SIEMENS

Data sheet

3UF7600-1AB01-0



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

product brand name	SIRIUS
product designation	Multifunction module
manufacturer's article number	
 1 of residual current transformer connectable 	<u>3UL2302-1A</u>
 2 of residual current transformer connectable 	<u>3UL2303-1A</u>
 3 of residual current transformer connectable 	<u>3UL2304-1A</u>
 4 of residual current transformer connectable 	<u>3UL2305-1A</u>
 5 of residual current transformer connectable 	<u>3UL2306-1A</u>
 6 of residual current transformer connectable 	<u>3UL2307-1A</u>
General technical data	
type of current for monitoring	Type A (alternating currents and pulsing DC residual currents)
response time maximum	0 s
product function residual current display	Yes
adjustable current response value current	40 0.03 A
product component	
 input for thermistor connection 	No
digital input	Yes
 input for residual current converter 	Yes
 input for analog temperature sensors 	Yes
 input for ground fault detection 	Yes
 relay output 	Yes
consumed active power	0.8 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	
 when mounted on current measuring module according to IEC 60068-2-27 	10 g / 11 ms
 according to IEC 60068-2-27 	15g / 11 ms
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 (operating cycles) typical	10 000 000
electrical endurance (operating cycles) typical	100 000

buffering time in the event of power failure	0 s
reference code according to IEC 81346-2	K
continuous current of the NO contacts of the relay outputs	
• at 50 °C	6 A
• at 60 °C	5 A
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Blei - 7439-92-1
	Bleimonoxid (Bleioxid) - 1317-36-8
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)
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	-50 °C
with KTY 83-110 maximum	175 °C
with Pt 1000 minimum	-50 °C
• with Pt 1000 maximum	500 °C
with Pt 100 minimum	-50 °C
with Pt 100 maximum	500 °C
relative temperature-related measurement deviation at 20 ℃	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 	Yes
open-circuit detection	Yes
diagnostics function at sensor input with Pt 100	
 short-circuit detection 	Yes
open-circuit detection	Yes
diagnostics function at sensor input with Pt 1000	
 short-circuit detection 	Yes
 open-circuit detection 	Yes
diagnostics function at sensor input with KTY 83-110	
 short-circuit detection 	Yes
open-circuit detection	Yes
diagnostics function at sensor input with KTY 84	
short-circuit detection	Yes
open-circuit detection	Yes
diagnostics function at sensor input with NTC	
short-circuit detection	Yes
open-circuit detection	No
type of connection technology 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 %
lectromagnetic 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 (power ports) / 1 kV (signal ports)
• 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

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• left 0 mm • right 0 mm diameter of inlet opening of connectable residual current transformer 35 210 mm Connections/ Terminals Yes product component removable terminal for auxiliary and control circuit Yes type of connectable conductor cross-sections Yes • solid 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) • finely stranded with core end processing 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) • for AWG cables solid 1x (20 14), 2x (20 16) • for AWG cables 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 1 maximum • 2 maximum 3 000 m; max. +50 °C (no protective separation) • 3 maximum 4 000 m; No protective separation at 40 °C		40 mm
• right0 mmdiameter of inlet opening of connectable residual current transformer35 210 mmConnections/TerminalsYesproduct component removable terminal for auxiliary and control circuitYestype of connectable conductor cross-sectionsYes• solid1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)• finely stranded with core end processing1x (20 14), 2x (20 1.0 mm²)• for AWG cables solid1x (20 14), 2x (20 16)• for AWG cables stranded0.6 0.8 N·mtightening torque with screw-type terminals0.6 0.8 N·mtightening torque [lbf in] with screw-type terminals5.2 7 lbf inAmbient conditions2 000 m• 1 maximum2 000 m• 2 maximum3 000 m; max. +50 °C (no protective separation)• 3 maximum4 000 m; No protective separation at 40 °C	• bottom	40 mm
diameter of inlet opening of connectable residual current transformer 35 210 mm Connections/ Terminals Product component removable terminal for auxiliary and control circuit Yes type of connectable conductor cross-sections solid finely stranded with core end processing for AWG cables solid for AWG cables stranded for AWG cables strandes for AWG cables strandes	• left	0 mm
transformer Connections/ Terminals product component removable terminal for auxiliary and control circuit Yes type of connectable conductor cross-sections Yes • solid 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) • finely stranded with core end processing 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) • for AWG cables solid 1x (20 14), 2x (20 16) • for AWG cables 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 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		
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product component removable terminal for auxiliary and control circuit Yes type of connectable conductor cross-sections ix (0.5 2.5 mm²), 2x (0.5 1.5 mm²) • solid 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) • finely stranded with core end processing 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) • for AWG cables solid 1x (20 14), 2x (20 16) • for AWG cables 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 2 000 m • 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		
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 finely stranded with core end processing finely stranded with core end processing 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) for AWG cables solid for AWG cables stranded 1x (20 14), 2x (20 16) for AWG cables 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 3 000 m; max. +50 °C (no protective separation) 4 000 m; No protective separation at 40 °C	type of connectable conductor cross-sections	
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• for AWG cables stranded1x (20 12), 2x (20 14)tightening torque with screw-type terminals0.6 0.8 N·mtightening torque [lbf·in] with screw-type terminals5.2 7 lbf·inAmbient conditions2 000 m• 1 maximum2 000 m• 2 maximum3 000 m; max. +50 °C (no protective separation)• 3 maximum4 000 m; No protective separation at 40 °Cambient temperature	 finely stranded with core end processing 	1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)
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tightening torque [lbf-in] with screw-type terminals 5.2 7 lbf-in Ambient conditions		1x (20 12), 2x (20 14)
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		
installation altitude at height above sea level 2 000 m • 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		5.2 7 lbf-in
• 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	Ambient conditions	
• 2 maximum 3 000 m; max. +50 °C (no protective separation) • 3 maximum 4 000 m; No protective separation at 40 °C ambient temperature		
• 3 maximum 4 000 m; No protective separation at 40 °C ambient temperature	installation altitude at height above sea level	
ambient temperature	-	
	• 1 maximum	
• during operation -25 +60 °C	• 1 maximum • 2 maximum • 3 maximum	3 000 m; max. +50 °C (no protective separation)
	• 1 maximum • 2 maximum • 3 maximum	3 000 m; max. +50 °C (no protective separation) 4 000 m; No protective separation at 40 °C

