

SIRIUS soft starter S0 38 A, 18.5 kW/400 V, 40 °C 200-480 V AC, 24 V AC/DC Screw terminals



## General technical data

|   |   |                          |
|---|---|--------------------------|
| <b>Product brand name</b>   |   | SIRIUS                   |
| <b>Product feature</b>  |   |                          |
| <ul style="list-style-type: none"> <li>• integrated bypass contact system</li> </ul>          |   | Yes                      |
| <ul style="list-style-type: none"> <li>• 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>Insulation voltage rated value</b>   | V | 600                      |
| <b>Degree of pollution</b>  |   | 3, acc. to IEC 60947-4-2 |
| <b>Reference code acc. to DIN EN 61346-2</b>  |   | Q                        |
| <b>Reference code 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  | 38           |
| • at 50 °C rated value  | A  | 34           |
| • at 60 °C rated value  | A  | 31           |
| <b>Mechanical power output for three-phase motors</b>   |    |              |
| • at 230 V<br>— at standard circuit at 40 °C rated value  | W  | 11 000       |
| • at 400 V<br>— at standard circuit at 40 °C rated value  | W  | 18 500       |
| <b>Yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C rated value</b> | hp | 10           |
| <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  | 23           |
| <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  | 19           |

## Control electronics

|   |    |       |
|---|----|-------|
| <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 50 Hz</b> | %  | -20   |
| <b>Relative positive tolerance of the control supply voltage at AC at 50 Hz</b> | %  | 20    |

|  |   |     |
|--|---|-----|
| Relative negative tolerance of the control supply voltage at AC at 60 Hz | % | -20 |
| Relative positive tolerance of the control supply voltage at AC at 60 Hz | % | 20  |
| 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 |

#### 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<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 | 15   |
| • downwards                                 | mm | 40   |
| 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  |  |  |

|   |  |  |
|---|--|--|
| <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>Installation altitude at height above sea level</b>   | m  | 5 000   |
| <b>Environmental category</b> <ul style="list-style-type: none"> <li>• during transport acc. to IEC 60721</li> <li>• during storage acc. to IEC 60721</li> <li>• during operation acc. 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   |
|  | °C | -40 ... +80   |
| <b>(derating temperature)</b>  | °C | 40  |
| <b>Protection class IP</b>   |    | IP20  |

### Certificates/approvals

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



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



[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



LRS



PRS

|       |
|-------|
| other |
|-------|

[Confirmation](#)

### 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 | 10          |
|  | hp | 25          |
| <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=3RW4028-1BB04>

**Cax online generator**

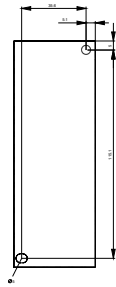
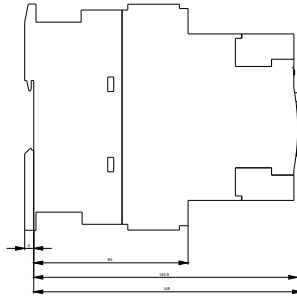
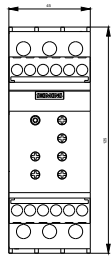
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4028-1BB04>

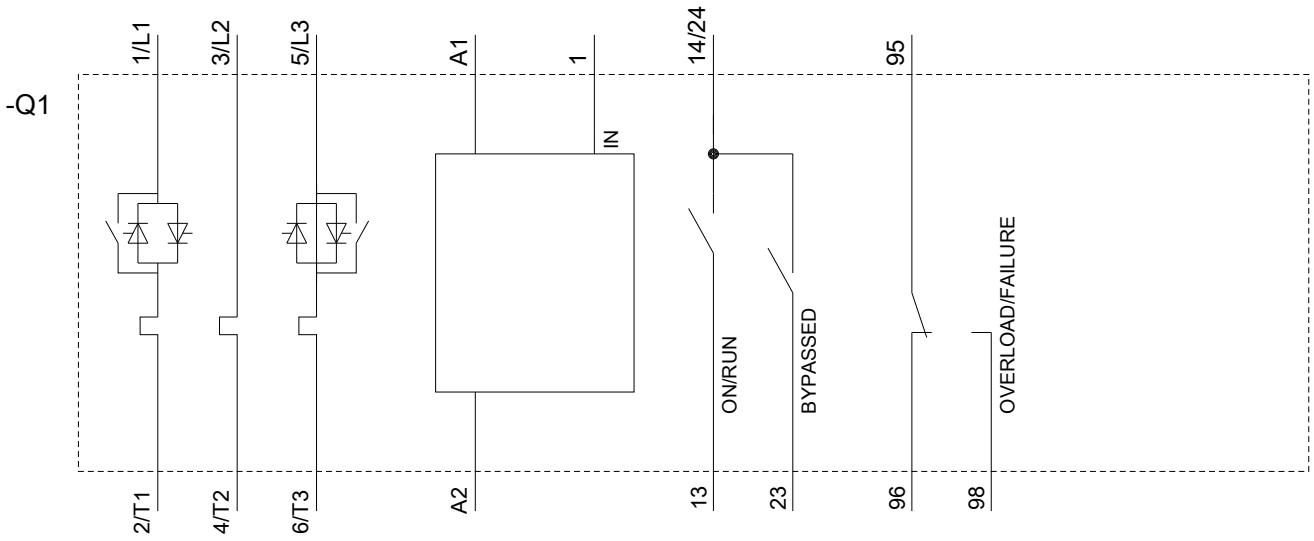
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4028-1BB04>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4028-1BB04&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4028-1BB04&lang=en)





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