



SIRIUS soft starter Values at 690 V, 40 °C standard: 970 A, 1000 kW Inside-delta: only up to 600 V 400-690 V AC, 230 V AC Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5556-6HA16<<

| General technical data | | |
|---|-------------------------|---|
| product brand name | | SIRIUS |
| product feature | | |
| <ul style="list-style-type: none"> integrated bypass contact system thyristors | | Yes Yes |
| product function | | |
| <ul style="list-style-type: none"> intrinsic device protection motor overload protection evaluation of thermistor motor protection external reset adjustable current limitation inside-delta circuit | | Yes Yes Yes Yes Yes Yes |
| product component motor brake output | | Yes |
| insulation voltage rated value | V | 690 |
| 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 | | |
| <ul style="list-style-type: none"> at 40 °C rated value at 50 °C rated value at 60 °C rated value | A A A | 970 850 760 |
| operational current for 3-phase motors at inside-delta circuit | | |
| <ul style="list-style-type: none"> at 40 °C rated value at 50 °C rated value at 60 °C rated value | A A A | 1 680 1 472 1 316 |
| yielded mechanical performance for 3-phase motors | | |
| <ul style="list-style-type: none"> at 400 V <ul style="list-style-type: none"> at standard circuit at 40 °C rated value at inside-delta circuit at 40 °C rated value at 500 V <ul style="list-style-type: none"> at standard circuit at 40 °C rated value at inside-delta circuit at 40 °C rated value at 690 V at standard circuit at 40 °C rated value | kW kW W W W | 560 000 1 000 000 710 000 1 200 000 1 000 000 |
| 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 ... 690 |
| relative negative tolerance of the operating voltage at standard circuit | % | -15 |
| relative positive tolerance of the operating voltage at standard circuit | % | 10 |
| operating voltage at inside-delta circuit rated value | V | 400 ... 600 |
| relative negative tolerance of the operating voltage at inside-delta circuit | % | -15 |
| relative positive tolerance of the operating voltage at inside-delta circuit | % | 10 |
| minimum load [%] | % | 8 |
| adjustable motor current for motor overload protection minimum rated value | A | 194 |
| continuous operating current [% of I _e] at 40 °C | % | 115 |
| power loss [W] at operational current at 40 °C during operation typical | W | 270 |
| Control circuit/ Control | | |
| type of voltage of the control supply voltage | | AC |
| 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 rated value | V | 230 |
| • at 60 Hz rated value | V | 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 |
| display version for fault signal | | Display |
| Mechanical data | | |
| width | mm | 510 |
| height | mm | 640 |
| depth | mm | 290 |
| fastening method | | screw fixing |
| mounting position | | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back |
| required spacing with side-by-side mounting | | |
| • upwards | mm | 100 |
| • at the side | mm | 5 |
| • downwards | mm | 75 |
| wire length maximum | m | 500 |
| number of poles for main current circuit | | 3 |
| Connections/ Terminals | | |
| type of electrical connection | | |
| • for main current circuit | | busbar connection |
| • for auxiliary and control circuit | | screw-type terminals |
| number of NC contacts for auxiliary contacts | | 0 |
| number of NO contacts for auxiliary contacts | | 3 |
| number of CO contacts for auxiliary contacts | | 1 |
| type of connectable conductor cross-sections for DIN cable lug for main contacts | | |
| • finely stranded | | 50 ... 240 mm ² |
| • stranded | | 70 ... 240 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 (0.5 ... 2.5 mm ²) 2x (0.5 ... 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 • for auxiliary contacts finely stranded with core end processing | | 2/0 ... 500 kcmil 2x (20 ... 14) 2x (20 ... 16) |

| | | |
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| Ambient conditions | | |
| installation altitude at height above sea level | m | 5 000 |
| environmental category | | 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 | 60 -25 ... +80 |
| derating temperature | °C | 40 |
| protection class IP on the front acc. to IEC 60529 | | IP00 |

| | | |
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| Certificates/ approvals | | |
| General Product Approval | EMC | Declaration of Conformity |



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| Test Certificates | Marine / Shipping |
|--------------------------|--------------------------|

[Special Test Certificate](#)



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| other |
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[Confirmation](#)

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| 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 inside-delta circuit at 50 °C rated value • at 575/600 V <ul style="list-style-type: none"> — at standard circuit at 50 °C rated value — at inside-delta circuit at 50 °C rated value | hp | 750 1 300 950 1 650 |
| contact rating of auxiliary contacts according to UL | | B300 / R300 |

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| 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=3RW4458-6BC46>

Cax online generator

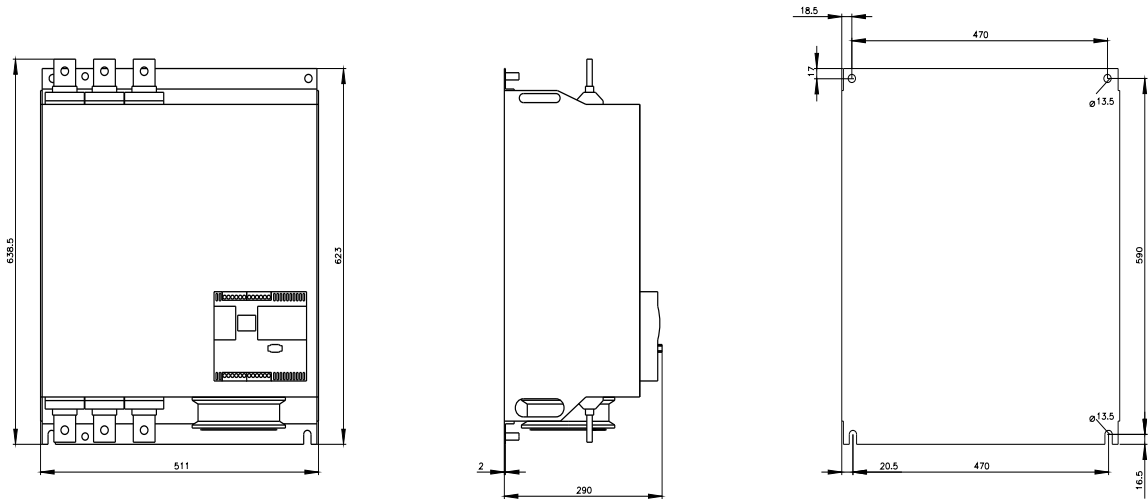
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4458-6BC46>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4458-6BC46>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4458-6BC46&lang=en





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