



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

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Multifunction module
<b>manufacturer's article number</b>	<ul style="list-style-type: none"> <li>• 1 of residual current transformer connectable <a href="#">3UL2302-1A</a></li> <li>• 2 of residual current transformer connectable <a href="#">3UL2303-1A</a></li> <li>• 3 of residual current transformer connectable <a href="#">3UL2304-1A</a></li> <li>• 4 of residual current transformer connectable <a href="#">3UL2305-1A</a></li> <li>• 5 of residual current transformer connectable <a href="#">3UL2306-1A</a></li> <li>• 6 of residual current transformer connectable <a href="#">3UL2307-1A</a></li> </ul>
<b>General technical data</b>	
<b>type of current for monitoring</b>	Type A (alternating currents and pulsing DC residual currents)
<b>response time maximum</b>	0.1 s
<b>product function residual current display</b>	Yes
<b>adjustable current response value current</b>	40 ... 0.03 A
<b>product component</b>	<ul style="list-style-type: none"> <li>• input for thermistor connection No</li> <li>• digital input Yes</li> <li>• input for residual current converter Yes</li> <li>• input for analog temperature sensors Yes</li> <li>• input for ground fault detection Yes</li> <li>• relay output Yes</li> </ul>
<b>insulation voltage with degree of pollution 3 at AC rated value</b>	300 V
<b>surge voltage resistance rated value</b>	4 000 V
<b>protection class IP</b>	IP20
<b>shock resistance</b>	<ul style="list-style-type: none"> <li>• when mounted on current measuring module acc. to IEC 60068-2-27 10 g / 11 ms</li> <li>• acc. to IEC 60068-2-27 15g / 11 ms</li> </ul>
<b>vibration resistance</b>	<ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-6 1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g</li> <li>• when mounted on current measuring module acc. to IEC 60068-2-6 1 ... 4 Hz / 15 mm, 4 ... 500 Hz / 1g</li> </ul>
<b>switching capacity current of the NO contacts of the relay outputs at AC-15</b>	<ul style="list-style-type: none"> <li>• at 24 V 6 A</li> <li>• at 120 V 6 A</li> <li>• at 230 V 3 A</li> </ul>
<b>switching capacity current of the NO contacts of the relay outputs at DC-13</b>	<ul style="list-style-type: none"> <li>• at 24 V 2 A</li> </ul>

<ul style="list-style-type: none"> <li>• at 60 V</li> <li>• at 125 V</li> </ul>	0.55 A 0.25 A
mechanical service life (switching cycles) typical	10 000 000
electrical endurance (switching cycles) typical	100 000
<b>buffering time in the event of power failure</b>	0.02 s
<b>reference code acc. to IEC 81346-2</b>	F
continuous current of the NO contacts of the relay outputs <ul style="list-style-type: none"> <li>• at 50 °C</li> <li>• at 60 °C</li> </ul>	6 A 5 A
<b>Substance Prohibittance (Date)</b>	01.05.2012 00:00:00
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)
<b>measurable temperature</b> <ul style="list-style-type: none"> <li>• with NTC minimum</li> <li>• with NTC maximum</li> <li>• with KTY 84 minimum</li> <li>• with KTY 84 maximum</li> <li>• with KTY 83-110 minimum</li> <li>• with KTY 83-110 maximum</li> <li>• with Pt 1000 minimum</li> <li>• with Pt 1000 maximum</li> <li>• with Pt 100 minimum</li> <li>• with Pt 100 maximum</li> </ul>	80 °C 160 °C -40 °C 300 °C -50 °C 175 °C -50 °C 500 °C -50 °C 500 °C
<b>relative temperature-related measurement deviation at 20 °C</b>	2 %
<b>sensor current for Pt 100 typical</b>	1 mA
<b>sensor current for Pt 1000/KTY 83-110/KTY 84/NTC typical</b>	0.2 mA
<b>diagnostics function at sensor input with residual current transformer</b> <ul style="list-style-type: none"> <li>• short-circuit detection</li> <li>• open-circuit detection</li> </ul>	Yes Yes
<b>diagnostics function at sensor input with Pt 100</b> <ul style="list-style-type: none"> <li>• short-circuit detection</li> <li>• open-circuit detection</li> </ul>	Yes Yes
<b>diagnostics function at sensor input with Pt 1000</b> <ul style="list-style-type: none"> <li>• short-circuit detection</li> <li>• open-circuit detection</li> </ul>	Yes Yes
<b>diagnostics function at sensor input with KTY 83-110</b> <ul style="list-style-type: none"> <li>• short-circuit detection</li> <li>• open-circuit detection</li> </ul>	Yes Yes
<b>diagnostics function at sensor input with KTY 84</b> <ul style="list-style-type: none"> <li>• short-circuit detection</li> <li>• open-circuit detection</li> </ul>	Yes Yes
<b>diagnostics function at sensor input with NTC</b> <ul style="list-style-type: none"> <li>• short-circuit detection</li> <li>• open-circuit detection</li> </ul>	Yes No
<b>type of connection technology of sensor circuit</b>	2-wire or 3-wire connection
<b>A/D conversion time at sensor circuit</b>	500 ms
<b>measurable line frequency initial value</b>	16 Hz
<b>measurable line frequency full-scale value</b>	400 Hz
<b>relative measurement deviation of residual current transformer</b>	7.5 %
<b>Electromagnetic compatibility</b>	
EMC emitted interference acc. to IEC 60947-1	class A
EMC immunity acc. to IEC 60947-1	corresponds to degree of severity 3
<b>conducted interference</b> <ul style="list-style-type: none"> <li>• due to burst acc. to IEC 61000-4-4</li> <li>• due to conductor-earth surge acc. to IEC 61000-4-5</li> </ul>	2 kV (power ports) / 1 kV (signal ports) 2 kV

