SIEMENS

## Data sheet 3RB2066-1GC2



Overload relay 55...250 A for motor protection Size S10/S12, Class 10E Contactor mounting/stand-alone installation Main circuit: busbar connection Auxiliary circuit: Screw terminal Manual-Automatic-Reset

| | |
|---|---|
| **product brand name** | SIRIUS |
| **product designation** | solid-state overload relay |
| **product type designation** | 3RB2 |
| **General technical data** | |
| **size of overload relay** | S10, S12 |
| **size of contactor can be combined company-specific** | S10, S12 |
| **type of calculation of power loss current-dependent** | quadratic |
| insulation voltage with degree of pollution 3 at AC rated value | 1 000 V |
| **surge voltage resistance rated value** | 8 kV |
| **maximum permissible voltage for protective separation** | |
| ● in networks with ungrounded star point between auxiliary and auxiliary circuit | 300 V |
| ● in networks with grounded star point between auxiliary and auxiliary circuit | 300 V |
| ● in networks with ungrounded star point between main and auxiliary circuit | 600 V |
| ● in networks with grounded star point between main and auxiliary circuit | 690 V |
| **shock resistance** | 15 g / 11 ms |
| ● **according to IEC 60068-2-27** | 15 g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms |
| **vibration resistance** | 1 … 6 Hz, 15 mm; 6 … 500 Hz, 20 m/s²; 10 cycles |
| **thermal current** | 250 A |
| **recovery time after overload trip** | |
| ● with automatic reset typical | 3 min |
| ● with remote-reset | 0 min |
| ● with manual reset | 0 min |
| **reference code according to IEC 81346-2** | F |
| **Substance Prohibitance (day/month/year)** | 07/01/2006 |
| **SVHC substance name** | Lead CAS-No. 7439-92-1<br>Lead monoxide (lead oxide) CAS-No. 1317-36-8<br>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5<br>Melamine CAS-No. 108-78-1<br>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1 |
| **Net Weight** | 1.587 kg |
| **Ambient conditions** | |
| installation altitude at height above sea level maximum | 2 000 m |
| **ambient temperature** | |
| ● during operation | -25 ... +60 °C |
| ● during storage | -40 ... +80 °C |
| ● during transport | -40 ... +80 °C |
| **temperature compensation** | -25 ... +60 °C |


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| | |
|---|---|
| relative humidity during operation | 10 ... 95 % |
| **Main circuit** | |
| **number of poles for main current circuit** | 3 |
| **adjustable current response value current of the current-dependent overload release** | 55 ... 250 A |
| **operating voltage** | |
| ● rated value | 1 000 V |
| ● at AC-3e rated value maximum | 1 000 V |
| **operating frequency rated value** | 50 ... 60 Hz |
| **operational current rated value** | 250 A |
| operational current at AC-3e at 400 V rated value | 250 A |
| **operating power** | |
| ● for 3-phase motors at 400 V at 50 Hz | 30 ... 132 kW |
| ● for AC motors at 500 V at 50 Hz | 45 ... 160 kW |
| ● for AC motors at 690 V at 50 Hz | 55 ... 250 kW |
| **Auxiliary circuit** | |
| **design of the auxiliary switch** | integrated |
| **number of NC contacts for auxiliary contacts** | 1 |
| ● note | for contactor disconnection |
| **number of NO contacts for auxiliary contacts** | 1 |
| ● note | for message "tripped" |
| number of CO contacts for auxiliary contacts | 0 |
| **operational current of auxiliary contacts at AC-15** | |
| ● at 24 V | 4 A |
| ● at 110 V | 4 A |
| ● at 120 V | 4 A |
| ● at 125 V | 4 A |
| ● at 230 V | 3 A |
| **operational current of auxiliary contacts at DC-13** | |
| ● at 24 V | 2 A |
| ● at 60 V | 0.55 A |
| ● at 110 V | 0.3 A |
| ● at 125 V | 0.3 A |
| ● at 220 V | 0.11 A |
| **Protective and monitoring functions** | |
| **trip class** | CLASS 10E |
| **design of the overload release** | electronic |
| **UL/CSA ratings** | |
| **full-load current (FLA) for 3-phase AC motor** | |
| ● at 480 V rated value | 250 A |
| ● at 600 V rated value | 250 A |
| **contact rating of auxiliary contacts according to UL** | B600 / R300 |
| **Short-circuit protection** | |
| **design of the fuse link** | |
| ● for short-circuit protection of the main circuit | |
| — with type of coordination 1 required | gG: 500 A, Class L: 700 A |
| — with type of coordination 2 required | gG: 500 A |
| ● for short-circuit protection of the auxiliary switch required | fuse gG: 6 A |
| **Installation/ mounting/ dimensions** | |
| **mounting position** | any |
| **fastening method** | Contactor mounting/stand-alone installation |
| **height** | 119 mm |
| **width** | 120 mm |
| **depth** | 155 mm |
| **required spacing** | |
| ● for grounded parts | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |


