



SIRIUS soft starter S0 38 A, 22 kW/500 V, 40 °C 400-600 V  
AC, 110-230 V AC/DC Screw terminals

### General technical data

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

### Power Electronics

|                                                                            |    |              |
|----------------------------------------------------------------------------|----|--------------|
| product designation                                                        |    | Soft starter |
| operational current                                                        |    |              |
| • at 40 °C rated value                                                     | A  | 38           |
| • at 50 °C rated value                                                     | A  | 34           |
| • at 60 °C rated value                                                     | A  | 31           |
| yielded mechanical performance for 3-phase motors                          |    |              |
| • at 400 V                                                                 |    |              |
| — at standard circuit at 40 °C rated value                                 | kW | 18.5         |
| • at 500 V                                                                 |    |              |
| — at standard circuit at 40 °C rated value                                 | kW | 22           |
| operating frequency rated value                                            | Hz | 50 ... 60    |
| relative negative tolerance of the operating frequency                     | %  | -10          |
| relative positive tolerance of the operating frequency                     | %  | 10           |
| operating voltage at standard circuit rated value                          | V  | 400 ... 600  |
| relative negative tolerance of the operating voltage at standard circuit   | %  | -15          |
| relative positive tolerance of the operating voltage at standard circuit   | %  | 10           |
| minimum load [%]                                                           | %  | 20           |
| adjustable motor current for motor overload protection minimum rated value | A  | 23           |

|                                                                                                                |    |                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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  | 19                                                                                                                                                                                                                                                              |
| <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                                                                        | V  | 110 ... 230                                                                                                                                                                                                                                                     |
| control supply voltage 1 at AC at 60 Hz                                                                        | V  | 110 ... 230                                                                                                                                                                                                                                                     |
| 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                                                                                 | V  | 110 ... 230                                                                                                                                                                                                                                                     |
| relative negative tolerance of the control supply voltage at DC                                                | %  | -15                                                                                                                                                                                                                                                             |
| relative positive tolerance of the control supply voltage at DC                                                | %  | 10                                                                                                                                                                                                                                                              |
| display version for fault signal                                                                               |    | red                                                                                                                                                                                                                                                             |
| <b>Mechanical data</b>                                                                                         |    |                                                                                                                                                                                                                                                                 |
| size of engine control device                                                                                  |    | S0                                                                                                                                                                                                                                                              |
| width                                                                                                          | mm | 45                                                                                                                                                                                                                                                              |
| height                                                                                                         | mm | 125                                                                                                                                                                                                                                                             |
| depth                                                                                                          | mm | 155                                                                                                                                                                                                                                                             |
| 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 | 15                                                                                                                                                                                                                                                              |
| • 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 (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), max. 1x 10 mm²                                                                                                                                                                                                          |
| • finely stranded with core end processing                                                                     |    | 2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²)                                                                                                                                                                                                                          |
| type of connectable conductor cross-sections at AWG cables 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 mm²)                                                                                                                                                                                                                                            |
| • finely stranded with core end processing                                                                     |    | 2x (0.5 ... 1.5 mm²)                                                                                                                                                                                                                                            |
| type of connectable conductor cross-sections at AWG                                                            |    |                                                                                                                                                                                                                                                                 |

|                                                                                                                                                       |  |                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|
| <b>cables</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 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                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                               | °C | -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                                                                                                                                                                                                                        |

| Certificates/ approvals  |  |     |
|--------------------------|--|-----|
| General Product Approval |  | EMC |



[Confirmation](#)



|                           |                   |                   |
|---------------------------|-------------------|-------------------|
| Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------|-------------------|-------------------|



EG-Konf.

