SIEMENS

product brand name

Data sheet 3UF7104-1BA00-0

SIRIUS

Current measuring module, Set current 63...630 A Overall width 145 mm, busbar connection $\,$



product designation General technical data product function	product state that	S. 1100
product function • current measurement • voltage measurement • voltage measurement • active power measurement • power measurement • power measurement • input for thermistor connection Insulation voltage • with degree of pollution 3 at AC rated value • for wires of main circuit acc. to IEC 60947-1 rated value surge voltage resistance rated value • for wires of main circuit acc. to IEC 60947-1 rated value surge voltage resistance rated value • book resistance acc. to IEC 60068-2-27 • shock resistance acc. to IEC 61006-2-27 • shock resistance acc. to IEC 81346-2 Function class IP Substance Prohibitance • 1-6 Hz / 15 mm; 6-500 Hz / 2 g reference code acc. to IEC 81346-2 Functificate of suitability • according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU ENC emitted interference acc. to IEC 60947-1 ENC immunity acc. to IEC 60947-1 conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-centh surge acc. to IEC 61000-4-5 • due to conductor-centh surge acc. to IEC 61000-4-3 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element Yes No No No No 690 V 8 kV 8 kV 9 00 V 9 00 V 8 kV 9 00 V 9 00 V 8 kV 9 00 V	product designation	Current measuring module
current measurement voltage measurement active power measurement voltage measurement	General technical data	
voltage measurement active power measurement power measurement frequency measurement input for thermistor connection insulation voltage with degree of pollution 3 at AC rated value for wires of main circuit acc. to IEC 60947-1 rated value surge voltage resistance rated value surge voltage resistance rated value protection class IP shock resistance acc. to IEC 60068-2-27 vibration resistance reference code acc. to IEC 81346-2 Substance Prohibitance (Date) certificate of suitability according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 conducted interference due to burst acc. to IEC 61000-4-4 due to conductor-earth surge acc. to IEC 61000-4-5 due to conductor-conductor surge acc. to IEC 61000-4-3 field-based interference acc. to IEC 61000-4-3 invision resistance outputs as contact-affected switching element	product function	
active power measurement product component insulation voltage with degree of pollution 3 at AC rated value for wires of main circuit acc. to IEC 60947-1 rated value surge voltage resistance rated value surge voltage resistance acc. to IEC 60068-2-27 shock resistance acc. to IEC 60068-2-27 shock resistance acc. to IEC 81346-2 substance Prohibitiance (Date) certificate of suitability according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60047-1 conducted interference due to burst acc. to IEC 61000-4-3 due to conductor-certif surge acc. to IEC 61000-4-3 eledichased interferenceacc. to IEC 61000-4-3 linputs/ Outputs linput	 current measurement 	Yes
product component input for thermistor connection No insulation voltage with degree of pollution 3 at AC rated value for wires of main circuit acc. to IEC 60947-1 rated value surge voltage resistance rated value substance Prohibitance (Date) out.07.2006 certificate of suitability explosion device group and category according to ATEX directive 2014/34/EU surge voltage resistance rated value surge voltage rate value surge voltage resistance rated valu	 voltage measurement 	No
• frequency measurement product component • input for thermistor connection Insulation voltage • with degree of pollution 3 at AC rated value • for wires of main circuit acc. to IEC 60947-1 rated value surge voltage resistance rated value surge voltage resistance rated value protection class IP shock resistance acc. to IEC 60068-2-27 feerence code acc. to IEC 81346-2 Substance Prohibitance (Date) certificate of suitability • according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-3 Inputs/ Outputs rumber of outputs as contact-affected switching element No No No No No No No No No N	 active power measurement 	No
product component input for thermistor connection insulation voltage with degree of pollution 3 at AC rated value for wires of main circuit acc. to IEC 60947-1 rated value surge voltage resistance rated value surge voltage resistance rated value protection class IP shock resistance acc. to IEC 60068-2-27 shock resistance acc. to IEC 60068-2-27 reference code acc. to IEC 81346-2 gubstance Prohibitance (Date) certificate of suitability	 power measurement 	No
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insulation voltage • with degree of pollution 3 at AC rated value • for wires of main circuit acc. to IEC 60947-1 rated value surge voltage resistance rated value 8 000 V protection class IP shock resistance acc. to IEC 60068-2-27 15g / 11 ms vibration resistance 1-6 Hz / 15 mm; 6-500 Hz / 2 g reference code acc. to IEC 81346-2 Fubration resistance (Date) certificate of suitability • according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 conducted interference • due to conductor-carth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element 8 kV 8 douve to IEC 60068-2-27 15g / 11 ms 10 0 V/m 11 mustic protection of the protection of	product component	
with degree of pollution 3 at AC rated value • for wires of main circuit acc. to IEC 60947-1 rated value surge voltage resistance rated value protection class IP protection class IP shock resistance acc. to IEC 60068-2-27 yibration resistance 1-6 Hz / 15 mm; 6-500 Hz / 2 g reference code acc. to IEC 81346-2 Substance Prohibitance (Date) certificate of suitability • according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element 8 kV 9 Contact of IEC 61004-2-3 10 V/m Inputs/ Outputs as contact-affected switching element	input for thermistor connection	No
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surge voltage resistance rated value protection class IP shock resistance acc. to IEC 60068-2-27 shock resistance acc. to IEC 60068-2-27 vibration resistance 1-6 Hz / 15 mm; 6-500 Hz / 2 g reference code acc. to IEC 81346-2 Substance Prohibitance (Date) certificate of suitability • according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-3 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element	 with degree of pollution 3 at AC rated value 	690 V