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| | |
|---|---|
| — at the side | 6 mm |
| — downwards | 0 mm |
| ● for live parts | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — downwards | 0 mm |
| — at the side | 6 mm |
| **Connections/ Terminals** | |
| **product component removable terminal for auxiliary and control circuit** | Yes |
| **type of electrical connection** | |
| ● for main current circuit | busbar connection |
| ● for auxiliary and control circuit | screw-type terminals |
| **arrangement of electrical connectors for main current circuit** | Top and bottom |
| **type of connectable conductor cross-sections** | |
| ● for auxiliary contacts | |
| — solid | 1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²) |
| — solid or stranded | 1x (0,5 ... 4 mm²), 2x (0,5 ... 2,5 mm²) |
| — finely stranded with core end processing | 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²) |
| ● for AWG cables for auxiliary contacts | 2x (20 ... 14) |
| **tightening torque** | |
| ● for main contacts with screw-type terminals | 20 ... 22 N·m |
| ● for auxiliary contacts with screw-type terminals | 0.8 ... 1.2 N·m |
| **design of the thread of the connection screw** | |
| ● for main contacts | M10 |
| ● of the auxiliary and control contacts | M3 |
| Electrical Safety | |
| **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 |
| **Communication/ Protocol** | |
| **type of voltage supply via input/output link master** | No |
| **Electromagnetic compatibility** | |
| **conducted interference** | |
| ● due to burst according to IEC 61000-4-4 | 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 |
| ● due to conductor-earth surge according to IEC 61000-4-5 | 2 kV (line to earth) corresponds to degree of severity 3 |
| ● due to conductor-conductor surge according to IEC 61000-4-5 | 1 kV (line to line) corresponds to degree of severity 3 |
| ● due to high-frequency radiation according to IEC 61000-4-6 | 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz |
| **field-based interference according to IEC 61000-4-3** | 10 V/m |
| **electrostatic discharge according to IEC 61000-4-2** | 6 kV contact discharge / 8 kV air discharge |
| **Display** | |
| display version for switching status | Slide switch |
| **Approvals Certificates** | |

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

| EMV | For use in hazardous locations | Test Certificates | | Maritime application |
|---|---|---|---|---|
| KC | RCM ATEX | Special Test Certificate | Type Test Certificates/Test Report | ABS |

