SIEMENS

## Data sheet 3RW4435-2BC45



SIRIUS soft starter Values at 500 V, 40 °C standard: 134 A, 90 kW Inside-delta: 232 A, 160 kW 400-600 V AC, 230 V AC spring-type terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5535-2HA16<<

| | |
|---|---|
| **General technical data** | |
| **product brand name** | SIRIUS |
| **product designation** | Soft starter |
| **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** | 690 V |
| **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** | |
| **operational current** | |
| ● at 40 °C rated value | 134 A |
| ● at 50 °C rated value | 117 A |
| ● at 60 °C rated value | 100 A |
| **operational current for 3-phase motors at inside-delta circuit** | |
| ● at 40 °C rated value | 232 A |
| ● at 50 °C rated value | 203 A |
| ● at 60 °C rated value | 173 A |
| **yielded mechanical performance for 3-phase motors** | |
| ● at 400 V | |
| — at standard circuit at 40 °C rated value | 75 kW |
| — at inside-delta circuit at 40 °C rated value | 132 kW |
| ● at 500 V | |
| — at standard circuit at 40 °C rated value | 90 kW |
| — at inside-delta circuit at 40 °C rated value | 160 kW |
| **operating frequency rated value** | 50 ... 60 Hz |
| **relative negative tolerance of the operating frequency** | -10 % |
| **relative positive tolerance of the operating frequency** | 10 % |
| **operating voltage at standard circuit rated value** | 400 ... 600 V |


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| **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** | 400 ... 600 V |
| **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** | 26 A |
| **continuous operating current [% of Ie] at 40 °C** | 115 % |
| **power loss [W] at operational current at 40 °C during operation typical** | 76 W |
| **Control circuit/ Control** | |
| **type of voltage of the control supply voltage** | AC |
| **control supply voltage frequency 1 rated value** | 50 Hz |
| **control supply voltage frequency 2 rated value** | 60 Hz |
| **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 | 230 V |
| ● at 60 Hz rated value | 230 V |
| **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** | 170 mm |
| **height** | 200 mm |
| **depth** | 270 mm |
| **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 | 100 mm |
| ● at the side | 5 mm |
| ● downwards | 75 mm |
| **wire length maximum** | 500 m |
| **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 main contacts for box terminal using the front clamping point** | |
| ● finely stranded with core end processing | 16 ... 70 mm² |
| ● finely stranded without core end processing | 16 ... 70 mm² |
| ● stranded | 16 ... 70 mm² |
| **type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point** | |
| ● finely stranded with core end processing | 16 ... 70 mm² |


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| | |
|---|---|
| ● finely stranded without core end processing | 16 ... 70 mm² |
| ● stranded | 16 ... 70 mm² |
| **type of connectable conductor cross-sections for main contacts for box terminal using both clamping points** | |
| ● finely stranded with core end processing | max. 1x 50 mm², 1x 70 mm² |
| ● finely stranded without core end processing | max. 1x 50 mm², 1x 70 mm² |
| ● stranded | max. 2x 70 mm² |
| **type of connectable conductor cross-sections for AWG cables for main contacts for box terminal** | |
| ● using the back clamping point | 6 ... 2/0 |
| ● using the front clamping point | 6 ... 2/0 |
| ● using both clamping points | max. 2x 1/0 |
| **type of connectable conductor cross-sections for DIN cable lug for main contacts** | |
| ● finely stranded | 16 ... 95 mm² |
| ● stranded | 25 ... 120 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 for AWG cables** | |
| ● for main contacts | 4 ... 250 kcmil |
| ● for auxiliary contacts | 2x (24 ... 16) |
| **Ambient conditions** | |
| **installation altitude at height above sea level** | 5 000 m |
| **environmental category** | |
| ● during transport according to IEC 60721 | 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) |
| ● during storage according to IEC 60721 | 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 |
| ● during operation according 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 | 60 °C |
| ● during storage | -25 ... +80 °C |
| **derating temperature** | 40 °C |
| **protection class IP on the front according to IEC 60529** | IP00; IP20 with box terminal/cover |
| **touch protection on the front according to IEC 60529** | finger-safe, for vertical contact from the front with box terminal/cover |
| **UL/CSA ratings** | |
| **yielded mechanical performance [hp] for 3-phase AC motor** | |
| **● at 460/480 V** | |
| — at standard circuit at 50 °C rated value | 75 hp |
| — at inside-delta circuit at 50 °C rated value | 150 hp |
| **● at 575/600 V** | |
| — at standard circuit at 50 °C rated value | 100 hp |
| — at inside-delta circuit at 50 °C rated value | 200 hp |
| **contact rating of auxiliary contacts according to UL** | B300 / R300 |