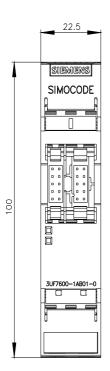
during storage	-40 +80 °C
during storage during transport	-40 +80 °C
environmental category	
during operation according to IEC 60721	3K6 (no formation of ice, no condensation, relative humidity 10 95%), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
during storage according to IEC 60721	1K6 (no condensation, relative humidity 10 95%), 1C2 (no salt mist), 1S2 (sand must not get into the devices), 1M4
 during transport according 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)
lectrical Safety	
touch protection against electrical shock	finger-safe
alvanic isolation	
(electrically) protective separation according to IEC 6094	7-1 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
ontrol 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 DC	at
• initial value	0.8
• full-scale value	1.2
Approvals Certificates	
For use in hazardous locations Declarati	on of Conformity Test Certificates
IECEx EST	E Certific- ate Type Test Certific- ates/Test Report
Marine / Shipping other	
	mation Profibus
EAC relevant market (other than the sanctioned EAEU member Information on the packaging https://support.industry.siemens.com/cs/ww/en/view/1098138 Information- and Downloadcenter (Catalogs, Brochures,. https://www.siemens.com/ic10	nd-down-russian-business rtificates. lity of the EAC certification if you intend to import or offer to supply these products to an er states Russia or Belarus). 75
Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product	

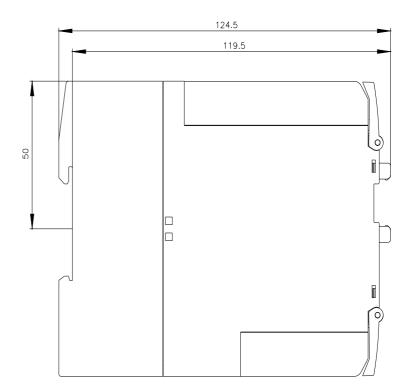
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

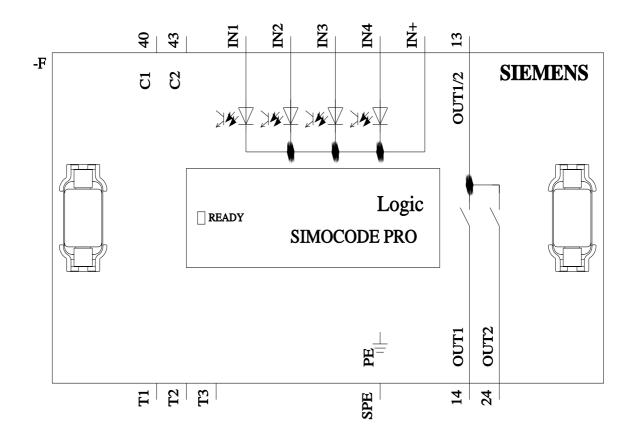
https://support.industry.siemens.com/cs/ww/en/ps/3UF7600-1AB01-0

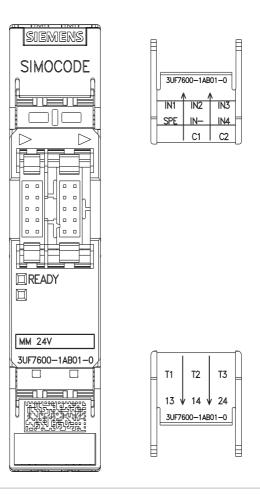
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <u>http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7600-1AB01-0&lang=en</u> Test report No. 40258, protective separation

Test report No. A0258, protective separation https://support.industry.siemens.com/cs/ww/en/view/109748152









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