

Current/voltage measuring module V2; Set current 20...200 A, Voltage measurement up to 690 V, Overall width 120 mm, Straight-through transformer, basic unit required pro V PB, pro V MR, pro V PN or pro V EIP



product brand name	SIMOCODE
product designation	Current/voltage measuring module
product type designation	IUM
General technical data	
measuring procedure	RMS value measurement
size of the circuit-breaker	S6
product function	
• current measurement	Yes
• voltage measurement	Yes
• active power measurement	Yes
• energy measurement	Yes
• frequency measurement	Yes
measuring procedure for current measurement	TRMS
current measuring range extension with external current transformers	No
measuring procedure for voltage measurement	TRMS
measurable supply voltage between the line conductors at AC maximum rated value	690 V
product component	
• input for thermistor connection	No
consumed active power	0.5 W
insulation voltage	
• with degree of pollution 3 at AC rated value	690 V
• for wires of main circuit according to IEC 60947-1 rated value	6 kV
surge voltage resistance rated value	6 000 V
shock resistance according to IEC 60068-2-27	15 g / 11 ms; with basic unit snapped on
vibration resistance	1 ... 6 Hz / 15 mm; 6 ... 500 Hz / 2 g; with basic unit snapped on: 1 g
reference code according to IEC 81346-2	F
Substance Prohibitance (day/month/year)	05/28/2009
SVHC substance name	Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1
Net Weight	0.675 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
• due to conductor-earth surge according to IEC 61000-4-5	2 kV

<ul style="list-style-type: none"> • due to conductor-conductor surge according to IEC 61000-4-5 	1 kV
field-based interference according to IEC 61000-4-3	10 V/m
Inputs/ Outputs	
number of outputs as contact-affected switching element	0
Protective and monitoring functions	
product function	
<ul style="list-style-type: none"> • power factor monitoring 	Yes
<ul style="list-style-type: none"> • ground-fault monitoring 	Yes
<ul style="list-style-type: none"> • voltage detection 	Yes
trip class	CLASS 5E
product function	
<ul style="list-style-type: none"> • current detection 	Yes
<ul style="list-style-type: none"> • overload protection 	Yes
Precision	
measuring precision	
<ul style="list-style-type: none"> • of frequency measurement 	+/- 1,5 %, 15 A ... 1600 A, 0,85 x 110 V ... 1,1 x 690 V (line-to-line voltages), cos phi (0.5...1), 50/60 Hz, 25 °C
<ul style="list-style-type: none"> • for current measurement 1 	+/- 1.5 %, in range 15 A ... 400 A, in range 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), 50/60 Hz, 25 °C
<ul style="list-style-type: none"> • for current measurement 2 	+/- 5%, in range 400 A ... 1600 A, in range 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), 50/60 Hz, 25 °C
<ul style="list-style-type: none"> • for voltage measurement 1 	+/- 1.5 %, in range 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), 50/60 Hz, 25 °C
<ul style="list-style-type: none"> • at cos phi-measurement 1 	+/- 1.5 %, 15 A ... 400 A, 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), cos phi (0.5...1), 50/60 Hz, 25 °C
<ul style="list-style-type: none"> • at cos phi-measurement 2 	+/- 5%, 400 A ... 1600 A, 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), cos phi (0.5...1), 50/60 Hz, 25 °C
<ul style="list-style-type: none"> • for active power measurement 1 	+/- 5%, 15 A ... 400 A, 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), cos phi (0.5...1), 50/60 Hz, 25 °C
<ul style="list-style-type: none"> • for active power measurement 2 	+/- 10%, 400 A ... 1600 A, 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), cos-phi (0.5...1), 50/60 Hz, 25 °C
<ul style="list-style-type: none"> • for energy measurement 1 	+/- 5%, 47 A ... 1260 A, 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), cos phi (0.5...1), 50/60 Hz, 25 °C
<ul style="list-style-type: none"> • for energy measurement 2 	+/- 10%, 400 A ... 1600 A, 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), cos-phi (0.5...1), 50/60 Hz, 25 °C
<ul style="list-style-type: none"> • for apparent power measurement 1 	+/- 3%, 15 A ... 400 A, 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), cos phi (0.5...1), 50/60 Hz, 25 °C
<ul style="list-style-type: none"> • for apparent power measurement 2 	+/- 5 %, 400 A ... 1600 A, 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), cos phi (0.5...1), 50/60 Hz, 25 °C
accuracy of ground-fault monitoring	In the range 30 % .. 120 %/Is: +/- 10 % (Class CI-A), in range 15 % .. 30 % Ie: +/- 25 % (Class CI-B), both values acc. to IEC 60947-1 Annex T
temperature drift per °C	0.01 %/°C; Reference temperature: 25°C
measured variable frequency	45 ... 65 Hz
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting
height	95 mm
width	120 mm
depth	145 mm
required spacing	
<ul style="list-style-type: none"> • top 	30 mm
<ul style="list-style-type: none"> • bottom 	30 mm
<ul style="list-style-type: none"> • left 	0 mm
<ul style="list-style-type: none"> • right 	0 mm
diameter of inlet opening	25 mm
diameter of inlet opening for current measurement	25 mm
Connections/ Terminals	
type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit 	straight-through transformers
<ul style="list-style-type: none"> • for auxiliary and control circuit 	screw-type terminals
type of electrical connection at the measurement inputs for voltage	screw-type terminals

type of connectable conductor cross-sections at the measurement inputs for voltage	
<ul style="list-style-type: none"> finely stranded with core end processing solid for AWG cables solid for AWG cables stranded 	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) 1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (20 ... 12), 2x (20 ... 14) 1x (20 ... 14), 2x (20 ... 16)
tightening torque at the measurement inputs for voltage	0.8 ... 1.2 N·m
tightening torque [lbf·in] at the measurement inputs for voltage	7 ... 10.3 lbf·in

Ambient conditions

installation altitude at height above sea level	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> during operation during storage during transport 	-25 ... +60 °C -40 ... +80 °C -40 ... +80 °C
environmental category	
<ul style="list-style-type: none"> 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	10 ... 95 %

Short-circuit protection

product function short circuit protection	No
IEC 61508	
Safety Integrity Level (SIL) according to IEC 61508	1

ATEX

certificate of suitability	
<ul style="list-style-type: none"> according to ATEX directive 2014/34/EU according to UKCA 	BVS 06 ATEX F001 ITS21UKEX0464
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 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)
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Main circuit

number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	20 ... 200 A
operating voltage	
<ul style="list-style-type: none"> at AC <ul style="list-style-type: none"> at 50 Hz rated value at 60 Hz rated value 	110 ... 690 V 110 ... 690 V
operating frequency rated value	50 ... 60 Hz

Control circuit/ Control

type of voltage	AC
inrush current maximum	2 000 A; 10 x I _o

Approvals Certificates

Environment	General Product Approval
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[Environmental Conformations](#)



General Product Approval	EMV	For use in hazardous locations
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For use in hazardous locations

Test Certificates



[Miscellaneous](#)

[Special Test Certificate](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Maritime application

other



[Confirmation](#)



other

Industrial Communication

[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=3UF7113-1AA01-0>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7113-1AA01-0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UF7113-1AA01-0>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7113-1AA01-0&lang=en