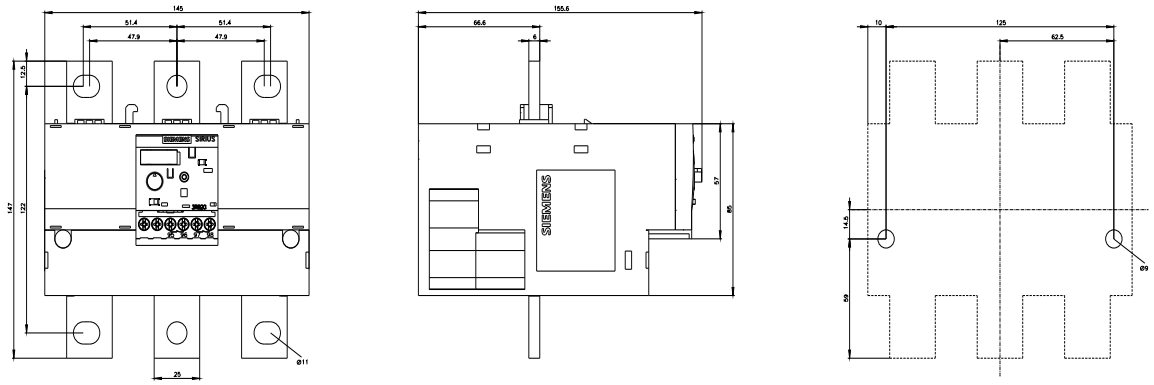

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| Maritime application | other |
| --- | --- |
| DNV LRS RINA | Confirmation Confirmation 产品合格 QC PASS |

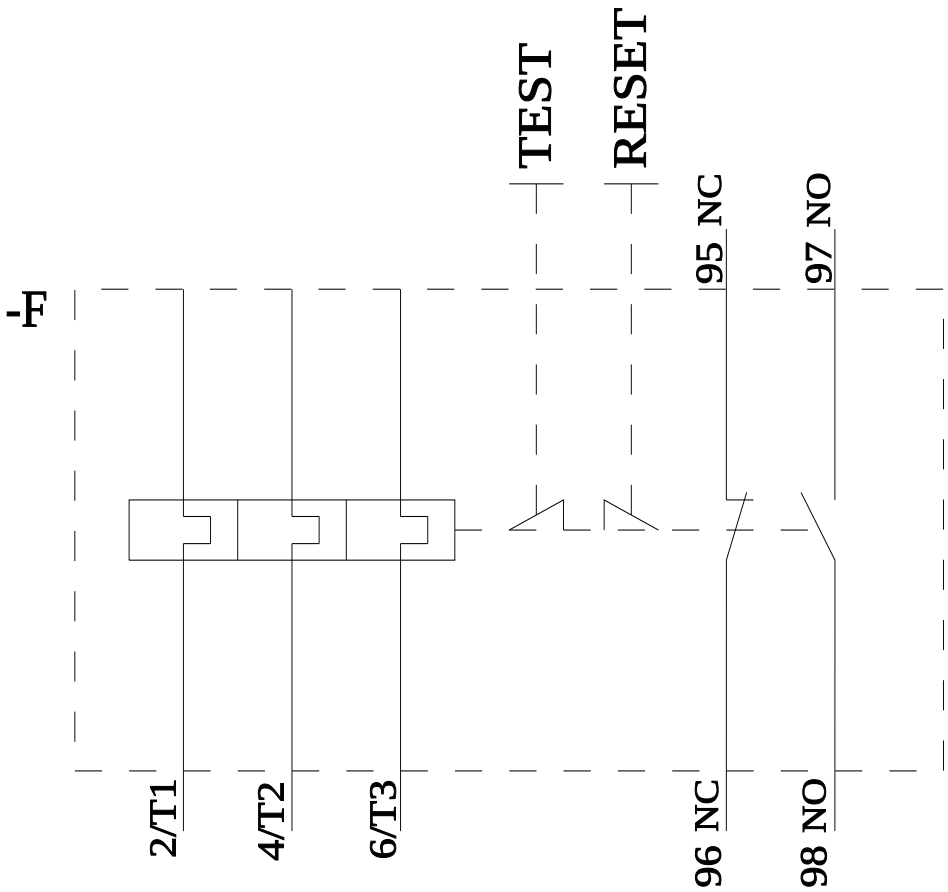
| other |
| --- |
| Miscellaneous |

## Further information

**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=3RB2066-1GC2
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1GC2
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2066-1GC2&lang=en
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https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2066-1GC2
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**last modified:** 4/21/2026


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