**Approvals Certificates**

| Environment | General Product Approval | | | | |
|---|---|---|---|---|---|
| Environmental Confirmations | CCC | cULus | EAC | UKCA | CE EG-Konf. |

| EMV | Test Certificates | Maritime application |
|---|---|---|


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Special Test Certific-ate

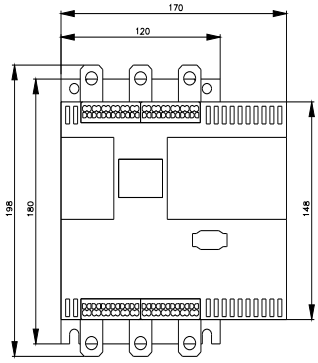
Type Test Certific-ates/Test Report

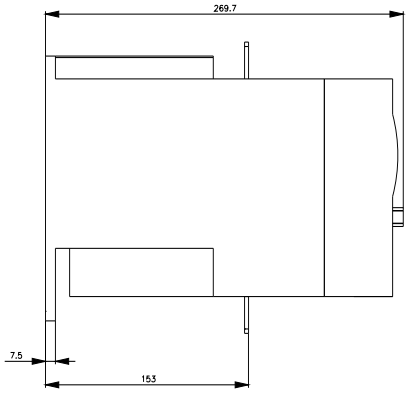
| Maritime application | other |
|---|---|

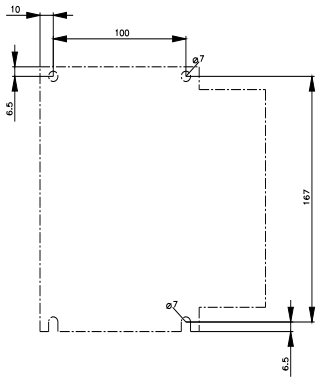
Confirmation

## Further information

**Simulation Tool for Soft Starters (STS)**
https://support.industry.siemens.com/cs/ww/en/view/101494917
**Information on the packaging**
https://support.industry.siemens.com/cs/ww/en/view/109813875
**Information for data generation and storage**
https://support.industry.siemens.com/cs/ww/en/view/109995012
**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=3RW4435-2BC45
**Cax online generator**
https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4435-2BC45
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RW4435-2BC45
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4435-2BC45&lang=en

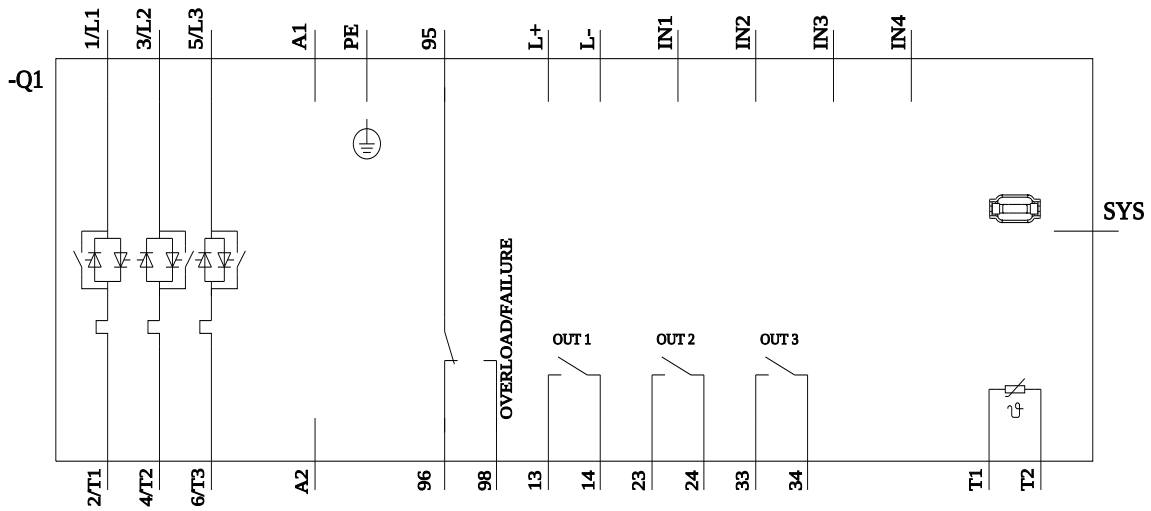




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