



SIRIUS soft starter S3 106 A, 55 kW/400 V, 40 °C 200-480 V AC, 24 V AC/DC Screw terminals Thermistor motor protection

### General technical data

|   |   |                          |
|---|---|--------------------------|
| <b>product brand name</b>   |   | SIRIUS                   |
| <b>product feature</b>  |   |                          |
| • integrated bypass contact system  |   | Yes                      |
| • thyristors  |   | Yes                      |
| <b>product function</b>   |   |                          |
| • intrinsic device protection   |   | Yes                      |
| • motor overload protection   |   | Yes                      |
| • evaluation of thermistor motor protection   |   | Yes                      |
| • external reset  |   | Yes                      |
| • adjustable current limitation   |   | Yes                      |
| • inside-delta circuit  |   | No                       |
| <b>product component motor brake output</b>   |   | No                       |
| <b>insulation voltage rated value</b>   | V | 600                      |
| <b>degree of pollution</b>  |   | 3, acc. to IEC 60947-4-2 |
| <b>reference code according to EN 61346-2</b>   |   | Q                        |
| <b>reference code according to DIN 40719 extended according to IEC 204-2 according to IEC 750</b> |   | G                        |

### Power Electronics

|   |    |              |
|---|----|--------------|
| <b>product designation</b>  |    | Soft starter |
| <b>operational current</b>  |    |              |
| • at 40 °C rated value  | A  | 106          |
| • at 50 °C rated value  | A  | 98           |
| • at 60 °C rated value  | A  | 90           |
| <b>yielded mechanical performance for 3-phase motors</b>  |    |              |
| • at 230 V  |    |              |
| — at standard circuit at 40 °C rated value  | kW | 30           |
| • at 400 V  |    |              |
| — at standard circuit at 40 °C rated value  | kW | 55           |
| <b>yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value</b> | hp | 30           |
| <b>operating frequency rated value</b>  | Hz | 50 ... 60    |
| <b>relative negative tolerance of the operating frequency</b>   | %  | -10          |
| <b>relative positive tolerance of the operating frequency</b>   | %  | 10           |
| <b>operating voltage at standard circuit rated value</b>  | V  | 200 ... 480  |
| <b>relative negative tolerance of the operating voltage at standard circuit</b>                                       | %  | -15          |
| <b>relative positive tolerance of the operating voltage at standard circuit</b>                                       | %  | 10           |
| <b>minimum load [%]</b>   | %  | 20           |
| <b>adjustable motor current for motor overload protection minimum rated value</b>                                     | A  | 46           |

|  |    |   |
|--|----|---|
| continuous operating current [% of I <sub>e</sub> ] at 40 °C   | %  | 115   |
| power loss [W] at operational current at 40 °C during operation typical  | W  | 21  |
| <b>Control circuit/ Control</b>  |    |   |
| type of voltage of the control supply voltage  |    | AC/DC   |
| control supply voltage frequency 1 rated value   | Hz | 50  |
| control supply voltage frequency 2 rated value   | Hz | 60  |
| relative negative tolerance of the control supply voltage frequency  | %  | -10   |
| relative positive tolerance of the control supply voltage frequency  | %  | 10  |
| control supply voltage 1 at AC   |    |   |
| • at 50 Hz rated value   | V  | 24  |
| • at 60 Hz rated value   | V  | 24  |
| relative negative tolerance of the control supply voltage at AC at 50 Hz                                       | %  | -15   |
| relative positive tolerance of the control supply voltage at AC at 50 Hz                                       | %  | 10  |
| relative negative tolerance of the control supply voltage at AC at 60 Hz                                       | %  | -15   |
| relative positive tolerance of the control supply voltage at AC at 60 Hz                                       | %  | 10  |
| control supply voltage 1 at DC rated value   | V  | 24  |
| relative negative tolerance of the control supply voltage at DC  | %  | -20   |
| relative positive tolerance of the control supply voltage at DC  | %  | 20  |
| display version for fault signal   |    | red   |
| <b>Mechanical data</b>   |    |   |
| size of engine control device  |    | S3  |
| width  | mm | 70  |
| height   | mm | 170   |
| depth  | mm | 190   |
| fastening method   |    | screw and snap-on mounting  |
| mounting position  |    | With additional fan: With vertical mounting surface +/- 90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back Without additional fan: With vertical mounting surface +/- 10° rotatable, with vertical mounting surface +/- 10° t |
| required spacing with side-by-side mounting  |    |   |
| • upwards  | mm | 60  |
| • at the side  | mm | 30  |
| • downwards  | mm | 40  |
| wire length maximum  | m  | 300   |
| number of poles for main current circuit   |    | 3   |
| <b>Connections/ Terminals</b>  |    |   |
| type of electrical connection  |    |   |
| • for main current circuit   |    | screw-type terminals  |
| • for auxiliary and control circuit  |    | screw-type terminals  |
| number of NC contacts for auxiliary contacts   |    | 0   |
| number of NO contacts for auxiliary contacts   |    | 2   |
| number of CO contacts for auxiliary contacts   |    | 1   |
| type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point |    |   |
| • solid  |    | 2x (2.5 ... 16 mm <sup>2</sup> )  |
| • finely stranded with core end processing   |    | 2.5 ... 35 mm <sup>2</sup>  |
| • stranded   |    | 4 ... 70 mm <sup>2</sup>  |
| type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point  |    |   |
| • solid  |    | 2x (2.5 ... 16 mm <sup>2</sup> )  |
| • finely stranded with core end processing   |    | 2.5 ... 50 mm <sup>2</sup>  |
| • stranded   |    | 10 ... 70 mm <sup>2</sup>   |
| type of connectable conductor cross-sections for main contacts for box terminal using both clamping points     |    |   |
| • solid  |    | 2x (2.5 ... 16 mm <sup>2</sup> )  |
| • finely stranded with core end processing   |    | 2x (2.5 ... 35 mm <sup>2</sup> )  |