protection class IP shock resistance acc. to IEC 60068-2-27 15g / 11 ms vibration resistance reference code acc. to IEC 81346-2 Substance Prohibitance (Date) certificate of suitability		8 kV
shock resistance acc. to IEC 60068-2-27 vibration resistance reference code acc. to IEC 81346-2 Substance Prohibitance (Date) certificate of suitability • according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element 15g / 11 ms 16g / 11 ms 1-6 Hz / 15 mm; 6-500 Hz / 2 g F Substance Prohibitance (1-6 Hz / 15 mm; 6-500 Hz / 2 g F Substance Prohibitance (1-6 Hz / 15 mm; 6-500 Hz / 2 g F Substance Prohibitance (1-6 Hz / 15 mm; 6-500 Hz / 2 g F Substance Prohibitance (1-6 Hz / 15 mm; 6-500 Hz / 2 g F Substance Prohibitance (1-6 Hz / 15 mm; 6-500 Hz / 2 g F Substance Prohibitance (1-6 Hz / 15 mm; 6-500 Hz / 2 g F Substance Prohibitance (1-6 Hz / 15 mm; 6-500 Hz / 2 g F Substance Prohibitance (1-6 Hz / 15 mm; 6-500 Hz / 2 g Il (2) G, II (2) D, I (M2) I	surge voltage resistance rated value	8 000 V
reference code acc. to IEC 81346-2 Substance Prohibitance (Date) certificate of suitability according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 EMC immunity acc. to IEC 60947-1 conducted interference a due to conductor-earth surge acc. to IEC 61000-4-5 a due to conductor-conductor surge acc. to IEC 61000-4-3 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element 1-6 Hz / 15 mm; 6-500 Hz / 2 g F Substance Prohibitance (Date) 10.07.2006 ENS 06 ATEX F001 II (2) G, II (2) D, I (M2) II (2) G, II (2) D, I (M2) Class A ENS A EVA corresponds to degree of severity 3 corresponds to degree of severity 3	protection class IP	IP00
reference code acc. to IEC 81346-2 Substance Prohibitance (Date) certificate of suitability • according to ATEX directive 2014/34/EU Explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 class A EMC 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 • due to conductor-carth surge acc. to IEC 61000-4-5 2 kV • due to conductor-conductor surge acc. to IEC 61000-4-3 10 V/m Inputs/ Outputs number of outputs as contact-affected switching element O 1.07.2006 ERC 91.07.2006 D1.07.2006 EV SUS OB ATEX F001 EV SUS	shock resistance acc. to IEC 60068-2-27	15g / 11 ms
Substance Prohibitance (Date) certificate of suitability • according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 class A EMC 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 • due to conductor-earth surge acc. to IEC 61000-4-5 2 kV • due to conductor-conductor surge acc. to IEC 61000-4-3 10 V/m Inputs/ Outputs number of outputs as contact-affected switching element 0 1.07.2006 0 1.07.2006 0 1.07.2006 0 2.07.2006 0 2.07.2006 0 2.07.2006 EVX 0 0 4 4 (2) D, I (M2) III (2) G, II (2) D, I (M2) III (2) G, II (2) D, I (M2) III (2) G, II (2) D, I (M2) II (2) G, II (2) D, I (M2	vibration resistance	1-6 Hz / 15 mm; 6-500 Hz / 2 g
certificate of suitability • according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 EMC immunity acc. to IEC 60947-1 conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-3 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element BVS 06 ATEX F001 BVS 06 ATEX F001 II (2) D, I (M2) II (2) D, I (M2) ELEC F001 II (2) D, I (M2)	reference code acc. to IEC 81346-2	F
according to ATEX directive 2014/34/EU explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 class A EMC 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 • due to conductor-earth surge acc. to IEC 61000-4-5 2 kV • due to conductor-conductor surge acc. to IEC 61000-4-3 10 V/m Inputs/ Outputs number of outputs as contact-affected switching element BVS 06 ATEX F001 II (2) D, I (M2) II (2) D, I (M2)	Substance Prohibitance (Date)	01.07.2006
explosion device group and category according to ATEX directive 2014/34/EU Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 class A EMC 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 • 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 61000-4-5 field-based interference acc. to IEC 61000-4-3 10 V/m Inputs/ Outputs number of outputs as contact-affected switching element II (2) G, II (2) D, I (M2)	certificate of suitability	
Electromagnetic compatibility EMC emitted interference acc. to IEC 60947-1 class A EMC 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 • 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 field-based interference acc. to IEC 61000-4-3 10 V/m Inputs/ Outputs number of outputs as contact-affected switching element 0		BVS 06 ATEX F001
EMC emitted interference acc. to IEC 60947-1 EMC immunity acc. to IEC 60947-1 conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element class A corresponds to degree of severity 3 2 kV 2 kV 1 kV 10 V/m	explosion device group and category according to ATEX directive 2014/34/EU	II (2) G, II (2) D, I (M2)
conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element corresponds to degree of severity 3 2 kV 2 kV 1 kV 1 kV 10 V/m	Electromagnetic compatibility	
conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element 0 due to burst acc. to IEC 61000-4-5 2 kV 1 kV 1 kV 1 burst acc. to IEC 61000-4-5 1 kV 10 V/m	EMC emitted interference acc. to IEC 60947-1	class A
 due to burst acc. to IEC 61000-4-4 due to conductor-earth surge acc. to IEC 61000-4-5 due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element 2 kV 1 kV 10 V/m 	EMC immunity acc. to IEC 60947-1	corresponds to degree of severity 3
• due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element • due to conductor-conductor surge acc. to IEC 61000-4-5 1 kV 10 V/m 0	conducted interference	
 due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element 	due to burst acc. to IEC 61000-4-4	2 kV
field-based interference acc. to IEC 61000-4-3 Inputs/ Outputs number of outputs as contact-affected switching element 0	 due to conductor-earth surge acc. to IEC 61000-4-5 	2 kV
Inputs/ Outputs number of outputs as contact-affected switching element 0		1 kV
number of outputs as contact-affected switching element 0	field-based interference acc. to IEC 61000-4-3	10 V/m
element	Inputs/ Outputs	
Protective and monitoring functions		0
	Protective and monitoring functions	
product function	product function	
• power factor monitoring No	 power factor monitoring 	No

