













Current/voltage measuring module V2; Set current 3...40 A, Voltage measurement up to 690 V, Overall width 45 mm, Straight-through transformer, basic unit required pro V PB, pro V MR, pro V PN or pro V EIP

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Current/voltage measuring module
<b>General technical data</b>	
<b>product function</b>	
• current measurement	Yes
• voltage measurement	Yes
• active power measurement	Yes
• power measurement	Yes
• frequency measurement	Yes
<b>measuring procedure for current measurement</b>	TRMS
<b>current measuring range extension with external current transformers</b>	Yes
<b>measuring procedure for voltage measurement</b>	TRMS
<b>measurable supply voltage between the line conductors at AC maximum rated value</b>	690 V
<b>line conductors and neutral conductors internal resistance for voltage measurement</b>	1 MΩ; RC-based voltage divider
<b>product component</b>	
• input for thermistor connection	No
<b>insulation voltage</b>	
• with degree of pollution 3 at AC rated value	690 V
• for wires of main circuit acc. to IEC 60947-1 rated value	6 kV
<b>surge voltage resistance rated value</b>	6 000 V
<b>protection class IP</b>	IP20
shock resistance acc. to IEC 60068-2-27	15g / 11 ms; with basic unit snapped on
<b>vibration resistance</b>	1-6 Hz / 15 mm; 6-500 Hz / 2 g; with basic unit snapped on: 1g
<b>reference code acc. to IEC 81346-2</b>	F
<b>Substance Prohibitance (Date)</b>	28.05.2009
<b>certificate of suitability</b>	
• 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>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>	
• 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
<b>Inputs/ Outputs</b>	
number of outputs as contact-affected switching element	0
<b>Protective and monitoring functions</b>	
<b>product function</b>	
• power factor monitoring	Yes
• ground-fault monitoring	Yes
• voltage detection	Yes
<b>product function</b>	
• current detection	Yes
• overload protection	Yes
<b>Precision</b>	
<b>measuring precision</b>	
• of frequency measurement	+/- 1.5 %, 2.25 A ... 80 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
• for current measurement 1	+/- 1.5 %, in range 2.25 A ... 80 A, in range 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), 50/60 Hz, 25 °C
• for current measurement 2	+/- 3 %, in range 80 A ... 320 A, in range 0.85 x 110 V ... 1.1 x 690 V (line-to-line voltages), 50/60 Hz, 25 °C
• 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
• at cos phi-measurement 1	+/- 1.5 %, 7.5 A ... 230 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
• at cos phi-measurement 2	+/- 5 %, 80 A ... 320 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
• at active power measurement 1	+/- 5 %, 7.5 A ... 230 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
• at active power measurement 2	+/- 10 %, 80 A ... 320 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
• at energy measurement 1	+/- 5 %, 2.25 A ... 80 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
• at energy measurement 2	+/- 10 %, 80 A ... 320 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
• at apparent power measurement 1	+/- 3 %, 2.25 A ... 80 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
• at apparent power measurement 2	+/- 5 %, 80 A ... 320 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
<b>accuracy of ground-fault monitoring</b>	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
<b>temperature drift per °C</b>	0.01 %/°C; Reference temperature: 25°C
<b>measured variable frequency</b>	45 ... 65 Hz
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	screw and snap-on mounting
<b>height</b>	84 mm
<b>width</b>	45 mm
<b>depth</b>	64 mm
<b>required spacing</b>	
• top	30 mm
• bottom	30 mm
• left	0 mm
• right	0 mm
<b>diameter of inlet opening</b>	7.5 mm
<b>diameter of inlet opening for current measurement</b>	7.5 mm
<b>Connections/ Terminals</b>	
<b>type of electrical connection at the measurement inputs for voltage</b>	screw-type terminals
<b>type of connectable conductor cross-sections at the measurement inputs for voltage</b>	
• finely stranded with core end processing	1x (0.25 ... 2.5 mm²), 2x (0.25 ... 1.0 mm²)
• solid	1x (0.25 ... 2.5 mm²), 2x (0.25 ... 1.0 mm²)
• at AWG cables solid	1x (24 ... 14), 2x (24 ... 18)

