



Basic unit SIMOCODE pro V PN, Ethernet/PROFINET IO, PN system redundancy, OPC UA server, Web server, transmission rate 100 Mbps, 2 x bus connection via RJ45, 4I/3O freely parameterizable, Us: 110...240 V AC/DC, input for thermistor connection Monostable relay outputs, expandable by extension modules

|                                                                                    |                                |
|------------------------------------------------------------------------------------|--------------------------------|
| <b>product brand name</b>                                                          | SIRIUS                         |
| <b>product designation</b>                                                         | Motor management system        |
| <b>design of the product</b>                                                       | basic unit 3                   |
| <b>product type designation</b>                                                    | SIMOCODE pro V PN              |
| <b>General technical data</b>                                                      |                                |
| <b>product function</b>                                                            |                                |
| • bus communication                                                                | Yes                            |
| • data acquisition function                                                        | Yes                            |
| • diagnostics function                                                             | Yes                            |
| • password protection                                                              | Yes                            |
| • test function                                                                    | Yes                            |
| • maintenance function                                                             | Yes                            |
| <b>product component</b>                                                           |                                |
| • input for thermistor connection                                                  | Yes                            |
| • digital input                                                                    | Yes                            |
| • input for analog temperature sensors                                             | No                             |
| • input for ground fault detection                                                 | No                             |
| • relay output                                                                     | Yes                            |
| <b>product extension</b>                                                           |                                |
| • temperature monitoring module                                                    | Yes                            |
| • current measuring module                                                         | Yes                            |
| • current/voltage measuring module                                                 | Yes                            |
| • fail-safe digital I/O module                                                     | Yes                            |
| • ground-fault monitoring module                                                   | Yes                            |
| • control unit with display                                                        | Yes                            |
| • control unit                                                                     | Yes                            |
| • analog I/O module                                                                | Yes                            |
| <b>apparent power consumption</b>                                                  | 8.3 V·A                        |
| <b>consumed active power</b>                                                       | 4.8 W                          |
| insulation voltage with degree of pollution 3 at AC rated value                    | 300 V                          |
| <b>surge voltage resistance rated value</b>                                        | 4 000 V                        |
| <b>protection class IP</b>                                                         | IP20                           |
| <b>shock resistance</b>                                                            |                                |
| • acc. to IEC 60068-2-27                                                           | 15g / 11 ms                    |
| • <b>vibration resistance</b>                                                      | 1-6 Hz / 15 mm; 6-500 Hz / 2 g |
| <b>switching capacity current of the NO contacts of the relay outputs at AC-15</b> |                                |
| • at 24 V                                                                          | 6 A                            |
| • at 120 V                                                                         | 6 A                            |

