

SIRIUS SOFT STARTER, SIZE S2, 45A, 22KW/400V,  
40 DEGREES, 200-480V AC, 110-230V AC/DC,  
SCREW TERMINALS



General technical data:

|  |  |        |
|--|--|--------|
| <b>product brand name</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>                        |  | No     |
| <ul style="list-style-type: none"> <li>• motor overload protection</li> </ul>                          |  | No     |
| <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>                                     |  | No     |
| <ul style="list-style-type: none"> <li>• Adjustable current limitation</li> </ul>                      |  | No     |
| <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 starters for standard applications |
|----------------------------|--|---|

|   |    |             |
|---|----|-------------|
| <b>Operating current</b>  |    |             |
| • at 40 °C rated value  | A  | 45          |
| • at 50 °C rated value  | A  | 42          |
| • at 60 °C rated value  | A  | 39          |
| <b>Mechanical power output for three-phase motors</b>   |    |             |
| • at 230 V  |    |             |
| — at standard circuit at 40 °C rated value  | W  | 11 000      |
| • at 400 V  |    |             |
| — at standard circuit at 40 °C rated value  | W  | 22 000      |
| <b>Yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C rated value</b> | hp | 10          |
| 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]  | %  | 10          |
| 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  | 6           |

| <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> | %  | -10         |
| <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>          | %  | -10         |
| <b>Relative positive tolerance of the control supply voltage at DC</b>          | %  | 10          |

|                                  |  |     |
|----------------------------------|--|-----|
| Display version for fault signal |  | red |
|----------------------------------|--|-----|

### Mechanical data:

|   |    |  |
|---|----|--|
| Size of engine control device                   |    | S2   |
| Width   | mm | 55   |
| Height  | mm | 160  |
| Depth   | mm | 170  |
| Mounting type                                   |    | screw and snap-on mounting   |
| Mounting position                               |    | With vertical mounting surface +/-10° rotatable, with vertical mounting surface +/- 10° tiltable to the front and back |
| Required spacing with side-by-side mounting     |    |  |
| • upwards                                       | mm | 60   |
| • at the side                                   | mm | 30   |
| • 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   |  | 1                                |
| Number of CO contacts for auxiliary contacts   |  | 0                                |
| Type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point |  |                                  |
| • solid  |  | 2x (1.5 ... 16 mm <sup>2</sup> ) |
| • finely stranded with core end processing   |  | 0.75 ... 25 mm <sup>2</sup>      |
| • stranded   |  | 0.75 ... 35 mm <sup>2</sup>      |
| Type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point  |  |                                  |
| • solid  |  | 2x (1.5 ... 16 mm <sup>2</sup> ) |
| • finely stranded with core end processing   |  | 1.5 ... 25 mm <sup>2</sup>       |
| • stranded   |  | 1.5 ... 35 mm <sup>2</sup>       |
| Type of connectable conductor cross-sections for main contacts for box terminal using both clamping points     |  |                                  |
| • solid  |  | 2x (1.5 ... 16 mm <sup>2</sup> ) |
| • finely stranded with core end processing   |  | 2x (1.5 ... 16 mm <sup>2</sup> ) |
| • stranded   |  | 2x (1.5 ... 25 mm <sup>2</sup> ) |

|  |  |  |
|--|--|--|
| <b>Type of connectable conductor cross-sections at AWG conductors 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> |  | 16 ... 2<br>18 ... 2<br>2x (16 ... 2)                                  |
| <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 at AWG conductors</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> <li>• for auxiliary contacts finely stranded with core end processing</li> </ul>  |  | 2x (20 ... 14)<br>2x (20 ... 16)                                       |

#### Ambient conditions:

|   |    |             |
|---|----|-------------|
| <b>Ambient temperature</b> <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul> | °C | -25 ... +60 |
|   | °C | -40 ... +80 |
| <b>Derating temperature</b>   | °C | 40          |
| <b>Protection class IP</b>  |    | IP00        |

#### Certificates/ approvals:

|  |  |   |
|--|--|---|
| <b>General Product Approval</b>  | <b>EMC</b>   | <b>Declaration of Conformity</b>  |
| <br>CCC | <br>EAC | <br>EG-Konf. |
| <br>CSA | <br>UL  | <br>C-TICK   |

|   |                                   |
|---|-----------------------------------|
| <b>Test Certificates</b>                          | <b>other</b>                      |
| <a href="#">Typprüfbescheinigung/Werkszeugnis</a> | <a href="#">Umweltbestätigung</a> |
| <a href="#">spezielle Prüfbescheinigungen</a>     | <a href="#">sonstige</a>          |
| <a href="#">n</a>                                 | <a href="#">Bestätigungen</a>     |

#### UL/CSA ratings:

|  |    |    |
|--|----|----|
| <b>Yielded mechanical performance [hp] for three-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 | 15 |
|  | hp | 30 |

## 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)**

<http://www.siemens.com/industrymall>

**Cax online generator**

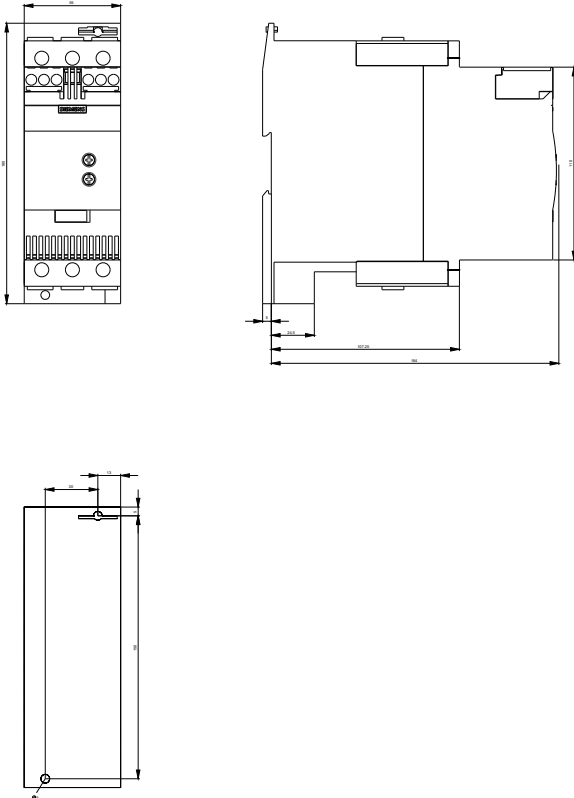
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW30361BB14>

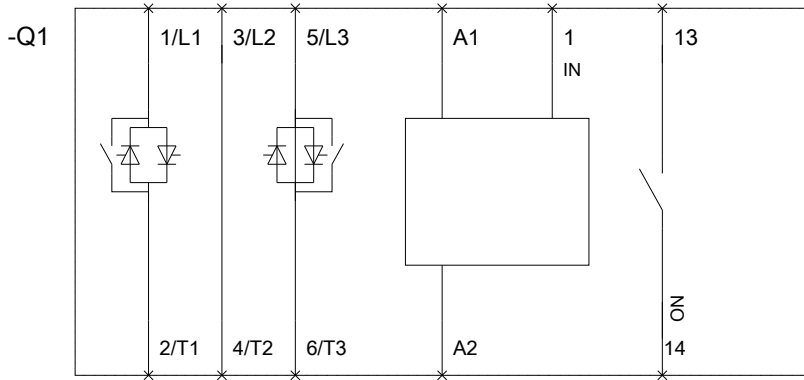
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RW30361BB14>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW30361BB14&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW30361BB14&lang=en)





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