SIEMENS

## Data sheet 3RW4444-6BC45

SIRIUS soft starter Values at 500 V, 40 °C standard: 250 A, 160 kW Inside-delta: 433 A, 315 kW 400-600 V AC, 230 V AC Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5544-6HA16<<

| | | |
|---|---|---|
| **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 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** | | |
| ● at 40 °C rated value | A | 250 |
| ● at 50 °C rated value | A | 215 |
| ● at 60 °C rated value | A | 185 |
| **operational current for 3-phase motors at inside-delta circuit** | | |
| ● at 40 °C rated value | A | 433 |
| ● at 50 °C rated value | A | 372 |
| ● at 60 °C rated value | A | 320 |
| **yielded mechanical performance for 3-phase motors** | | |
| ● at 400 V | | |
| — at standard circuit at 40 °C rated value | kW | 132 |
| — at inside-delta circuit at 40 °C rated value | kW | 250 |
| ● at 500 V | | |
| — at standard circuit at 40 °C rated value | kW | 160 |
| — at inside-delta circuit at 40 °C rated value | kW | 315 |
| **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 |
| **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 | 50 |
| **continuous operating current [% of Ie] at 40 °C** | % | 115 |
| **power loss [W] at operational current at 40 °C during operation typical** | W | 110 |
| **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 | 210 |
| **height** | mm | 230 |
| **depth** | mm | 298 |
| **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 main contacts for box terminal using the front clamping point** | | |
| ● finely stranded with core end processing | | 70 ... 240 mm² |
| ● finely stranded without core end processing | | 70 ... 240 mm² |
| ● stranded | | 95 ... 300 mm² |
| **type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point** | | |
| ● finely stranded with core end processing | | 120 ... 185 mm² |
| ● finely stranded without core end processing | | 120 ... 185 mm² |
| ● stranded | | 120 ... 240 mm² |

| | | |
|---|---|---|
| **type of connectable conductor cross-sections for main contacts for box terminal using both clamping points** | | |
| ● finely stranded with core end processing | | min. 2x 50 mm², max. 2x 185 mm² |
| ● finely stranded without core end processing | | min. 2x 50 mm², max. 2x 185 mm² |
| ● stranded | | max. 2x 70 mm², max. 2x 240 mm² |
| **type of connectable conductor cross-sections at AWG cables for main contacts for box terminal** | | |
| ● using the back clamping point | | 250 ... 500 kcmil |
| ● using the front clamping point | | 3/0 ... 600 kcmil |
| ● using both clamping points | | min. 2x 2/0, max. 2x 500 kcmil |
| **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 (0.5 ... 2.5 mm²) |
| ● finely stranded with core end processing | | 2x (0.5 ... 1.5 mm²) |
| **type of connectable conductor cross-sections at AWG cables** | | |
| ● for main contacts | | 2/0 ... 500 kcmil |
| ● for auxiliary contacts | | 2x (20 ... 14) |
| ● for auxiliary contacts finely stranded with core end processing | | 2x (20 ... 16) |

## Ambient conditions

| | | |
|---|---|---|
| **installation altitude at height above sea level** | m | 5 000 |
| **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 | °C | 60 |
| ● during storage | °C | -25 ... +80 |
| **derating temperature** | °C | 40 |
| **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 |