|                                                                                                                                                                                                                                                                                         |                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 230 V</li> </ul>                                                                                                                                                                                                                            | 3 A                                                              |
| <b>switching capacity current of the NO contacts of the relay outputs at DC-13</b>                                                                                                                                                                                                      |                                                                  |
| <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 60 V</li> <li>• at 125 V</li> </ul>                                                                                                                                                                                      | 2 A<br>0.55 A<br>0.25 A                                          |
| mechanical service life (switching cycles) typical                                                                                                                                                                                                                                      | 10 000 000                                                       |
| electrical endurance (switching cycles) typical                                                                                                                                                                                                                                         | 100 000                                                          |
| <b>buffering time in the event of power failure</b>                                                                                                                                                                                                                                     | 0.02 s                                                           |
| <b>reference code acc. to IEC 81346-2</b>                                                                                                                                                                                                                                               | F                                                                |
| continuous current of the NO contacts of the relay outputs                                                                                                                                                                                                                              |                                                                  |
| <ul style="list-style-type: none"> <li>• at 50 °C</li> <li>• at 60 °C</li> </ul>                                                                                                                                                                                                        | 6 A<br>5 A                                                       |
| <b>type of input characteristic</b>                                                                                                                                                                                                                                                     | Type 1 in accordance with EN 61131-2                             |
| <b>Substance Prohibittance (Date)</b>                                                                                                                                                                                                                                                   | 01.03.2017                                                       |
| <b>certificate of suitability</b>                                                                                                                                                                                                                                                       |                                                                  |
| <ul style="list-style-type: none"> <li>• IECEx</li> <li>• according to ATEX directive 2014/34/EU</li> </ul>                                                                                                                                                                             | Yes; IECEx PTB 18.0004X<br>BVS 06 ATEX F001, PTB 18 ATEX 5003 X  |
| explosion device group and category according to ATEX directive 2014/34/EU                                                                                                                                                                                                              | II (2) G, II (2 ) D, I (M2) / I (1G/M2), II (1/2) G, II (1G/2D)  |
| <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>                                                                                                                                                                                                                                                           |                                                                  |
| <ul style="list-style-type: none"> <li>• due to burst acc. to IEC 61000-4-4</li> <li>• due to conductor-earth surge acc. to IEC 61000-4-5</li> <li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li> <li>• due to high-frequency radiation acc. to IEC 61000-4-6</li> </ul> | 2 kV (power ports) / 1 kV (signal ports)<br>2 kV<br>1 kV<br>10 V |
| <b>field-based interference acc. to IEC 61000-4-3</b>                                                                                                                                                                                                                                   | 10 V/m                                                           |
| <b>electrostatic discharge acc. to IEC 61000-4-2</b>                                                                                                                                                                                                                                    | 6 kV contact discharge / 8 kV air discharge                      |
| <b>conducted HF interference emissions acc. to CISPR11</b>                                                                                                                                                                                                                              | corresponds to degree of severity A                              |
| <b>field-bound HF interference emission acc. to CISPR11</b>                                                                                                                                                                                                                             | corresponds to degree of severity A                              |
| <b>Inputs/ Outputs</b>                                                                                                                                                                                                                                                                  |                                                                  |
| <b>product function</b>                                                                                                                                                                                                                                                                 |                                                                  |
| <ul style="list-style-type: none"> <li>• parameterizable inputs</li> <li>• parameterizable outputs</li> </ul>                                                                                                                                                                           | Yes<br>Yes                                                       |
| <b>number of inputs</b>                                                                                                                                                                                                                                                                 | 4                                                                |
| <ul style="list-style-type: none"> <li>• for thermistor connection</li> </ul>                                                                                                                                                                                                           | 1                                                                |
| number of digital inputs with a common reference potential                                                                                                                                                                                                                              | 4                                                                |