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



LRS



PRS



DNV GL

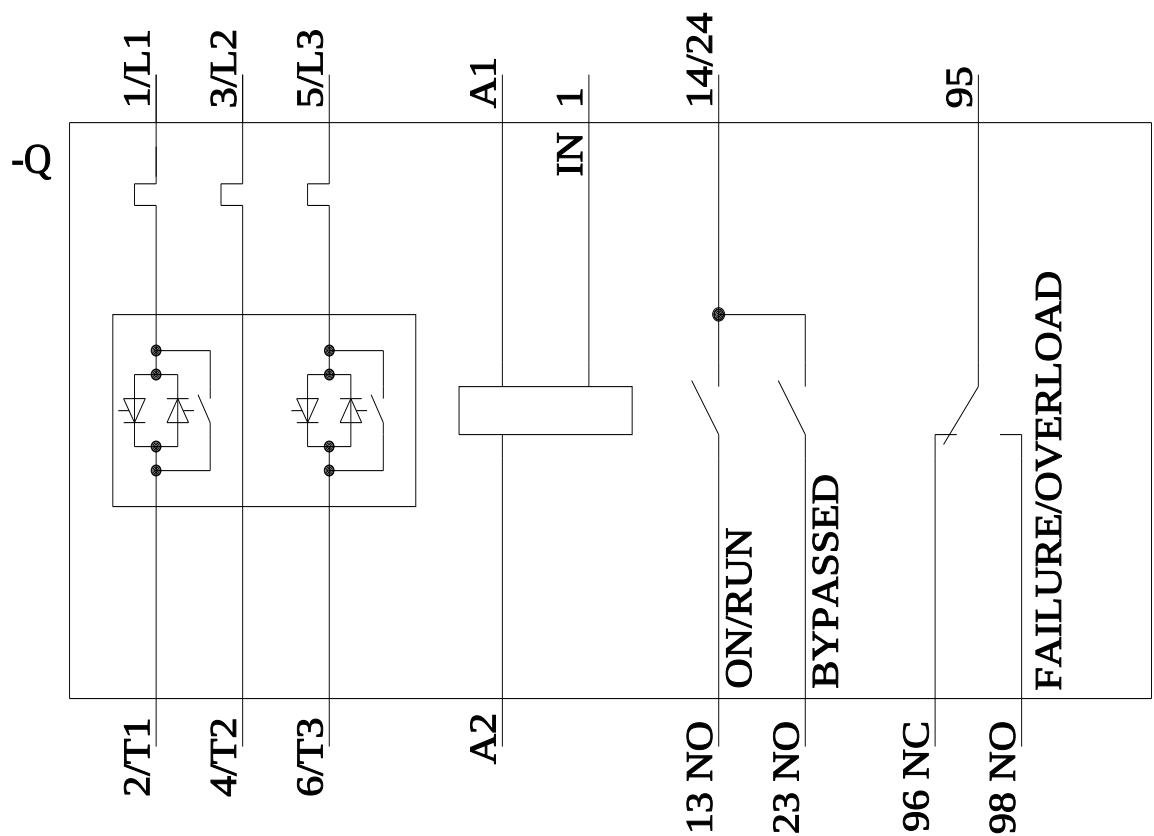
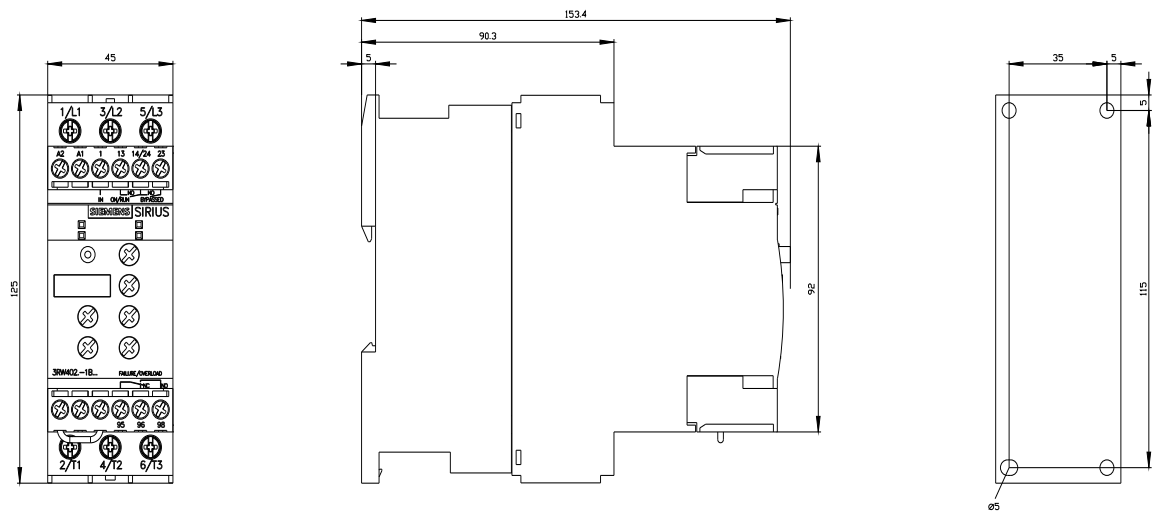
|       |         |
|-------|---------|
| other | Railway |
|-------|---------|

[Confirmation](#)

[Confirmation](#)

| UL/CSA ratings                                                                                                                                                                                                                                                                                                   |    |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------|
| <b>yielded mechanical performance [hp] for 3-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 | 25          |
|                                                                                                                                                                                                                                                                                                                  | hp | 30          |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                                                      |    | B300 / R300 |

| Further information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| <b>Simulation Tool for Soft Starters (STS)</b><br><a href="https://support.industry.siemens.com/cs/ww/en/view/101494917">https://support.industry.siemens.com/cs/ww/en/view/101494917</a><br><b>Information- and Downloadcenter (Catalogs, Brochures,...)</b><br><a href="https://www.siemens.com/ic10">https://www.siemens.com/ic10</a><br><b>Industry Mall (Online ordering system)</b><br><a href="https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4028-1BB15">https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4028-1BB15</a><br><b>Cax online generator</b><br><a href="http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RW4028-1BB15">http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RW4028-1BB15</a><br><b>Service&amp;Support (Manuals, Certificates, Characteristics, FAQs,...)</b> |  |  |



last modified:

1/16/2022 