|   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>• stranded</li> </ul>  |  | 2x (10 ... 50 mm <sup>2</sup> )  |
| <b>type of connectable conductor cross-sections for AWG cables for main contacts for box terminal</b> <ul style="list-style-type: none"> <li>• using the back clamping point</li> <li>• using the front clamping point</li> <li>• using both clamping points</li> </ul> |  | 2x (10 ... 1/0)<br>2x (10 ... 1/0)<br>10 ... 2/0                       |
| <b>type of connectable conductor cross-sections for DIN cable lug for main contacts</b> <ul style="list-style-type: none"> <li>• finely stranded</li> <li>• stranded</li> </ul>   |  | 2 x (10 ... 50 mm <sup>2</sup> )<br>2x (10 ... 70 mm <sup>2</sup> )    |
| <b>type of connectable conductor cross-sections for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> </ul>  |  | 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> ) |
| <b>type of connectable conductor cross-sections for AWG cables</b> <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary contacts</li> <li>• for auxiliary contacts finely stranded with core end processing</li> </ul>                   |  | 2x (7 ... 1/0)<br>2x (20 ... 14)<br>2x (20 ... 16)                     |

### Ambient conditions

|   |    |   |
|---|----|---|
| <b>installation altitude at height above sea level</b>  | m  | 5 000   |
| <b>environmental category</b> <ul style="list-style-type: none"> <li>• during transport according to IEC 60721</li> <li>• during storage according to IEC 60721</li> <li>• during operation according to IEC 60721</li> </ul> |    | 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)<br>1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4<br>3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 |
| <b>ambient temperature</b> <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul>   | °C | -25 ... +60<br>-40 ... +80  |
| <b>derating temperature</b>   | °C | 40  |
| <b>protection class IP on the front according to IEC 60529</b>  |    | IP20  |
| <b>touch protection on the front according to IEC 60529</b>   |    | finger-safe, for vertical contact from the front  |

### UL/CSA ratings

|  |    |             |
|--|----|-------------|
| <b>yielded mechanical performance [hp] for 3-phase AC motor</b> <ul style="list-style-type: none"> <li>• at 220/230 V <ul style="list-style-type: none"> <li>— at standard circuit at 50 °C rated value</li> </ul> </li> <li>• at 460/480 V <ul style="list-style-type: none"> <li>— at standard circuit at 50 °C rated value</li> </ul> </li> </ul> | hp | 30<br>75    |
| <b>contact rating of auxiliary contacts according to UL</b>  |    | B300 / R300 |

### Approvals Certificates

|                          |     |
|--------------------------|-----|
| General Product Approval | EMV |
|--------------------------|-----|



[Confirmation](#)



|     |                                |                   |                   |
|-----|--------------------------------|-------------------|-------------------|
| EMV | For use in hazardous locations | Test Certificates | Marine / Shipping |
|-----|--------------------------------|-------------------|-------------------|

[KC](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



|                   |       |         |             |
|-------------------|-------|---------|-------------|
| Marine / Shipping | other | Railway | Environment |
|-------------------|-------|---------|-------------|