| digital input version type 1 acc. to IEC 61131                                                                                                                                                                                                                                          | Yes                                                              |
| input voltage at digital input at DC rated value                                                                                                                                                                                                                                        | 24 V                                                             |
| <b>number of outputs</b>                                                                                                                                                                                                                                                                | 3                                                                |
| <b>number of semiconductor outputs</b>                                                                                                                                                                                                                                                  | 0                                                                |
| <b>number of outputs as contact-affected switching element</b>                                                                                                                                                                                                                          | 3                                                                |
| <b>switching behavior</b>                                                                                                                                                                                                                                                               | monostable                                                       |
| <b>type of relay outputs</b>                                                                                                                                                                                                                                                            | Monostable                                                       |
| <b>wire length for digital signals maximum</b>                                                                                                                                                                                                                                          | 300 m                                                            |
| <b>wire length for thermistor connection</b>                                                                                                                                                                                                                                            |                                                                  |
| <ul style="list-style-type: none"> <li>• with conductor cross-section = 0.5 mm<sup>2</sup> maximum</li> <li>• with conductor cross-section = 1.5 mm<sup>2</sup> maximum</li> <li>• with conductor cross-section = 2.5 mm<sup>2</sup> maximum</li> </ul>                                 | 50 m<br>150 m<br>250 m                                           |
| <b>Protective and monitoring functions</b>                                                                                                                                                                                                                                              |                                                                  |
| <b>product function</b>                                                                                                                                                                                                                                                                 |                                                                  |
| <ul style="list-style-type: none"> <li>• asymmetry detection</li> <li>• blocking current evaluation</li> <li>• power factor monitoring</li> <li>• ground fault detection</li> <li>• phase failure detection</li> </ul>                                                                  | Yes<br>Yes<br>Yes<br>Yes<br>Yes                                  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• phase sequence recognition</li> <li>• voltage detection</li> <li>• monitoring of number of start operations</li> <li>• overvoltage detection</li> <li>• overcurrent detection 1 phase</li> <li>• undervoltage detection</li> <li>• undercurrent detection 1 phase</li> <li>• active power monitoring</li> </ul>                                                                                                                                                                                                                                                                                                                                                       | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes                                        |
| <b>product function</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |
| <ul style="list-style-type: none"> <li>• current detection</li> <li>• overload protection</li> <li>• evaluation of thermistor motor protection</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes<br>Yes<br>Yes                                                                           |
| <b>total cold resistance number of sensors in series maximum</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1.5 k $\Omega$                                                                              |
| <b>response value of thermoresistor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3 400 ... 3 800 $\Omega$                                                                    |
| <ul style="list-style-type: none"> <li>• of the short-circuit control</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 9 $\Omega$                                                                                  |
| <b>release value of thermoresistor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1 500 ... 1 650 $\Omega$                                                                    |
| <b>Motor control functions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                             |
| <b>product function</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |
| <ul style="list-style-type: none"> <li>• parameterizable overload relay</li> <li>• circuit breaker control</li> <li>• direct start</li> <li>• reverse starting</li> <li>• star-delta circuit</li> <li>• star-delta reversing circuit</li> <li>• Dahlander circuit</li> <li>• Dahlander reversing circuit</li> <li>• pole-changing switch circuit</li> <li>• pole-changing switch reversing circuit</li> <li>• slide control</li> <li>• valve control</li> </ul>                                                                                                                                                                                                                                                | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes            |
| <b>Communication/ Protocol</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                             |
| <ul style="list-style-type: none"> <li>• protocol is supported PROFIBUS DP protocol</li> <li>• protocol is supported PROFINET IO protocol</li> <li>• protocol is supported PROFI-safe protocol</li> <li>• protocol is supported Modbus RTU</li> <li>• protocol is supported EtherNet/IP</li> <li>• protocol is supported OPC UA Server</li> <li>• protocol is supported LLDP</li> <li>• protocol is supported Address Resolution Protocol (ARP)</li> <li>• protocol is supported SNMP</li> <li>• protocol is supported HTTPS</li> <li>• protocol is supported NTP</li> <li>• protocol is supported Media Redundancy Protocol (MRP)</li> <li>• product function is supported Device Level Ring (DLR)</li> </ul> | No<br>Yes<br>Yes<br>No<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>No         |
| <b>number of interfaces</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                             |
| <ul style="list-style-type: none"> <li>• acc. to PROFINET</li> <li>• acc. to PROFIBUS</li> <li>• according to Ethernet/IP</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2<br>0<br>0                                                                                 |
| <b>product function</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |
| <ul style="list-style-type: none"> <li>• web server</li> <li>• shared device</li> <li>• at the Ethernet interface Autocrossover</li> <li>• at the Ethernet interface Autonegotiation</li> <li>• at the Ethernet interface Autosensing</li> <li>• Media Redundancy Protocol for Planned Duplication (MRPD)</li> <li>• is supported PROFINET system redundancy</li> </ul>                                                                                                                                                                                                                                                                                                                                        | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes; In conjunction with SIMATIC PCS 7 CPU 410-5H |

