



SIRIUS soft starter S3 80 A, 45 kW/400 V, 40 °C 200-480 V AC, 110-230 V AC/DC spring-type terminals

| General technical data   |    |                          |
|--|----|--------------------------|
| product brand name   |    | SIRIUS                   |
| product feature  |    |                          |
| <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                      |
| product function   |    |                          |
| <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                       |
| 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  |    |                          |
| <ul style="list-style-type: none"> <li>at 40 °C rated value</li> </ul>   | A  | 80                       |
| <ul style="list-style-type: none"> <li>at 50 °C rated value</li> </ul>   | A  | 73                       |
| <ul style="list-style-type: none"> <li>at 60 °C rated value</li> </ul>   | A  | 66                       |
| yielded mechanical performance for 3-phase motors  |    |                          |
| <ul style="list-style-type: none"> <li>at 230 V                             <ul style="list-style-type: none"> <li>at standard circuit at 40 °C rated value</li> </ul> </li> </ul> | kW | 22                       |
| <ul style="list-style-type: none"> <li>at 400 V                             <ul style="list-style-type: none"> <li>at standard circuit at 40 °C rated value</li> </ul> </li> </ul> | kW | 45                       |
| yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value   | hp | 20                       |
| 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  | 200 ... 480              |
| 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  | 43                       |

|  |    |   |
|--|----|---|
| 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  | 12  |
| <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  |    | S3  |
| width  | mm | 70  |
| height   | mm | 170   |
| depth  | mm | 190   |
| 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 | 30  |
| • 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  |    | spring-loaded 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 (2.5 ... 16 mm <sup>2</sup> )  |
| • finely stranded with core end processing   |    | 2.5 ... 35 mm <sup>2</sup>  |
| • stranded   |    | 4 ... 70 mm <sup>2</sup>  |
| type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point  |    |   |
| • solid  |    | 2x (2.5 ... 16 mm <sup>2</sup> )  |
| • finely stranded with core end processing   |    | 2.5 ... 50 mm <sup>2</sup>  |
| • stranded   |    | 10 ... 70 mm <sup>2</sup>   |
| type of connectable conductor cross-sections for main contacts for box terminal using both clamping points     |    |   |
| • solid  |    | 2x (2.5 ... 16 mm <sup>2</sup> )  |
| • finely stranded with core end processing   |    | 2x (2.5 ... 35 mm <sup>2</sup> )  |
| • stranded   |    | 2x (10 ... 50 mm <sup>2</sup> )   |

|   |  |  |
|---|--|--|
| <b>type of connectable conductor cross-sections for AWG cables 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> |  | 2x (10 ... 1/0)<br>2x (10 ... 1/0)<br>10 ... 2/0                         |
| <b>type of connectable conductor cross-sections for DIN cable lug for main contacts</b> <ul style="list-style-type: none"> <li>• finely stranded</li> <li>• stranded</li> </ul>   |  | 2 x (10 ... 50 mm <sup>2</sup> )<br>2x (10 ... 70 mm <sup>2</sup> )      |
| <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 (0.25 ... 2.5 mm <sup>2</sup> )<br>2x (0.25 ... 1.5 mm <sup>2</sup> ) |
| <b>type of connectable conductor cross-sections for AWG cables</b> <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary contacts</li> </ul>  |  | 2x (7 ... 1/0)<br>2x (24 ... 14)   |

#### 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 |
|--------------------------|-----|



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



|                   |       |         |
|-------------------|-------|---------|
| Marine / Shipping | other | Railway |
|-------------------|-------|---------|



#### UL/CSA ratings

|  |    |             |
|--|----|-------------|
| <b>yielded mechanical performance [hp] for 3-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 | 25          |
|  | hp | 50          |
| <b>contact rating of auxiliary contacts according to UL</b>  |    | B300 / R300 |

#### Further information

Siemens has decided to exit the Russian market (see here).



