit	2-wire or 3-wire connection
A/D conversion time at sensor circuit	500 ms
Measurable line frequency initial value	16 Hz
Measurable line frequency Full-scale value	400 Hz
Relative measurement deviation of residual current transformer	7.5 %

Electromagnetic compatibility

EMC emitted interference	
• acc. to IEC 60947-1	class A
EMI immunity acc. to IEC 60947-1	corresponds to degree of severity 3
Conducted interference	
• due to burst acc. to IEC 61000-4-4	2 kV (power ports) / 1 kV (signal ports)

• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV
• due to high-frequency radiation acc. to IEC 61000-4-6	10 V
Field-bound parasitic coupling acc. to IEC 61000-4-3	10 V/m
Electrostatic discharge acc. to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
Conducted HF-interference emissions acc. to CISPR11	corresponds to degree of severity A
Field-bound HF-interference emission acc. to CISPR11	corresponds to degree of severity A

Inputs/ Outputs

Product function	
• Parameterizable inputs	Yes
• Parameterizable outputs	Yes
Number of inputs	4
Number of digital inputs	4
• with a common reference potential	4
Digital input version	
• Type 1 acc. to IEC 61131	No
• Type 2 acc. to IEC 61131	Yes
Number of analog inputs	0
Number of sensor inputs	
• for ground fault detection	1
• for temperature measurement	1
Input voltage at digital input at DC rated value	24 V
Number of outputs	2
Number of semiconductor outputs	0
Number of outputs as contact-affected switching element	2
Number of analog outputs	0
Switching behavior	monostable
Wire length for digital signals maximum	300 m

Protective and monitoring functions

Product function	
• Ground fault detection	Yes
Design of the sensor	
• for temperature measurement connectable	PT100 / PT1000 / KTY83-110 / KTY84 / NTC

Precision

Temperature drift per °C	0.05 %/°C
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Installation/ mounting/ dimensions

Mounting position	any
Height	100 mm
Width	22.5 mm
Depth	124.5 mm
Required spacing	• top 40 mm • bottom 40 mm • left 0 mm • right 0 mm
Diameter of feed through opening of connectable residual current transformer	35 ... 210 mm

Connections/Terminals

Product function	
• removable terminal for auxiliary and control circuit	Yes
Type of electrical connection	
• for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections	
• solid	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
• at AWG conductors solid	1x (20 ... 14), 2x (20 ... 16)
• at AWG conductors stranded	1x (20 ... 12), 2x (20 ... 14)
Tightening torque	
• with screw-type terminals	0.6 ... 0.8 N·m
Tightening torque [lbf·in]	
• with screw-type terminals	5.2 ... 7 lbf·in

Ambient conditions

Installation altitude at height above sea level	
• 1 maximum	2 000 m
• 2 maximum	3 000 m; max. +50 °C (no protective separation)
• 3 maximum	4 000 m; No protective separation at 40 °C
Ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-40 ... +80 °C
• during transport	-40 ... +80 °C
Environmental category	
• during operation acc. 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
• during storage acc. to IEC 60721	1K6 (no condensation, relative humidity 10 ... 95%), 1C2 (no salt mist), 1S2 (sand must not get into the devices), 1M4
• during transport acc. to IEC 60721	2K2, 2C1, 2S1, 2M2

Relative humidity	
• during operation	10 ... 95 %
Contact rating of auxiliary contacts according to UL	
B300 / R300	
Short-circuit protection	
Design of short-circuit protection	
• per output	Fuse links: gG 6 A, quick-response 10 A (IEC 60947-5-1), miniature circuit-breaker C char.: 1.6 A (IEC 60947-5-1) or 6 A (I _K < 500 A)
Safety related data	
Protection against electrical shock	
finger-safe	
Galvanic isolation	
(electrically) protective separation acc. 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	
• Note	Test report no. 2668 is to be observed
• Galvanic isolation between inputs and electronic	No
Control circuit/ Control	
Operating range factor control supply voltage rated value at DC	
• initial value	0.8
• Full-scale value	1.2
Certificates/approvals	

General Product Approval	EMC	For use in hazardous locations
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CCC



CSA



UL



C-Tick



ATEX

For use in hazardous locations	Declaration of Conformity	Test Certificates	Marine / Shipping	other
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[Explosion Protection Certificate](#)



EG-Konf.