<ul style="list-style-type: none"><li>• at AWG cables stranded</li></ul>	1x (20 ... 14), 2x (20 ... 16)				
tightening torque at the measurement inputs for voltage	0.5 ... 0.6 N·m				
tightening torque [lbf·in] at the measurement inputs for voltage	4.4 ... 5.3 lbf·in				
Ambient conditions					
installation altitude at height above sea level <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; max. +40 °C (no protective separation)				
ambient temperature <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				
environmental category <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 %				
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	3 ... 40 A				
operating voltage <ul style="list-style-type: none"><li>• at AC<ul style="list-style-type: none"><li>— at 50 Hz rated value</li><li>— at 60 Hz rated value</li></ul></li></ul>	110 ... 690 V 110 ... 690 V				
operating frequency rated value	50 ... 60 Hz				
Control circuit/ Control					
type of voltage	AC				
inrush current maximum	400 A; 10 x I <sub>o</sub>				
Certificates/ approvals					
General Product Approval	EMC	For use in hazardous locations			
					
For use in hazardous locations			Declaration of Conformity	Test Certificates	
				<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Special Test Certificate</a>
Test Certificates	Marine / Shipping			other	

other



[PROFINET-Certification](#)

#### 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=3UF7111-1AA01-0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7111-1AA01-0>

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

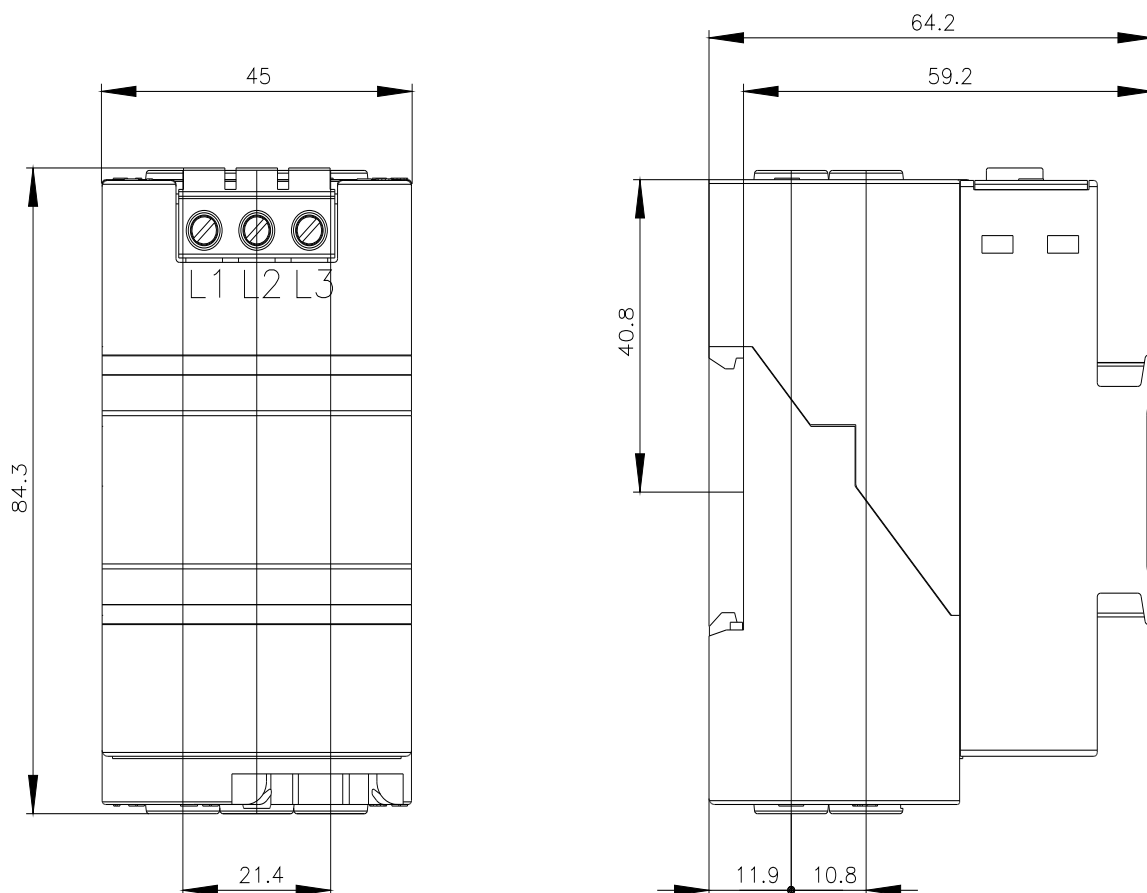
<https://support.industry.siemens.com/cs/ww/en/ps/3UF7111-1AA01-0>

