



Overload relay 12.5...50 A Electronic For motor protection Size S2, Class 5E...30E
 Contactor mounting Main circuit: Screw Auxiliary circuit: Spring-type terminal
 Manual-Automatic-Reset Internal ground fault detection

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| product brand name | SIRIUS |
| product designation | solid-state overload relay |
| product type designation | 3RB3 |
| General technical data | |
| size of overload relay | S2 |
| size of contactor can be combined company-specific | S2 |
| power loss [W] for rated value of the current at AC in hot operating state | 1.8 W |
| • per pole | 0.6 W |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V |
| surge voltage resistance rated value | 6 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 | 15g / 11 ms |
| • according to IEC 60068-2-27 | 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms |
| thermal current | 50 A |
| reference code according to IEC 81346-2 | F |
| Substance Prohibition (Date) | 10/15/2014 |
| SVHC substance name | Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 |
| 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 |
| 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 | 12.5 ... 50 A |
| operating voltage | |
| • rated value | 690 V |
| • for remote-reset function at DC | 24 V |

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| <ul style="list-style-type: none"> at AC-3e rated value maximum | 690 V |
| operating frequency rated value | 50 ... 60 Hz |
| operational current rated value | 50 A |
| operational current at AC-3e at 400 V rated value | 50 A |
| operating power | |
| <ul style="list-style-type: none"> for 3-phase motors at 400 V at 50 Hz | 7.5 ... 22 kW |
| <ul style="list-style-type: none"> for AC motors at 500 V at 50 Hz | 11 ... 30 kW |
| <ul style="list-style-type: none"> for AC motors at 690 V at 50 Hz | 11 ... 45 kW |
| Auxiliary circuit | |
| design of the auxiliary switch | integrated |
| number of NC contacts for auxiliary contacts | 1 |
| <ul style="list-style-type: none"> note | for contactor disconnection |
| number of NO contacts for auxiliary contacts | 1 |
| <ul style="list-style-type: none"> note | for message "tripped" |
| number of CO contacts for auxiliary contacts | 0 |
| operational current of auxiliary contacts at AC-15 | |
| <ul style="list-style-type: none"> at 24 V | 4 A |
| <ul style="list-style-type: none"> at 110 V | 4 A |
| <ul style="list-style-type: none"> at 120 V | 4 A |
| <ul style="list-style-type: none"> at 125 V | 4 A |
| <ul style="list-style-type: none"> at 230 V | 3 A |
| operational current of auxiliary contacts at DC-13 | |
| <ul style="list-style-type: none"> at 24 V | 2 A |
| <ul style="list-style-type: none"> at 60 V | 0.55 A |
| <ul style="list-style-type: none"> at 110 V | 0.3 A |
| <ul style="list-style-type: none"> at 125 V | 0.3 A |
| <ul style="list-style-type: none"> at 220 V | 0.11 A |
| Protective and monitoring functions | |
| trip class | CLASS 5E, 10E, 20E and 30E adjustable |
| design of the overload release | electronic |
| response value current of the grounding protection minimum | 0.75 x IMotor |
| response time of the grounding protection in settled state | 1 000 ms |
| operating range of the grounding protection relating to current set value | |
| <ul style="list-style-type: none"> minimum | IMotor > lower current setting value |
| <ul style="list-style-type: none"> maximum | IMotor < upper current setting value x 3.5 |
| UL/CSA ratings | |
| full-load current (FLA) for 3-phase AC motor | |
| <ul style="list-style-type: none"> at 480 V rated value | 50 A |
| <ul style="list-style-type: none"> at 600 V rated value | 50 A |
| contact rating of auxiliary contacts according to UL | B600 / R300 |
| Short-circuit protection | |
| design of the fuse link | |
| <ul style="list-style-type: none"> for short-circuit protection of the main circuit <ul style="list-style-type: none"> with type of coordination 1 required with type of assignment 2 required | gG: 250 A gG: 200 A |
| <ul style="list-style-type: none"> for short-circuit protection of the auxiliary switch required | fuse gG: 6 A |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| fastening method | Contacting mounting |
| height | 99 mm |
| width | 55 mm |
| depth | 104 mm |
| Connections/ Terminals | |
| product component removable terminal for auxiliary and control circuit | Yes |
| type of electrical connection | |
| <ul style="list-style-type: none"> for main current circuit | screw-type terminals |
| <ul style="list-style-type: none"> for auxiliary and control circuit | spring-loaded terminals |
| arrangement of electrical connectors for main current circuit | Top and bottom |