[Type Test Certificates/Test Report](#)



RMRS



DNVGL.COM/AF

[Confirmation](#)

other

[PROFIsafe-Certification](#)



Profibus

[PROFINET-Certification](#)

Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UF7600-1AB01-0>

Cax online generator

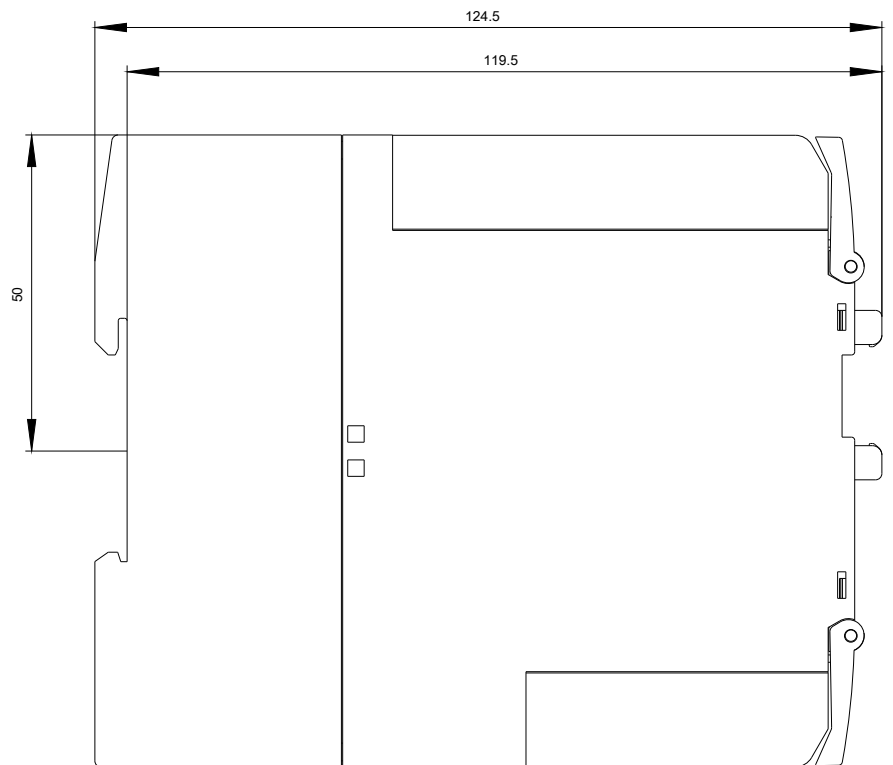
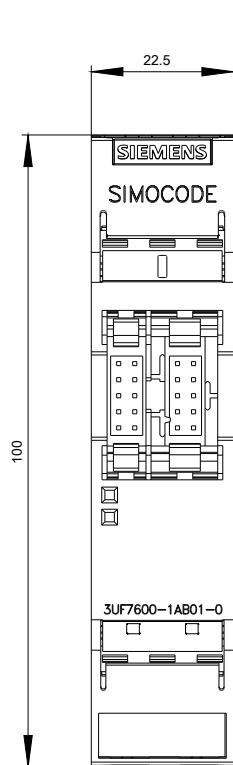
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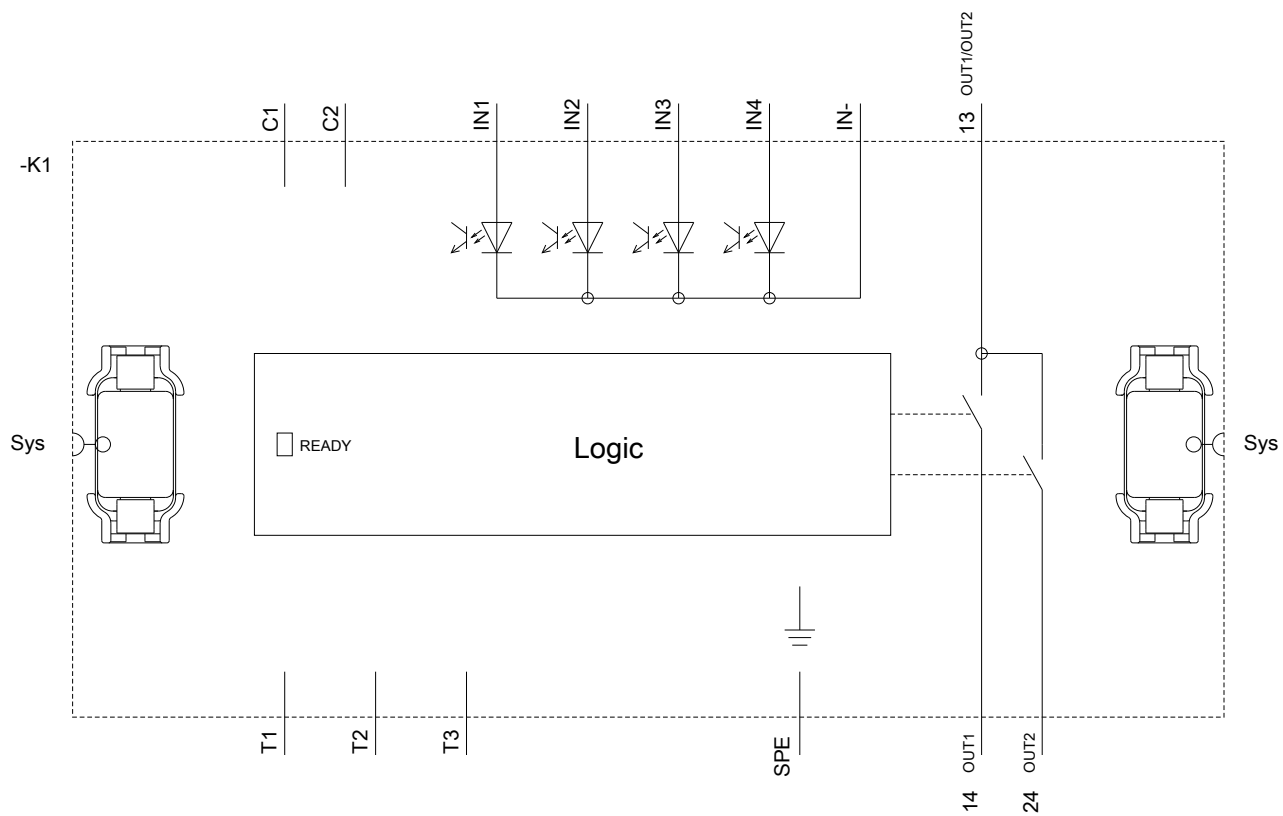
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