|                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• supports PROFINergy measured values</li> <li>• supports PROFINergy shutdown</li> </ul>                                                                                                                                                       | Yes<br>Yes                                                                                                                                                                                                                                                                                  |
| <b>transfer rate maximum</b>                                                                                                                                                                                                                                                          | 100 Mbit/s                                                                                                                                                                                                                                                                                  |
| <b>PROFINET conformity class</b>                                                                                                                                                                                                                                                      | B                                                                                                                                                                                                                                                                                           |
| <b>identification &amp; maintenance function</b> <ul style="list-style-type: none"> <li>• I&amp;M0 - device-specific information</li> <li>• I&amp;M1 – higher level designation/location designation</li> <li>• I&amp;M2 - installation date</li> <li>• I&amp;M3 - comment</li> </ul> | Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                    |
| type of electrical connection of the communication interface                                                                                                                                                                                                                          | 2x RJ45                                                                                                                                                                                                                                                                                     |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                             |
| <b>mounting position</b>                                                                                                                                                                                                                                                              | any                                                                                                                                                                                                                                                                                         |
| <b>fastening method</b>                                                                                                                                                                                                                                                               | screw and snap-on mounting                                                                                                                                                                                                                                                                  |
| <b>height</b>                                                                                                                                                                                                                                                                         | 111 mm                                                                                                                                                                                                                                                                                      |
| <b>width</b>                                                                                                                                                                                                                                                                          | 45 mm                                                                                                                                                                                                                                                                                       |
| <b>depth</b>                                                                                                                                                                                                                                                                          | 124 mm                                                                                                                                                                                                                                                                                      |
| <b>required spacing</b> <ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul>                                                                                                                                                    | 40 mm<br>40 mm<br>0 mm<br>0 mm                                                                                                                                                                                                                                                              |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                             |
| <b>product component removable terminal for auxiliary and control circuit</b>                                                                                                                                                                                                         | Yes                                                                                                                                                                                                                                                                                         |
| <b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• at AWG cables solid</li> <li>• at AWG cables stranded</li> </ul>                                                    | 1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )<br>1x (20 ... 12), 2x (20 ... 14)<br>1x (20 ... 14), 2x (20 ... 16)                                                                            |
| tightening torque with screw-type terminals                                                                                                                                                                                                                                           | 0.8 ... 1.2 N·m                                                                                                                                                                                                                                                                             |
| tightening torque [lbf·in] with screw-type terminals                                                                                                                                                                                                                                  | 7 ... 10.3 lbf·in                                                                                                                                                                                                                                                                           |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                             |
| <b>installation altitude at height above sea level</b> <ul style="list-style-type: none"> <li>• 1 maximum</li> <li>• 2 maximum</li> <li>• 3 maximum</li> </ul>                                                                                                                        | 2 000 m<br>3 000 m; max. +50 °C (no protective separation)<br>4 000 m; max. +40 °C (no protective separation)                                                                                                                                                                               |
| <b>ambient temperature</b> <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul>                                                                                                                                 | -25 ... +60 °C<br>-40 ... +80 °C<br>-40 ... +80 °C                                                                                                                                                                                                                                          |
| <b>environmental category</b> <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<br>1K6 (no condensation, relative humidity 10 ... 95%), 1C2 (no salt mist), 1S2 (sand must not get into the devices), 1M4<br>2K2, 2C1, 2S1, 2M2 |
| <b>relative humidity</b> <ul style="list-style-type: none"> <li>• during operation</li> </ul>                                                                                                                                                                                         | 5 ... 95 %                                                                                                                                                                                                                                                                                  |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                           | B300 / R300                                                                                                                                                                                                                                                                                 |
| <b>Short-circuit protection</b>                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                             |
| 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 <sub>N</sub> < 500 A)                                                                                                                                           |
| <b>Safety related data</b>                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                             |
| <b>touch protection against electrical shock</b>                                                                                                                                                                                                                                      | finger-safe                                                                                                                                                                                                                                                                                 |
| <b>Galvanic isolation</b>                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                             |
| <b>(electrically) protective separation acc. to IEC 60947-1</b>                                                                                                                                                                                                                       | 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)                                                                                      |
| <b>Control circuit/ Control</b>                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                             |
| <b>product function soft starter control</b>                                                                                                                                                                                                                                          | Yes                                                                                                                                                                                                                                                                                         |

