SIEMENS

Data sheet 3RW4456-2BC44



SIRIUS soft starter Values at 400 V, 40 °C standard: 780 A, 450 kW Inside-delta: 1351 A, 800 kW 200-460 V AC, 230 V AC spring-type terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5554-2HA14<<

| 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 | | Yes |
| external reset | | Yes |
| adjustable current limitation | | Yes |
| • inside-delta circuit | | 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 | | |
| at 40 °C rated value | Α | 780 |
| at 50 °C rated value | Α | 693 |
| at 60 °C rated value | Α | 615 |
| operational current for 3-phase motors at inside-delta circuit | | |
| at 40 °C rated value | Α | 1 351 |
| at 50 °C rated value | Α | 1 200 |
| at 60 °C rated value | Α | 1 065 |
| yielded mechanical performance for 3-phase motors | - | |
| • at 230 V | | |
| — at standard circuit at 40 °C rated value | W | 250 000 |
| — at inside-delta circuit at 40 °C rated value | W | 450 000 |
| ● at 400 V | | |
| at standard circuit at 40 °C rated value | W | 450 000 |
| — at inside-delta circuit at 40 °C rated value | W | 800 000 |
| yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value | hp | 200 |

| 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 | 200 460 |
| 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 | 200 460 |
| 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 | 156 |
| continuous operating current [% of le] at 40 °C | % | 115 |
| power loss [W] at operational current at 40 °C during operation typical | W | 214 |
| 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 | | spring-loaded 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 mm² |
|---------------------------------------------------------------------|----|---------------------------------------------------------------------------------------------------------------|
| stranded | | 70 240 mm² |
| type of connectable conductor cross-sections for auxiliary contacts | | |
| • solid | | 2x (0.25 1.5 mm²) |
| finely stranded with core end processing | | 2x (0.25 1.5 mm²) |
| type of connectable conductor cross-sections at AWG cables | | |
| for main contacts | | 2/0 500 kcmil |
| for auxiliary contacts | | 2x (24 16) |
| Ambient conditions | | |
| installation altitude at height above sea level | m | 5 000 |
| environmental category | | |
| during transport acc. to IEC 60721 | | 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) |
| • during storage acc. to IEC 60721 | | 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 |
| during operation acc. to IEC 60721 | | 3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 |
| ambient temperature | | |
| during operation | °C | 60 |
| during storage | °C | -25 +80 |
| derating temperature | °C | 40 |
| protection class IP on the front acc. to IEC 60529 | | IP00 |
| Certificates/ approvals | | |

General Product Approval

EMC

Declaration of Conformity













Test Certificates

Marine / Shipping

other

Special Test Certific-<u>ate</u>







Confirmation

| UL/CSA ratings | | |
|------------------------------------------------------------------|----|-------------|
| yielded mechanical performance [hp] for 3-phase AC motor | | |
| • at 200/208 V | | |
| at inside-delta circuit at 50 °C rated value | hp | 450 |
| • at 220/230 V | | |
| at standard circuit at 50 °C rated value | hp | 250 |
| at inside-delta circuit at 50 °C rated value | hp | 500 |
| • at 460/480 V | | |
| at standard circuit at 50 °C rated value | hp | 600 |
| at inside-delta circuit at 50 °C rated value | hp | 1 050 |
| 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,...)

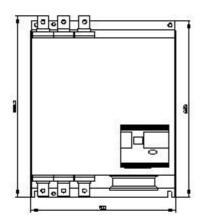
https://www.siemens.com/ic10

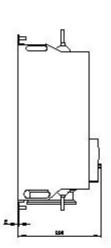
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4456-2BC44

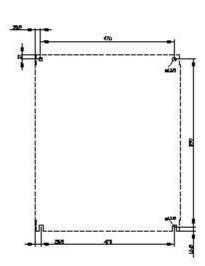
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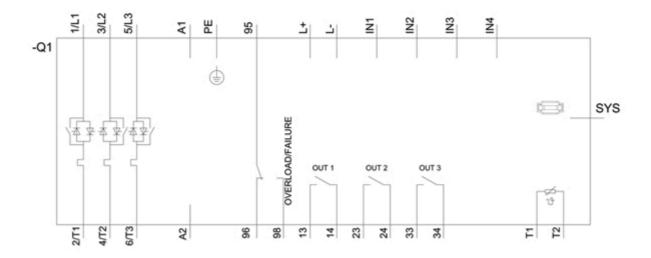
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4456-2BC44 Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RW4456-2BC44

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4456-2BC44&lang=en









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