



SIRIUS soft starter S3 80 A, 55 kW/500 V, 40 °C 400-600 V AC, 110-230 V AC/DC spring-type 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 acc. to DIN EN 61346-2 | | Q |
| reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 | | G |
| Power Electronics | | |
| product designation | | Soft starter |
| operational current | | |
| • at 40 °C rated value | A | 80 |
| • at 50 °C rated value | A | 73 |
| • at 60 °C rated value | A | 66 |
| yielded mechanical performance for 3-phase motors | | |
| • at 400 V | | |
| — at standard circuit at 40 °C rated value | W | 45 000 |
| • at 500 V | | |
| — at standard circuit at 40 °C rated value | W | 55 000 |
| 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 | 43 |
| continuous operating current [% of I _e] at 40 °C | % | 115 |
| power loss [W] at operational current at 40 °C during operation typical | W | 12 |
| Control circuit/ Control | | |
| 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 |
| Mechanical data | | |
| 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 |
| Connections/ Terminals | | |
| 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 mm²) |
| • finely stranded with core end processing | | 2.5 ... 35 mm² |
| • stranded | | 4 ... 70 mm² |
| type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point | | |

| | | |
|--|--|---|
| <ul style="list-style-type: none"> • solid • finely stranded with core end processing • stranded | | 2x (2.5 ... 16 mm ²) 2.5 ... 50 mm ² 10 ... 70 mm ² |
| type of connectable conductor cross-sections for main contacts for box terminal using both clamping points <ul style="list-style-type: none"> • solid • finely stranded with core end processing • stranded | | 2x (2.5 ... 16 mm ²) 2x (2.5 ... 35 mm ²) 2x (10 ... 50 mm ²) |
| type of connectable conductor cross-sections at AWG cables for main contacts for box terminal <ul style="list-style-type: none"> • using the back clamping point • using the front clamping point • using both clamping points | | 2x (10 ... 1/0) 2x (10 ... 1/0) 10 ... 2/0 |
| type of connectable conductor cross-sections for DIN cable lug for main contacts <ul style="list-style-type: none"> • finely stranded • stranded | | 2 x (10 ... 50 mm ²) 2x (10 ... 70 mm ²) |
| type of connectable conductor cross-sections for auxiliary contacts <ul style="list-style-type: none"> • solid • finely stranded with core end processing | | 2x (0.25 ... 2.5 mm ²) 2x (0.25 ... 1.5 mm ²) |
| type of connectable conductor cross-sections at AWG cables <ul style="list-style-type: none"> • for main contacts • for auxiliary contacts | | 2x (7 ... 1/0) 2x (24 ... 14) |

Ambient conditions

| | | |
|--|----------|---|
| installation altitude at height above sea level | m | 5 000 |
| environmental category <ul style="list-style-type: none"> • during transport acc. to IEC 60721 • during storage acc. to IEC 60721 • during operation acc. to IEC 60721 | | 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 |
| ambient temperature <ul style="list-style-type: none"> • during operation • during storage | °C °C | -25 ... +60 -40 ... +80 |
| derating temperature | °C | 40 |
| protection class IP on the front acc. to IEC 60529 | | IP20 |
| touch protection on the front acc. to IEC 60529 | | finger-safe, for vertical contact from the front |

Certificates/ approvals

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



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



[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



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

UL/CSA ratings

| | | |
|--|--------------|--------------|
| yielded mechanical performance [hp] for 3-phase AC motor <ul style="list-style-type: none"> • at 460/480 V <ul style="list-style-type: none"> — at standard circuit at 50 °C rated value • at 575/600 V <ul style="list-style-type: none"> — at standard circuit at 50 °C rated value | hp hp | 50 60 |
| contact rating of auxiliary contacts according to UL | | 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,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4046-2BB15>

Cax online generator

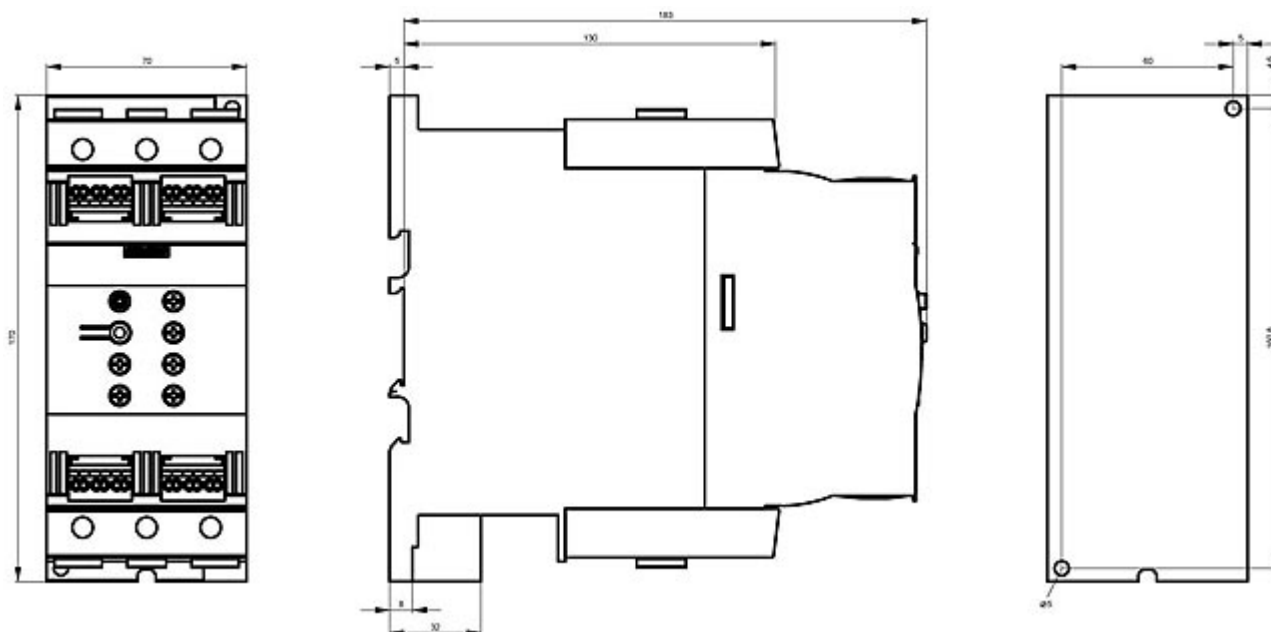
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4046-2BB15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4046-2BB15>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4046-2BB15&lang=en





last modified:

12/15/2020 [🔗](#)