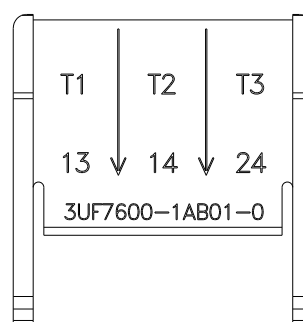
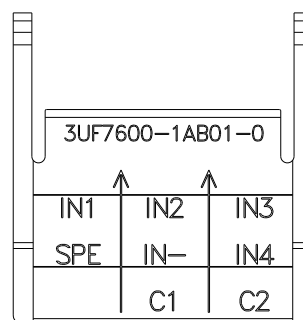
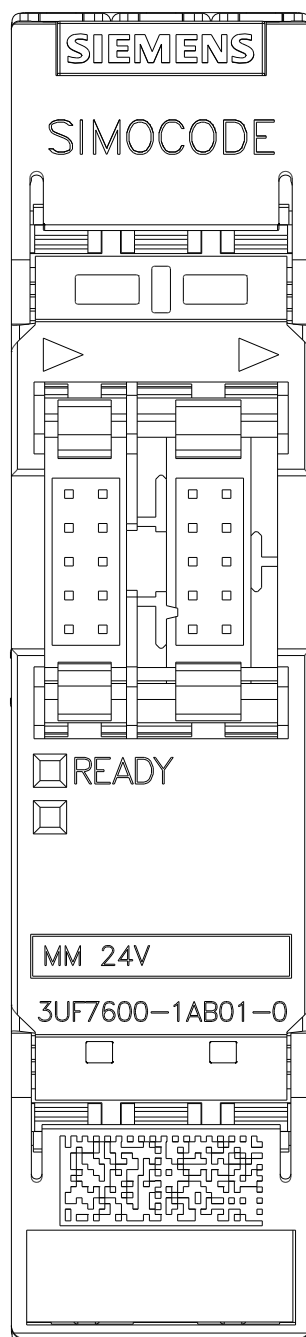
<https://support.industry.siemens.com/cs/ww/en/ps/3UF7600-1AB01-0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7600-1AB01-0&lang=en







last modified:

12/15/2018