|                                                                          |               |
|--------------------------------------------------------------------------|---------------|
| type of voltage of the control supply voltage                            | AC/DC         |
| control supply voltage at AC                                             |               |
| • at 50 Hz rated value                                                   | 110 ... 240 V |
| • at 60 Hz rated value                                                   | 110 ... 240 V |
| control supply voltage frequency                                         |               |
| • 1 rated value                                                          | 50 Hz         |
| • 2 rated value                                                          | 60 Hz         |
| relative symmetrical tolerance of the control supply voltage frequency   | 5 %           |
| control supply voltage at DC                                             |               |
| • rated value                                                            | 110 ... 240 V |
| operating range factor control supply voltage rated value at DC          |               |
| • initial value                                                          | 0.85          |
| • full-scale value                                                       | 1.1           |
| operating range factor control supply voltage rated value at AC at 50 Hz |               |
| • initial value                                                          | 0.85          |
| • full-scale value                                                       | 1.1           |
| operating range factor control supply voltage rated value at AC at 60 Hz |               |
| • initial value                                                          | 0.85          |
| • full-scale value                                                       | 1.1           |

#### Certificates/ approvals

|                          |     |                                |
|--------------------------|-----|--------------------------------|
| General Product Approval | EMC | For use in hazardous locations |
|--------------------------|-----|--------------------------------|



|                                |                           |                   |
|--------------------------------|---------------------------|-------------------|
| For use in hazardous locations | Declaration of Conformity | Test Certificates |
|--------------------------------|---------------------------|-------------------|



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

|                   |                   |       |
|-------------------|-------------------|-------|
| Test Certificates | Marine / Shipping | other |
|-------------------|-------------------|-------|

[Special Test Certificate](#)



[Confirmation](#)

|       |
|-------|
| other |
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#### 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=3UF7011-1AU00-0>

# Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7011-1AU00-0>

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

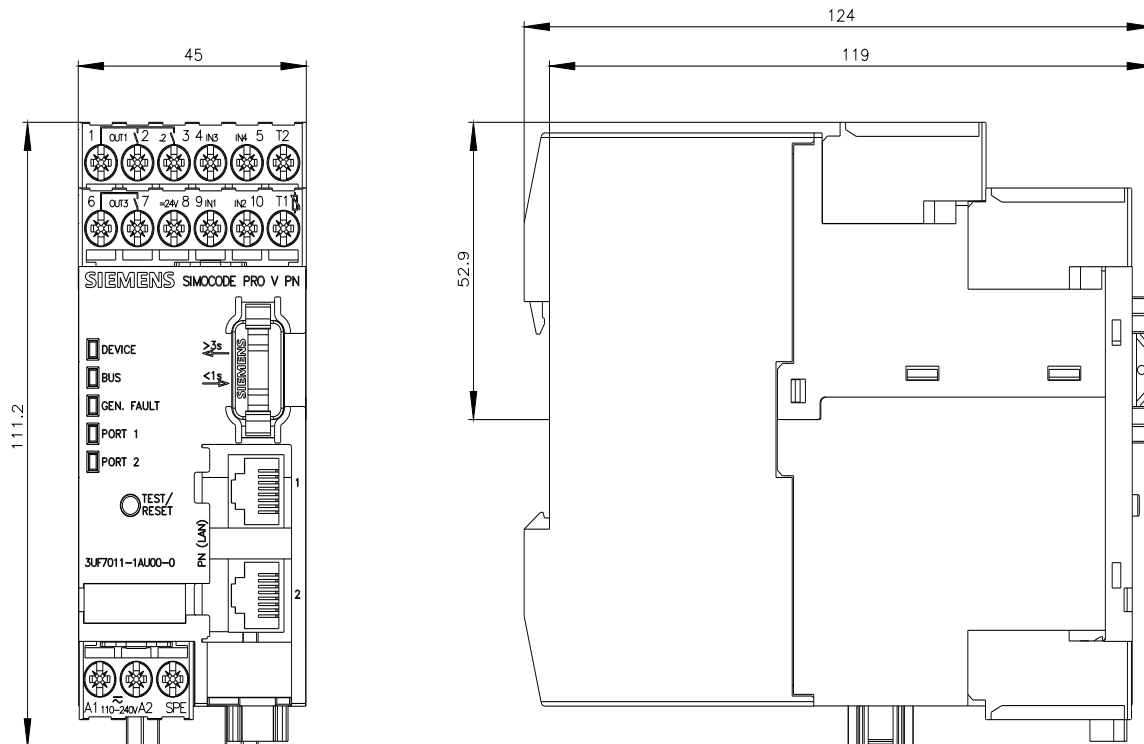
<https://support.industry.siemens.com/cs/ww/en/ps/3UF7011-1AU00-0>