ground-fault monitoring	No
voltage detection	No
product function	INU
current detection	Yes
overload protection	Yes
·	165
Installation/ mounting/ dimensions	
mounting position	any
fastening method	direct mounting / stand-alone installation
height	147 mm
width	145 mm
depth	148 mm
required spacing	
• top	30 mm
• bottom	30 mm
• left	0 mm
• right	0 mm
Connections/ Terminals	
type of connectable conductor cross-sections at the	
measurement inputs for current	50 mm ² 240 mm ²
solid with core end processing stranded with core and processing	50 mm ² 240 mm ²
stranded with core end processing	70 mm ² 240 mm ²
at AWG cables	1/0 kcmil 500 kcmil
design of the thread of the connection screw at the measurement inputs for current	M8 x 25
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; max. +40 °C (no protective separation)
ambient temperature	05
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	5 95 %
Short-circuit protection	
product function short circuit protection	No
Galvanic isolation	
(electrically) protective separation acc. to IEC 60947-1	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)
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	63 630 A
operating voltage	
• at AC	
— at 50 Hz rated value	110 690 V
— at 60 Hz rated value	110 690 V
operating frequency rated value	50 60 Hz
Control circuit/ Control	
type of voltage	AC
Certificates/ approvals	
General Product Approval	EMC
OS. OSAN TOWARD APPROVAL	LINO





