













Current/voltage measuring module V2; Set current 10...115 A, Voltage measurement up to 690 V, Overall width 55 mm, Straight-through transformer, basic unit required pro V PB, pro V MR, pro V PN or pro V EIP

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| product brand name | SIRIUS |
| product designation | Current/voltage measuring module |
| General technical data | |
| product function | |
| • current measurement | Yes |
| • voltage measurement | Yes |
| • active power measurement | Yes |
| • power 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 |
| line conductors and neutral conductors internal resistance for voltage measurement | 1 MΩ; RC-based voltage divider |
| product component | |
| • input for thermistor connection | No |
| insulation voltage | |
| • 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 |
| surge voltage resistance rated value | 6 000 V |
| protection class IP | IP20 |
| shock resistance acc. to IEC 60068-2-27 | 15g / 11 ms; with basic unit snapped on |
| vibration resistance | 1-6 Hz / 15 mm; 6-500 Hz / 2 g; with basic unit snapped on: 1g |
| reference code acc. to IEC 81346-2 | F |
| Substance Prohibitance (Date) | 28.05.2009 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) |
| 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 |

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| field-based interference acc. 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 |
| 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 %, 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 |
| <ul style="list-style-type: none"> • for current measurement 1 | +/- 1.5 %, in range 7.25 A ... 230 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 | +/- 3 %, in range 230 A ... 920 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 %, 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 |
| <ul style="list-style-type: none"> • at cos phi-measurement 2 | +/- 5 %, 230 A ... 920 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 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"> • at active power measurement 2 | +/- 10 %, 230 A ... 920 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 energy 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 |
| <ul style="list-style-type: none"> • at energy measurement 2 | +/- 10 %, 230 A ... 920 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 apparent power measurement 1 | +/- 3 %, 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 |
| <ul style="list-style-type: none"> • at apparent power measurement 2 | +/- 5 %, 230 A ... 920 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 | 94 mm |
| width | 55 mm |
| depth | 91 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 | 14 mm |
| diameter of inlet opening for current measurement | 14 mm |
| Connections/ 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 | 1x (0.25 ... 2.5 mm ²), 2x (0.25 ... 1.0 mm ²) |
| <ul style="list-style-type: none"> • solid | 1x (0.25 ... 2.5 mm ²), 2x (0.25 ... 1.0 mm ²) |
| <ul style="list-style-type: none"> • at AWG cables solid | 1x (24 ... 14), 2x (24 ... 18) |

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|---|---|--|
| <ul style="list-style-type: none"> at AWG cables stranded | 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"> 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 acc. to IEC 60721 during storage acc. to IEC 60721 during transport 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 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 | 10 ... 115 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 | 1 150 A; 10 x I ₀ | |
| Certificates/ approvals | | |
| General Product Approval | EMC | For use in hazardous locations |
|       | | |
| For use in hazardous locations | Declaration of Conformity | Test Certificates |
|     | Special Test Certificate | Type Test Certificates/Test Report |
| 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=3UF7112-1AA01-0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7112-1AA01-0>

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

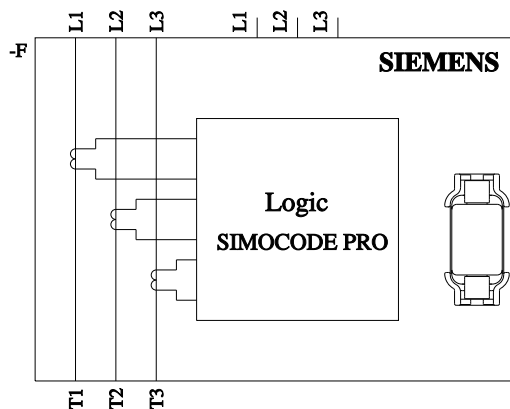
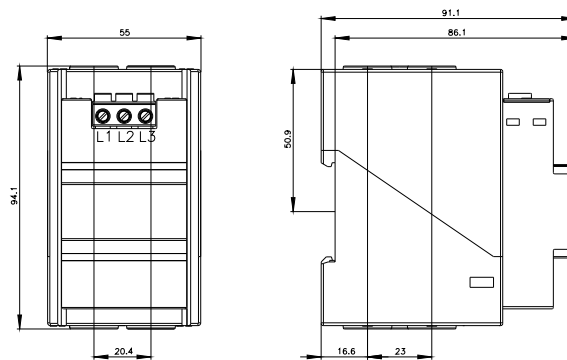
<https://support.industry.siemens.com/cs/ww/en/ps/3UF7112-1AA01-0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7112-1AA01-0&lang=en

Test report No. A0258, protective separation

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



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