<ul style="list-style-type: none"> <li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	1 kV
<ul style="list-style-type: none"> <li>• due to high-frequency radiation acc. to IEC 61000-4-6</li> </ul>	10 V
<b>field-based interference acc. to IEC 61000-4-3</b>	10 V/m
<b>electrostatic discharge acc. to IEC 61000-4-2</b>	6 kV contact discharge / 8 kV air discharge
<b>conducted HF interference emissions acc. to CISPR11</b>	corresponds to degree of severity A
<b>field-bound HF interference emission acc. to CISPR11</b>	corresponds to degree of severity A
<b>Inputs/ Outputs</b>	
<b>product function</b>	
<ul style="list-style-type: none"> <li>• parameterizable inputs</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• parameterizable outputs</li> </ul>	Yes
<b>number of inputs</b>	4
<b>number of digital inputs</b>	4
<ul style="list-style-type: none"> <li>• with a common reference potential</li> </ul>	4
<b>digital input version</b>	
<ul style="list-style-type: none"> <li>• type 1 acc. to IEC 61131</li> </ul>	No
<ul style="list-style-type: none"> <li>• type 2 acc. to IEC 61131</li> </ul>	Yes
<b>number of analog inputs</b>	0
<b>number of sensor inputs</b>	
<ul style="list-style-type: none"> <li>• for ground fault detection</li> </ul>	1
<ul style="list-style-type: none"> <li>• for temperature measurement</li> </ul>	1
input voltage at digital input at DC rated value	24 V
<b>number of outputs</b>	2
<b>number of semiconductor outputs</b>	0
<b>number of outputs as contact-affected switching element</b>	2
<b>number of analog outputs</b>	0
<b>switching behavior</b>	monostable
<b>property of contacts of the relay outputs</b>	Floating NO contacts (NC reaction parameterizable via internal signal conditioning), of which 2 relay outputs connected to common ground and one relay output separately, can be freely assigned to the control functions (e.g. line, star (wye), delta contactor or signaling of the operating state)
<b>wire length for digital signals maximum</b>	300 m
<b>Protective and monitoring functions</b>	
product function ground fault detection	Yes
design of the sensor for temperature measurement connectable	PT100 / PT1000 / KTY83-110 / KTY84 / NTC
<b>Precision</b>	
<b>temperature drift per °C</b>	0.05 %/°C
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>height</b>	100 mm
<b>width</b>	22.5 mm
<b>depth</b>	124.5 mm
<b>required spacing</b>	
<ul style="list-style-type: none"> <li>• top</li> </ul>	40 mm
<ul style="list-style-type: none"> <li>• bottom</li> </ul>	40 mm
<ul style="list-style-type: none"> <li>• left</li> </ul>	0 mm
<ul style="list-style-type: none"> <li>• right</li> </ul>	0 mm
<b>diameter of inlet opening of connectable residual current transformer</b>	35 ... 210 mm
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x ( 0.5 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• finely stranded with core end processing</li> </ul>	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• at AWG cables solid</li> </ul>	1x (20 ... 14), 2x (20 ... 16)
<ul style="list-style-type: none"> <li>• at AWG cables stranded</li> </ul>	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
<b>Ambient conditions</b>	
<b>installation altitude at height above sea level</b>	
<ul style="list-style-type: none"> <li>• 1 maximum</li> <li>• 2 maximum</li> <li>• 3 maximum</li> </ul>	2 000 m 3 000 m; max. +50 °C (no protective separation) 4 000 m; No protective separation at 40 °C
<b>ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul>	-25 ... +60 °C -40 ... +80 °C -40 ... +80 °C
<b>environmental category</b>	
<ul style="list-style-type: none"> <li>• during operation acc. to IEC 60721</li> <li>• during storage acc. to IEC 60721</li> <li>• during transport acc. to IEC 60721</li> </ul>	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	10 ... 95 %
<b>contact rating of auxiliary contacts according to UL</b>	B300 / R300