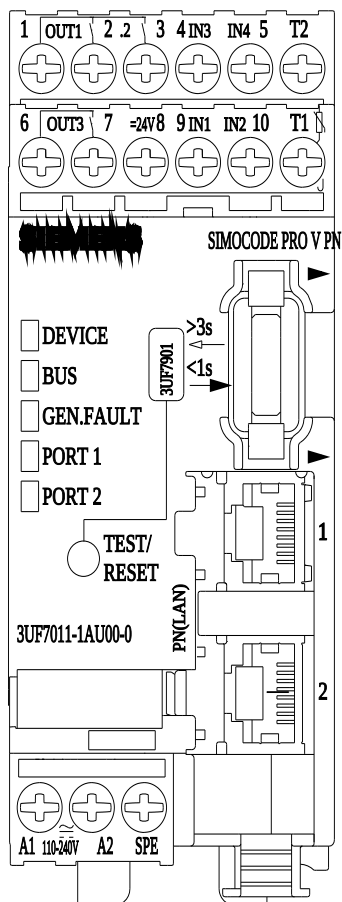
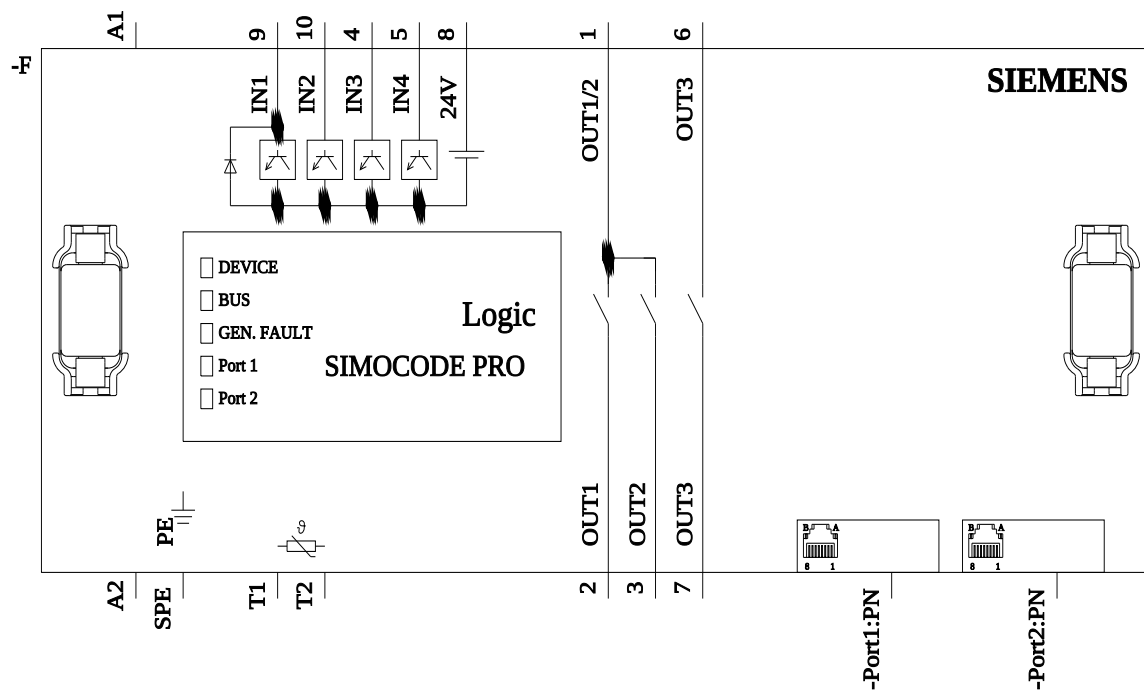
## Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UF7011-1AU00-0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7011-1AU00-0&lang=en)

## Test report No. A0258, protective separation

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





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