

SIRIUS SOFT STARTER, S0, 12.5A, 5.5KW/400V, 40 DEGR., AC 200-480V, AC/DC 110-230V, SCREW TERMINALS



## General technical data

|  |  |        |
|--|--|--------|
| <b>product brandname</b>   |  | SIRIUS |
| <ul style="list-style-type: none"> <li>• Product equipment Integrated bypass contact system</li> </ul> |  | Yes    |
| <ul style="list-style-type: none"> <li>• Product feature Thyristors</li> </ul>                         |  | Yes    |
| <b>Product function</b>  |  |        |
| <ul style="list-style-type: none"> <li>• Intrinsic device protection</li> </ul>                        |  | Yes    |
| <ul style="list-style-type: none"> <li>• motor overload protection</li> </ul>                          |  | Yes    |
| <ul style="list-style-type: none"> <li>• Evaluation of thermistor motor protection</li> </ul>          |  | No     |
| <ul style="list-style-type: none"> <li>• External reset</li> </ul>                                     |  | Yes    |
| <ul style="list-style-type: none"> <li>• Adjustable current limitation</li> </ul>                      |  | Yes    |
| <ul style="list-style-type: none"> <li>• Inside-delta circuit</li> </ul>                               |  | No     |
| <b>Product component Motor brake output</b>  |  | No     |
| <b>Equipment marking acc. to DIN EN 61346-2</b>  |  | Q      |
| <b>Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>             |  | G      |

## Power Electronics

|                            |  |              |
|----------------------------|--|--------------|
| <b>Product designation</b> |  | Soft starter |
|----------------------------|--|--------------|

|   |    |             |
|---|----|-------------|
| <b>Operating current</b>  |    |             |
| • at 40 °C rated value  | A  | 12.5        |
| • at 50 °C rated value  | A  | 11          |
| • at 60 °C rated value  | A  | 10          |
| <b>Mechanical power output for three-phase motors</b>   |    |             |
| • at 230 V  |    |             |
| — at standard circuit at 40 °C rated value  | W  | 3 000       |
| • at 400 V  |    |             |
| — at standard circuit at 40 °C rated value  | W  | 5 500       |
| <b>Yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C rated value</b> | hp | 3           |
| Operating frequency rated value   | Hz | 50 ... 60   |
| <b>Relative negative tolerance of the operating frequency</b>   | %  | -10         |
| <b>Relative positive tolerance of the operating frequency</b>   | %  | 10          |
| Operating voltage at standard circuit rated value   | 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          |
| Minimum load [% of IM]  | %  | 20          |
| Adjustable motor current for motor overload protection minimum rated value  | A  | 5           |
| Continuous operating current [% of I <sub>e</sub> ] at 40 °C  | %  | 115         |
| Power loss [W] at operating current at 40 °C during operation typical   | W  | 2           |

|   |    |             |
|---|----|-------------|
| <b>Control electronics</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          |
| <b>Relative negative tolerance of the control supply voltage frequency</b>      | %  | -10         |
| <b>Relative positive tolerance of the control supply voltage frequency</b>      | %  | 10          |
| Control supply voltage 1 at AC at 50 Hz   | V  | 110 ... 230 |
| Control supply voltage 1 at AC at 60 Hz   | V  | 110 ... 230 |
| <b>Relative negative tolerance of the control supply voltage at AC at 60 Hz</b> | %  | -15         |
| <b>Relative positive tolerance of the control supply voltage at AC at 60 Hz</b> | %  | 10          |
| Control supply voltage 1 at DC  | V  | 110 ... 230 |
| <b>Relative negative tolerance of the control supply voltage at DC</b>          | %  | -15         |

|   |   |     |
|---|---|-----|
| Relative positive tolerance of the control supply voltage at DC | % | 10  |
| Display version for fault signal                                |   | red |

### Mechanical data

|   |    |  |
|---|----|--|
| Size of engine control device                   |    | S0   |
| Width   | mm | 45   |
| Height  | mm | 125  |
| Depth   | mm | 155  |
| Mounting type                                   |    | 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 | 15   |
| • downwards                                     | mm | 40   |
| Installation altitude at height above sea level | m  | 5 000  |
| Wire length maximum                             | m  | 300  |
| Number of poles for main current circuit        |    | 3  |

### Connections/Terminals

|  |  |  |
|--|--|--|
| Type of electrical connection  |  |  |
| • for main current circuit   |  | screw-type terminals   |
| • for auxiliary and control current 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 (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), max. 1x 10 mm <sup>2</sup> |
| • finely stranded with core end processing   |  | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> )                             |
| Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal              |  |  |
| • using the front clamping point   |  | 1x 8, 2x (16 ... 10)   |
| Type of connectable conductor cross-sections for auxiliary contacts  |  |  |
| • solid  |  | 2x (0.5 ... 2.5 mm <sup>2</sup> )  |
| • finely stranded with core end processing   |  | 2x (0.5 ... 1.5 mm <sup>2</sup> )  |
| Type of connectable conductor cross-sections at AWG conductors   |  |  |
| • for auxiliary contacts   |  | 2x (20 ... 14)   |

- for auxiliary contacts finely stranded with core end processing

2x (20 ... 16)

### Ambient conditions

|                             |    |             |
|-----------------------------|----|-------------|
| <b>Ambient temperature</b>  |    |             |
| • during operation          | °C | -25 ... +60 |
| • during storage            | °C | -40 ... +80 |
| <b>Derating temperature</b> | °C | 40          |
| <b>Protection class IP</b>  |    | IP20        |