## Certificates/ approvals

**General Product Approval** | **EMC**

Confirmation

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

Type Test Certificates/Test Report | Special Test Certificate

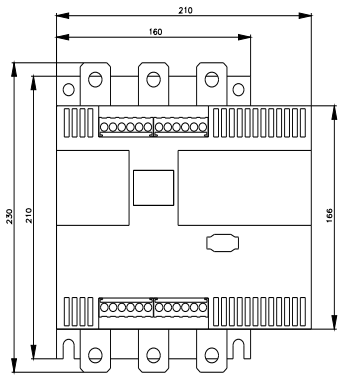
**Marine / Shipping** | **other**

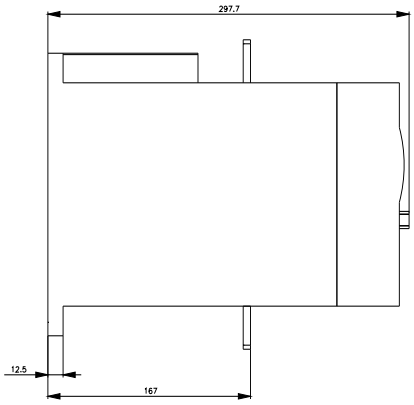
Confirmation

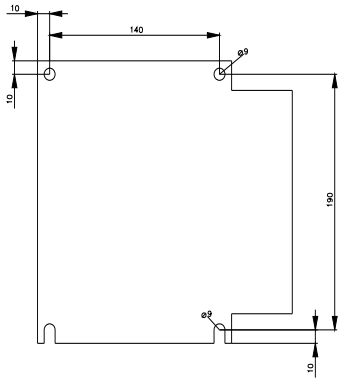
| UL/CSA ratings | | |
|---|---|---|
| **yielded mechanical performance [hp] for 3-phase AC motor** | | |
| **• at 460/480 V** | | |
| — at standard circuit at 50 °C rated value | hp | 150 |
| — at inside-delta circuit at 50 °C rated value | hp | 300 |
| **• at 575/600 V** | | |
| — at standard circuit at 50 °C rated value | hp | 200 |
| — at inside-delta circuit at 50 °C rated value | hp | 350 |
| **contact rating of auxiliary contacts according to UL** | | B300 / R300 |

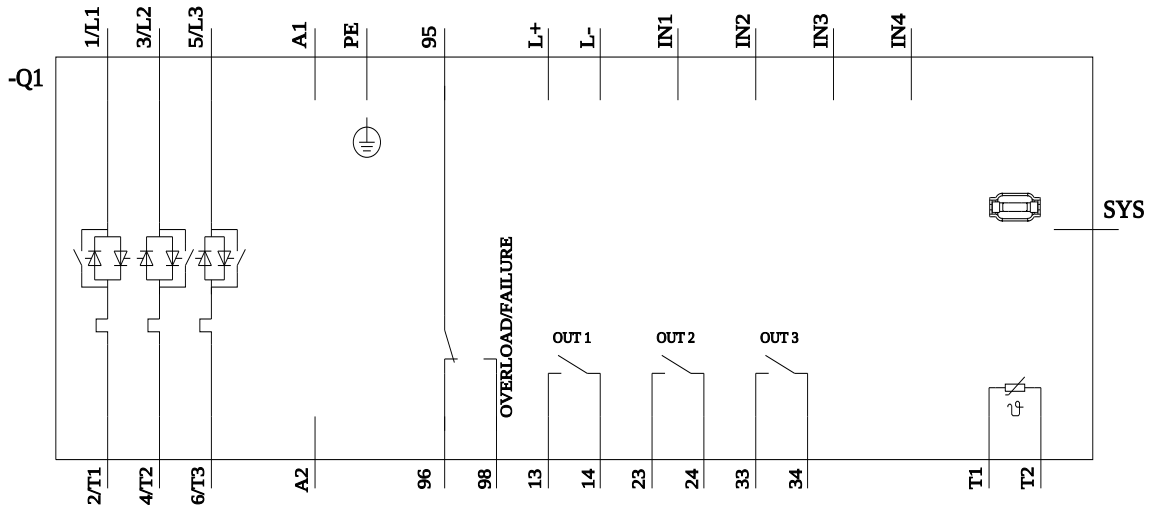
## Further information

**Simulation Tool for Soft Starters (STS)**
https://support.industry.siemens.com/cs/ww/en/view/101494917
**Information on the packaging**
https://support.industry.siemens.com/cs/ww/en/view/109813875
**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=3RW4444-6BC45
**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4444-6BC45
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RW4444-6BC45
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4444-6BC45&lang=en






**last modified:** 1/16/2022