SIEMENS

## Data sheet 3RW4047-1BB15




SIRIUS soft starter S3 106 A, 75 kW/500 V, 40 °C 400-600 V AC, 110-230 V AC/DC Screw terminals



| | |
|---|---|
| **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 | No |
| ● external reset | Yes |
| ● adjustable current limitation | Yes |
| ● inside-delta circuit | No |
| **product component motor brake output** | No |
| **insulation voltage rated value** | 600 V |
| **degree of pollution** | 3, acc. to IEC 60947-4-2 |
| **blocking voltage of the thyristor maximum** | 1 600 V |
| **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 | 106 A |
| ● at 50 °C rated value | 98 A |
| ● at 60 °C rated value | 90 A |
| **yielded mechanical performance for 3-phase motors** | |
| ● at 400 V | |
| — at standard circuit at 40 °C rated value | 55 kW |
| ● at 500 V | |
| — at standard circuit at 40 °C rated value | 75 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 |
| **relative negative tolerance of the operating voltage at standard circuit** | -15 % |
| **relative positive tolerance of the operating voltage at** | 10 % |


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| **standard circuit** | |
| **minimum load [%]** | 20 % |
| **adjustable motor current for motor overload protection minimum rated value** | 46 A |
| **continuous operating current [% of Ie] at 40 °C** | 115 % |
| **power loss [W] at operational current at 40 °C during operation typical** | 21 W |
| **Control circuit/ Control** | |
| **type of voltage of the control supply voltage** | AC/DC |
| **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** | 110 ... 230 V |
| **control supply voltage 1 at AC at 60 Hz** | 110 ... 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 % |
| **control supply voltage 1 at DC** | 110 ... 230 V |
| **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** | 70 mm |
| **height** | 170 mm |
| **depth** | 190 mm |
| **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 | 60 mm |
| ● at the side | 30 mm |
| ● downwards | 40 mm |
| **wire length maximum** | 300 m |
| **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 | screw-type 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** | |
| ● solid | 2x (2.5 ... 16 mm²) |
| ● finely stranded with core end processing | 2.5 ... 50 mm² |


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| ● stranded | 10 ... 70 mm² |
| **type of connectable conductor cross-sections for main contacts for box terminal using both clamping points** | |
| ● solid | 2x (2.5 ... 16 mm²) |
| ● finely stranded with core end processing | 2x (2.5 ... 35 mm²) |
| ● stranded | 2x (10 ... 50 mm²) |
| **type of connectable conductor cross-sections for AWG cables for main contacts for box terminal** | |
| ● using the back clamping point | 2x (10 ... 1/0) |
| ● using the front clamping point | 2x (10 ... 1/0) |
| ● using both clamping points | 10 ... 2/0 |
| **type of connectable conductor cross-sections for DIN cable lug for main contacts** | |
| ● finely stranded | 2 x (10 ... 50 mm²) |
| ● stranded | 2x (10 ... 70 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 for AWG cables** | |
| ● for main contacts | 2x (7 ... 1/0) |
| ● 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** | 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 | -25 ... +60 °C |
| ● during storage | -40 ... +80 °C |
| **derating temperature** | 40 °C |
| **protection class IP on the front according to IEC 60529** | IP20 |
| **touch protection on the front according to IEC 60529** | finger-safe, for vertical contact from the front |
| **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 575/600 V** | |
| — at standard circuit at 50 °C rated value | 75 hp |
| **contact rating of auxiliary contacts according to UL** | B300 / R300 |
| **Approvals Certificates** | |
| Environmental Product Declaration | |
| ● global warming potential [CO2 eq] / during manufacturing | 23.7 kg |
| ● global warming potential [CO2 eq] / during sales | 0.471 kg |
| ● global warming potential [CO2 eq] / during operation | 158 kg |
| ● global warming potential [CO2 eq] / after end of life | -6.65 kg |
| ● global warming potential [CO2 eq] / total | 175 kg |

| **Environment** | **General Product Approval** |
|---|---|
| Environmental Confirmations | |