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## Further information

### Simulation Tool for Soft Starters (STS)

<https://support.industry.siemens.com/cs/ww/en/view/101494917>

### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

### 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=3RW4047-1TB04>

### Cax online generator

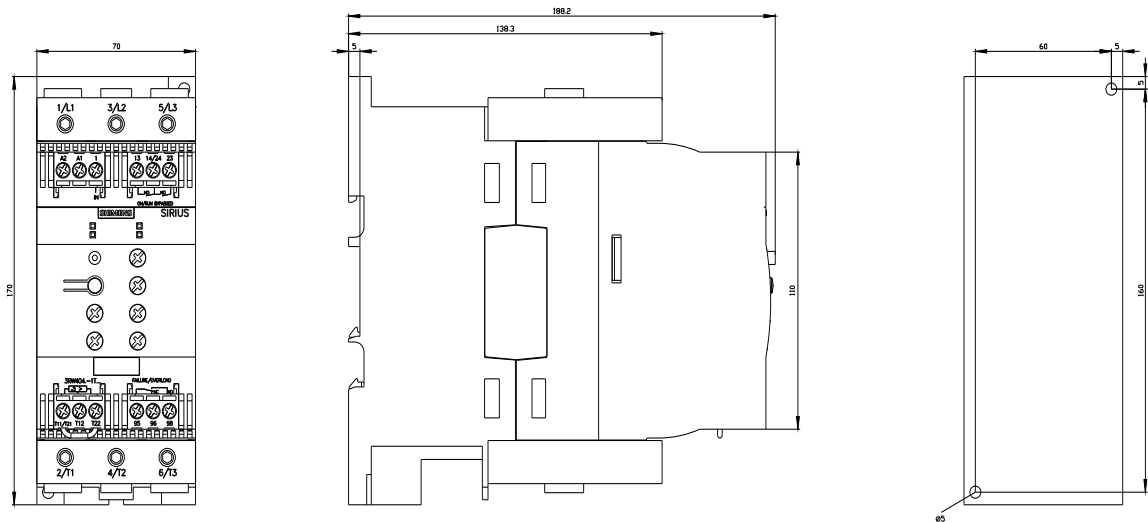
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4047-1TB04>

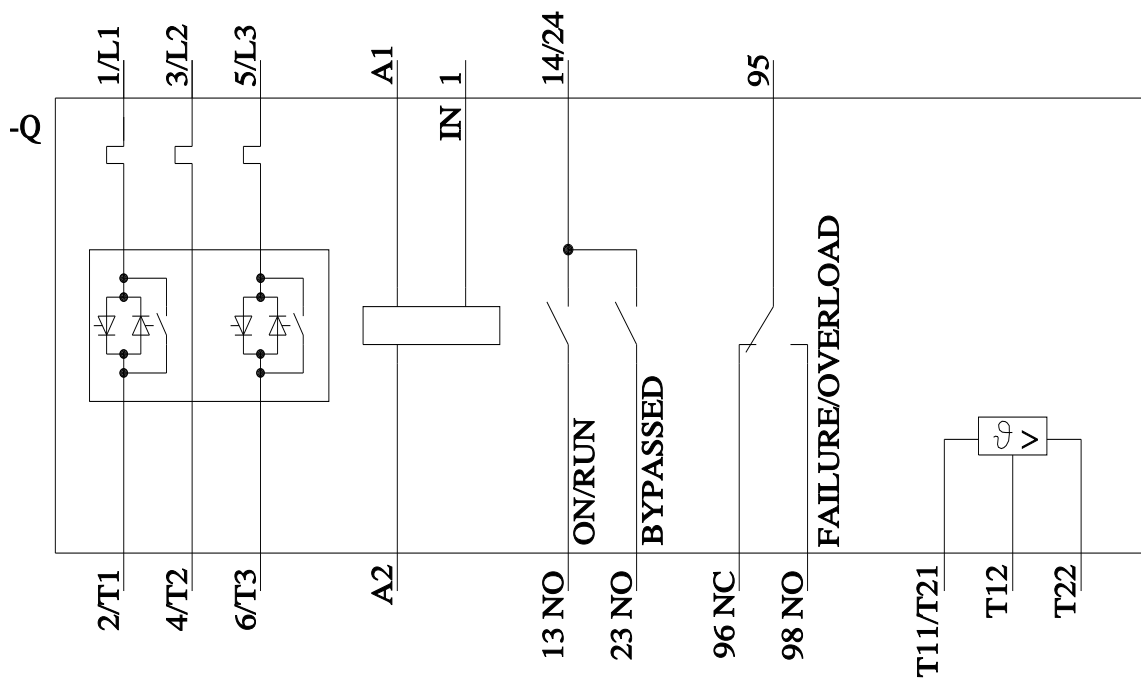
### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4047-1TB04>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4047-1TB04&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4047-1TB04&lang=en)





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