<b>Short-circuit protection</b>	
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)

<b>Safety related data</b>	
<b>touch protection against electrical shock</b>	finger-safe

<b>Galvanic isolation</b>	
<b>(electrically) protective separation acc. to IEC 60947-1</b>	All circuits with protective separation (double creepage paths and clearances), the information in the "Protective Separation" test report, No. A0258, must be observed (link see further information)
galvanic isolation between inputs and electronics	No

<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	DC
<b>control supply voltage at DC</b>	
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	24 V
<b>operating range factor control supply voltage rated value at DC</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	0.8 1.2

<b>Certificates/ approvals</b>		
<b>General Product Approval</b>	<b>EMC</b>	<b>For use in hazardous locations</b>



<b>For use in hazardous locations</b>	<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>Marine / Shipping</b>
		<a href="#">Special Test Certificate</a> <a href="#">Type Test Certificates/Test Report</a>	 

<b>other</b>	
<a href="#">Confirmation</a> 	<a href="#">PROFINET-Certification</a>

## Further information

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?mfb=3UF7600-1AB01-0>

Cax online generator

<http://support.automation.siemens.com/WW/CAxOrder/default.aspx?lang=en&mfb=3UF7600-1AB01-0>

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

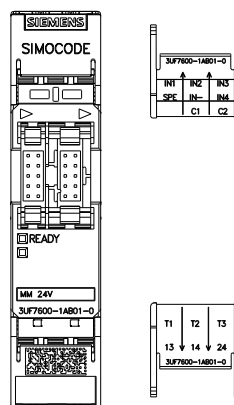
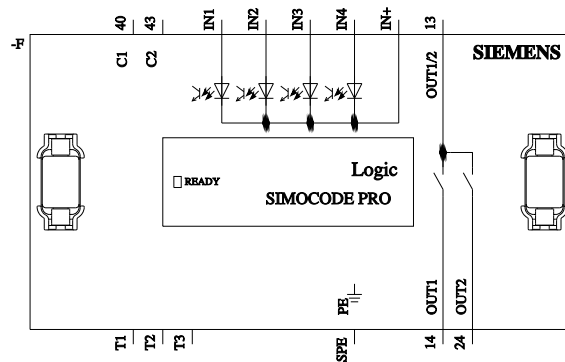
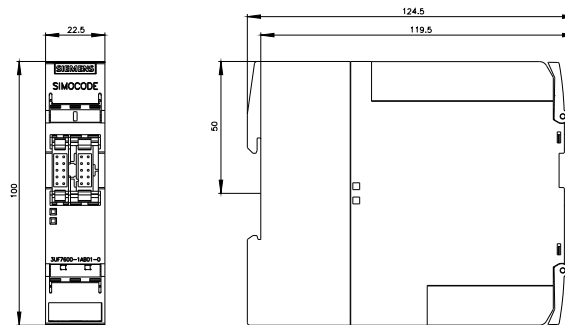
<https://support.industry.siemens.com/cs/ww/en/ps/3UF7600-1AB01-0>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3UF7600-1AB01-0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3UF7600-1AB01-0&lang=en)

Test report No. A0258, protective separation

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



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