Confirmation







For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping







Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping

other







Confirmation



Profibus

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?mlfb=3UF7104-1BA00-0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7104-1BA00-0

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

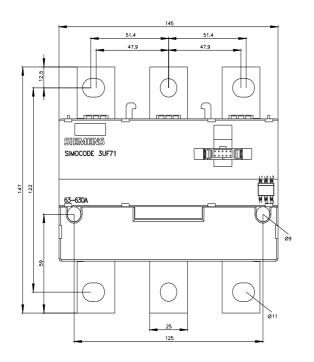
https://support.industry.siemens.com/cs/ww/en/ps/3UF7104-1BA00-0

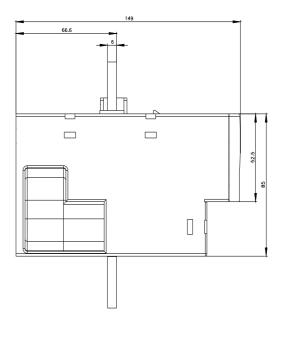
 $Image\ database\ (product\ images,\ 2D\ dimension\ drawings,\ 3D\ models,\ device\ circuit\ diagrams,\ EPLAN\ macros,\ ...)$

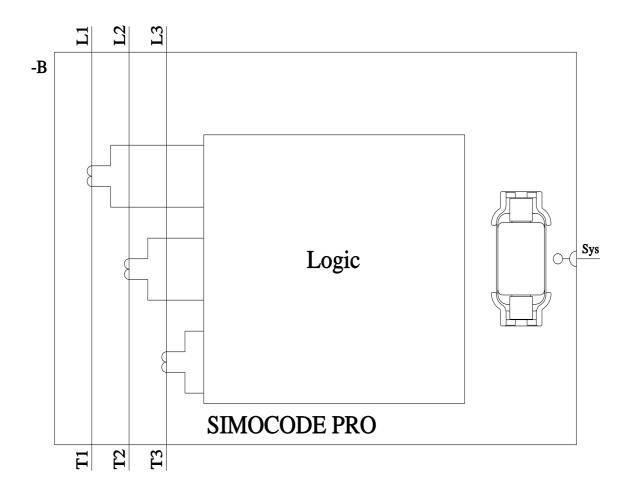
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7104-1BA00-0&lang=en

Test report No. A0258, protective separation

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







last modified: 1/18/2021 **C**