### Certificates/approvals

|   |  |   |
|---|--|---|
| <b>General Product Approval</b>   | <b>EMC</b>   | <b>For use in hazardous locations</b>   |
| <br>CCC      | <br>CSA | <br>UL |
|              |  |   |
| <br>C-Tick |  |   |
| <br>ATEX   |  |   |

|  |  |  |
|--|--|--|
| <b>Declaration of Conformity</b>   | <b>Test Certificates</b>   | <b>Shipping Approval</b>   |
| <br>EG-Konf. | <a href="#">spezielle Prüfbescheinigungen</a><br><a href="#">Typprüfbescheinigung/Werkszeugnis</a> | <br>GL    |
|  |  | <br>LRS |
|  |  | <br>PRS  |

### other

- [Umweltbestätigung](#)    [Bestätigungen](#)

### UL/CSA ratings

|   |    |             |
|---|----|-------------|
| <b>Yielded mechanical performance [hp] for three-phase AC motor</b> |    |             |
| • at 220/230 V  |    |             |
| — at standard circuit at 50 °C rated value                          | hp | 3           |
| • at 460/480 V  |    |             |
| — at standard circuit at 50 °C rated value                          | hp | 7.5         |
| <b>Contact rating of auxiliary contacts according to UL</b>         |    | B300 / R300 |

### Further information

**Simulation Tool for Soft Starters (STS)**  
<https://support.industry.siemens.com/cs/ww/en/view/101494917>

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3RW4024-1BB14>

**Cax online generator**

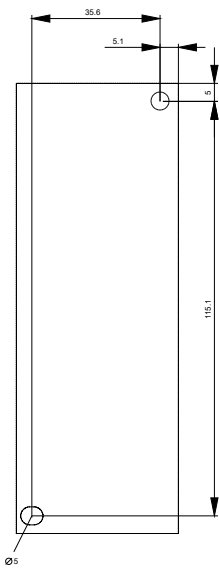
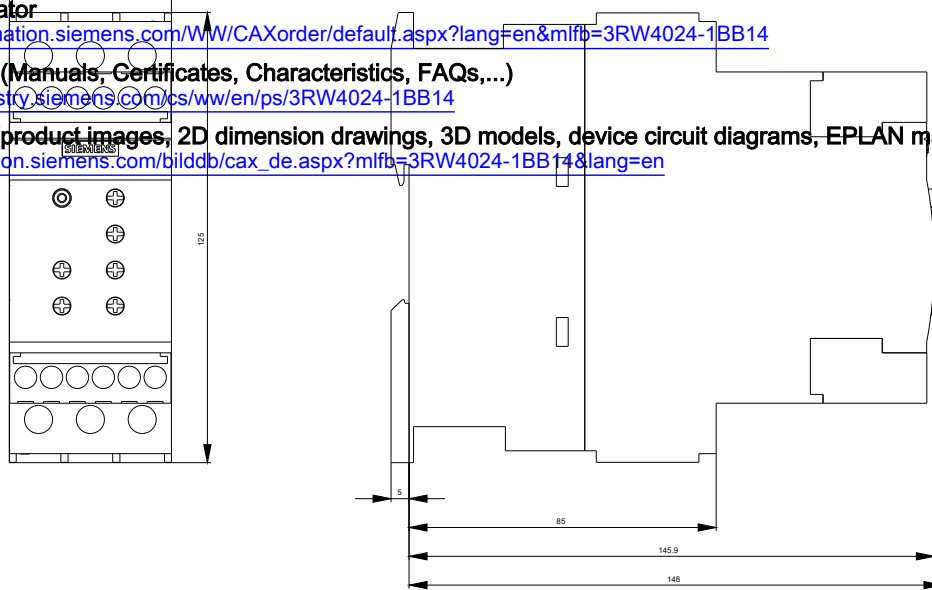
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RW4024-1BB14>

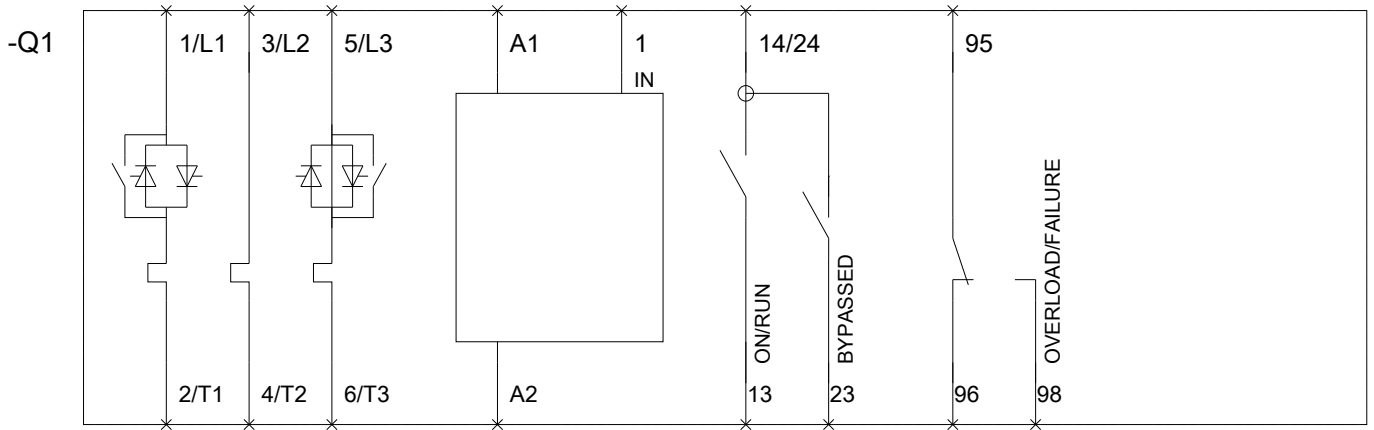
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4024-1BB14>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RW4024-1BB14&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RW4024-1BB14&lang=en)





last modified:

04/12/2017