

SIRIUS SOFT STARTER, S2, 72A, 45KW/500V, 40 DEGR., AC 400-600V, AC/DC 24V, 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  | 72          |
| • at 50 °C rated value  | A  | 62          |
| • at 60 °C rated value  | A  | 60          |
| <b>Mechanical power output for three-phase motors</b>                             |    |             |
| • at 400 V  |    |             |
| — at standard circuit at 40 °C rated value  | W  | 37 000      |
| • at 500 V  |    |             |
| — at standard circuit at 40 °C rated value  | W  | 45 000      |
| 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          |
| <b>Operating voltage at standard circuit rated value</b>                          | V  | 400 ... 600 |
| <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 [% of IM]</b>   | %  | 20          |
| <b>Adjustable motor current for motor overload protection minimum rated value</b> | A  | 35          |
| <b>Continuous operating current [% of I<sub>e</sub>] at 40 °C</b>                 | %  | 115         |
| <b>Power loss [W] at operating current at 40 °C during operation typical</b>      | W  | 15          |

| <b>Control electronics</b>  |    |       |
|---|----|-------|
| <b>Type of voltage of the control supply voltage</b>                            |    | AC/DC |
| <b>Control supply voltage frequency 1 rated value</b>                           | Hz | 50    |
| <b>Control supply voltage frequency 2 rated value</b>                           | 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    |
| <b>Control supply voltage 1 at AC</b>   |    |       |
| • at 50 Hz rated value  | V  | 24    |
| • at 60 Hz rated value  | V  | 24    |
| <b>Relative negative tolerance of the control supply voltage at AC at 60 Hz</b> | %  | -20   |
| <b>Relative positive tolerance of the control supply voltage at AC at 60 Hz</b> | %  | 20    |
| <b>Control supply voltage 1 at DC rated value</b>                               | V  | 24    |
| <b>Relative negative tolerance of the control supply voltage at DC</b>          | %  | -20   |
| <b>Relative positive tolerance of the control supply voltage at DC</b>          | %  | 20    |

|                                  |  |     |
|----------------------------------|--|-----|
| 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 additional fan: With vertical mounting surface +/- 90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back<br>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   |
| 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 (1.5 ... 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> ) |

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

Certificates/approvals

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



|                           |                   |                   |
|---------------------------|-------------------|-------------------|
| Declaration of Conformity | Test Certificates | Shipping Approval |
|---------------------------|-------------------|-------------------|



[Typprüfbescheinigung/Werkszeugnis](#)

[spezielle Prüfbescheinigung](#)



**other**

[Umweltbestätigung](#)

[Bestätigungen](#)

**UL/CSA ratings**

|  |    |             |
|--|----|-------------|
| <b>Yielded mechanical performance [hp] for three-phase AC motor</b>  |    |             |
| <ul style="list-style-type: none"> <li>• at 460/480 V <ul style="list-style-type: none"> <li>— at standard circuit at 50 °C rated value</li> </ul> </li> <li>• at 575/600 V <ul style="list-style-type: none"> <li>— at standard circuit at 50 °C rated value</li> </ul> </li> </ul> | hp | 40          |
|  | hp | 60          |
| <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?mlfb=3RW4038-1BB05>

**Cax online generator**

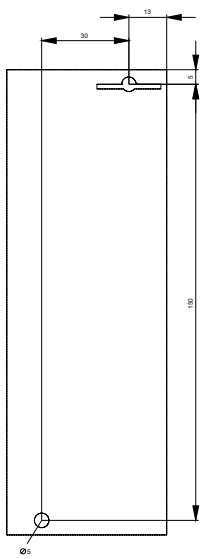
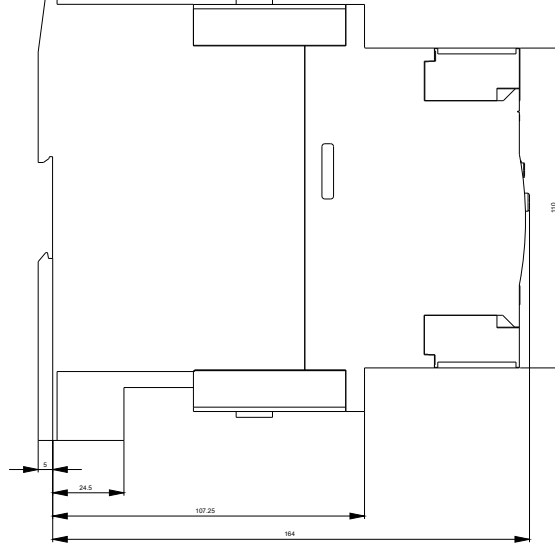
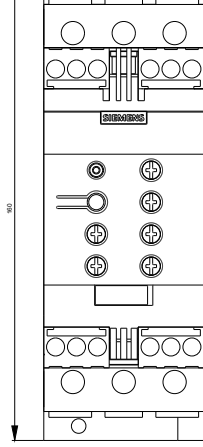
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4038-1BB05>

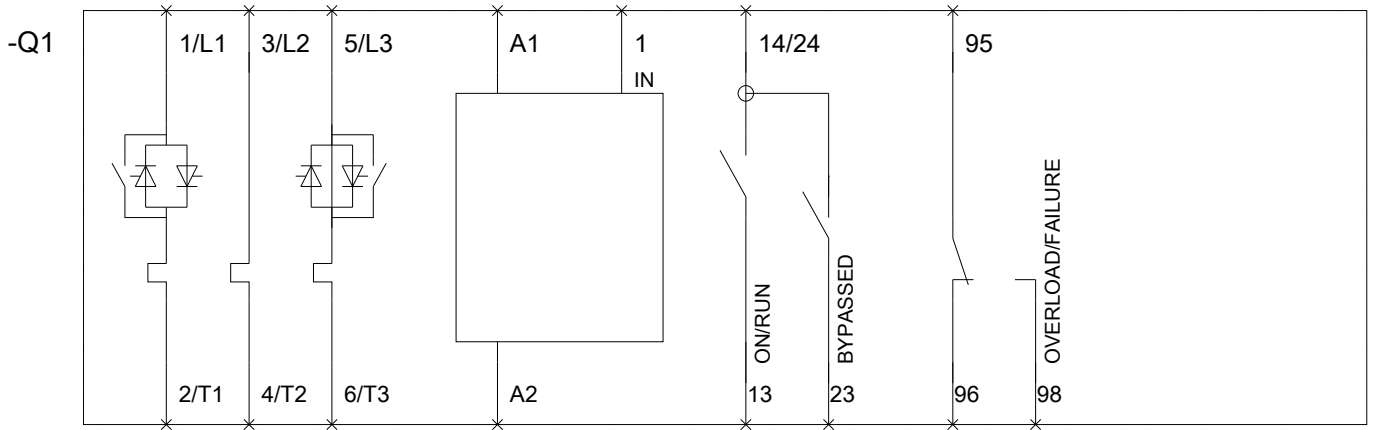
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4038-1BB05>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4038-1BB05&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4038-1BB05&lang=en)





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