| **General Product Approval** | **EMV** | **For use in hazardous locations** |
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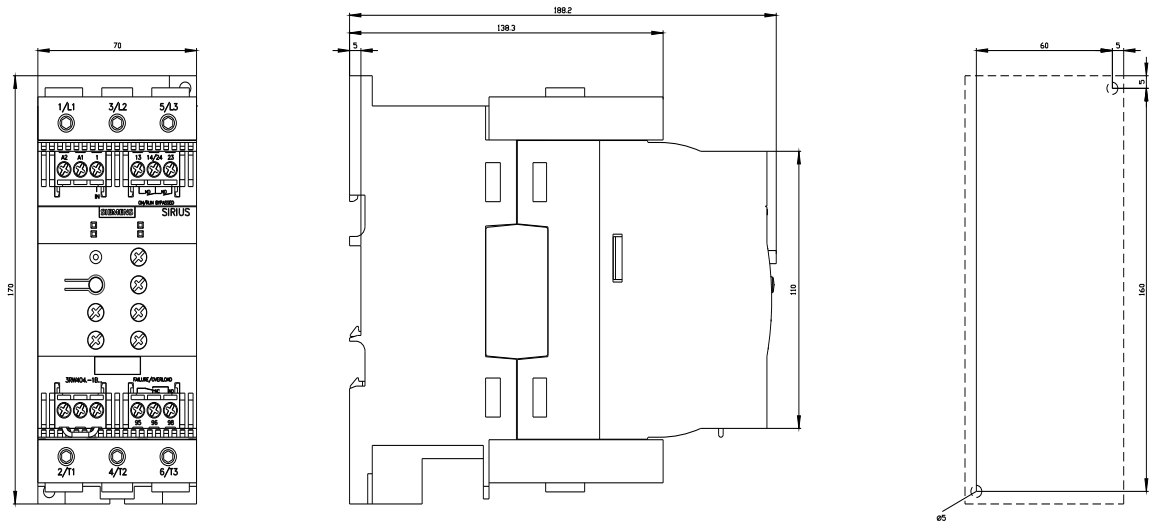
| Test Certificates | | Maritime application | | | other |
|---|---|---|---|---|---|
| Special Test Certific-ate | Type Test Certific-ates/Test Report | DNV | LRS | PRS | Confirmation |

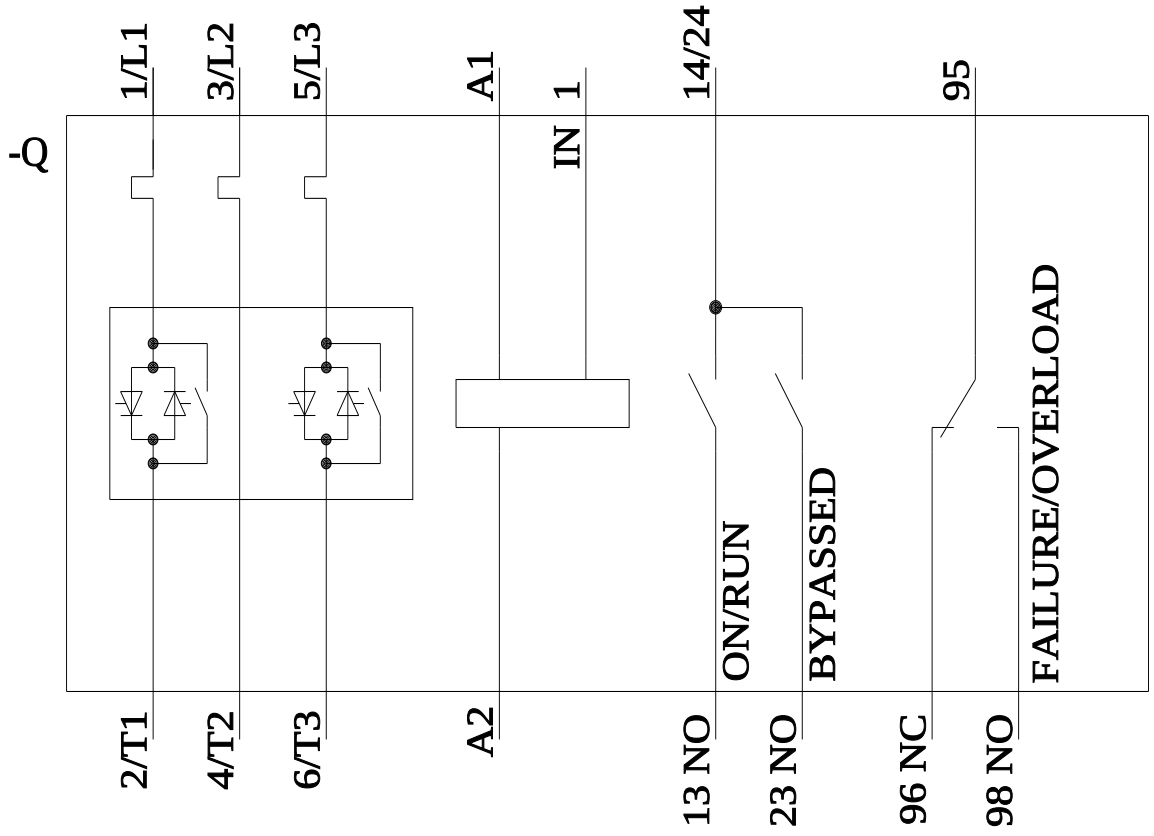
| other | Railway | |
|---|---|---|
| 产品合格 QC PASS | Special Test Certific-ate | Confirmation |

## 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=3RW4047-1BB15
**Cax online generator**
https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4047-1BB15
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RW4047-1BB15
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4047-1BB15&lang=en


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