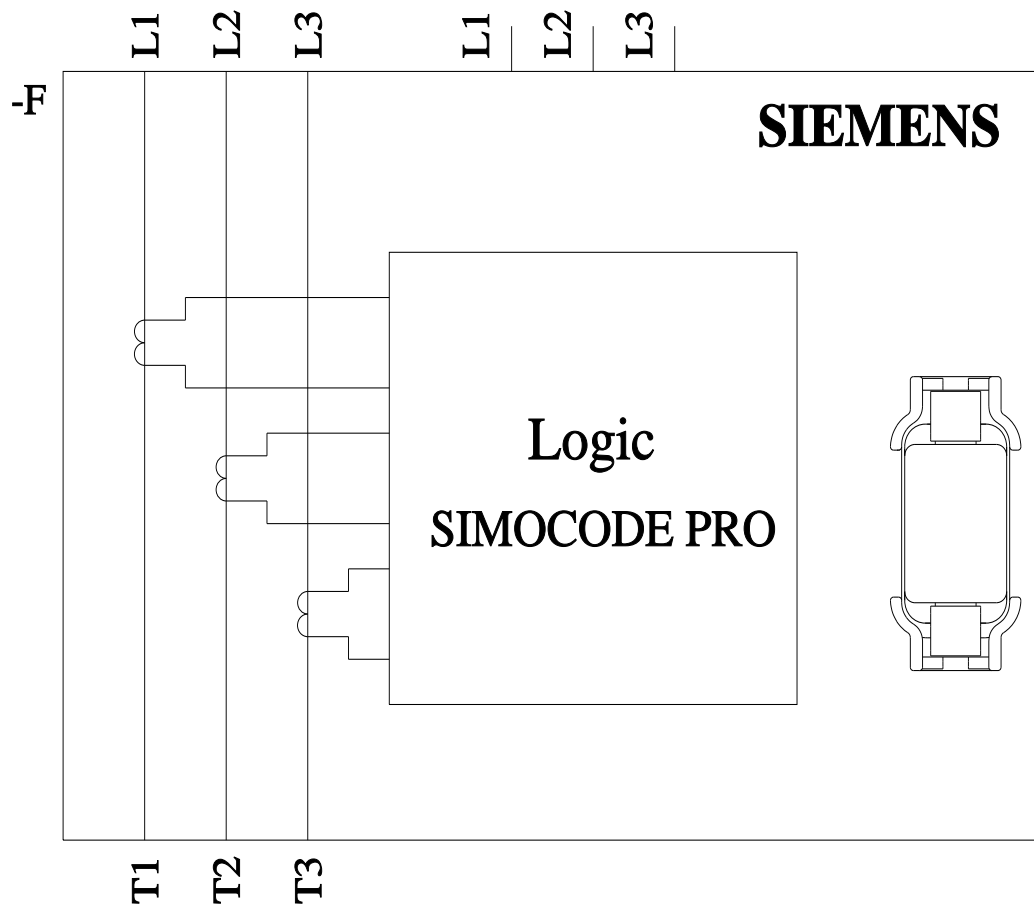
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UF7111-1AA01-0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7111-1AA01-0&lang=en)

Test report No. A0258, protective separation

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





last modified:

12/21/2020 [🔗](#)