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| type of connectable conductor cross-sections for main contacts | |
| <ul style="list-style-type: none"> • solid • stranded • finely stranded with core end processing | 1x (1 ... 50 mm ²), 2x (1 ... 35 mm ²) 2x (10 ... 35 mm ²), 1x 50 mm ² 1x (1 ... 35 mm ²), 2x (1 ... 25 mm ²) |
| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing — finely stranded without core end processing • for AWG cables for auxiliary contacts | 2x (0.25 ... 1.5 mm ²) 2x (0,25 ... 1,5 mm ²) 2x (0.25 ... 1.5 mm ²) 2x (0.25 ... 1.5 mm ²) 1x (24 ... 16), 2x (24 ... 16) |
| tightening torque | |
| <ul style="list-style-type: none"> • for main contacts with screw-type terminals | 3 ... 4.5 N·m |
| design of screwdriver shaft | Diameter 5 to 6 mm |
| size of the screwdriver tip | Pozidriv PZ 2 |
| design of the thread of the connection screw | |
| <ul style="list-style-type: none"> • for main contacts | M6 |

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| Electrical Safety | |
| 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 |





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| Communication/ Protocol | |
| type of voltage supply via input/output link master | No |




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| Electromagnetic compatibility | |
| conducted interference | |
| <ul style="list-style-type: none"> • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000-4-6 | 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 2 kV (line to earth) corresponds to degree of severity 3 1 kV (line to line) corresponds to degree of severity 3 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 |

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| Display | |
| display version for switching status | Slide switch |

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| Approvals Certificates | |
| General Product Approval | |



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|---|---|--|---|
| EMV | For use in hazardous locations | Test Certificates | Marine / Shipping |
|  |  | Special Test Certificate Type Test Certificates/Test Report |   |

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|---|------------------------------|---|
| Marine / Shipping | other | Environment |
|    | Confirmation | Environmental Confirmations |

Further information

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=3RB3133-4UD0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3133-4UD0>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3133-4UD0>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

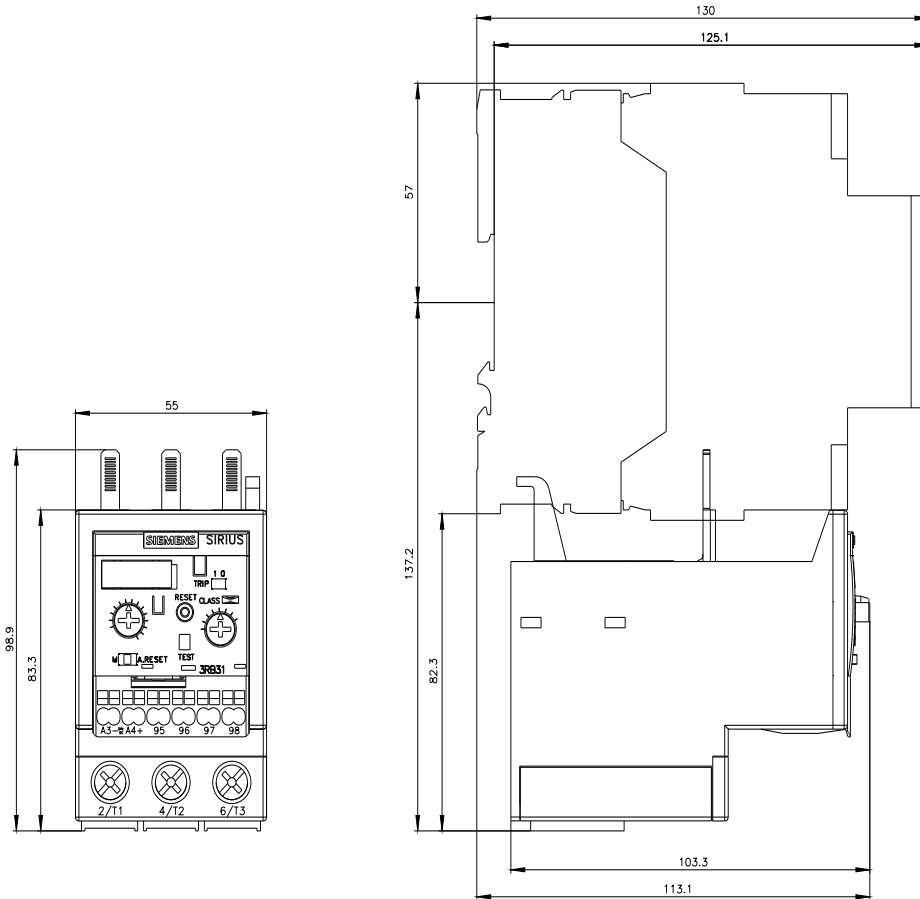
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3133-4UD0&lang=en

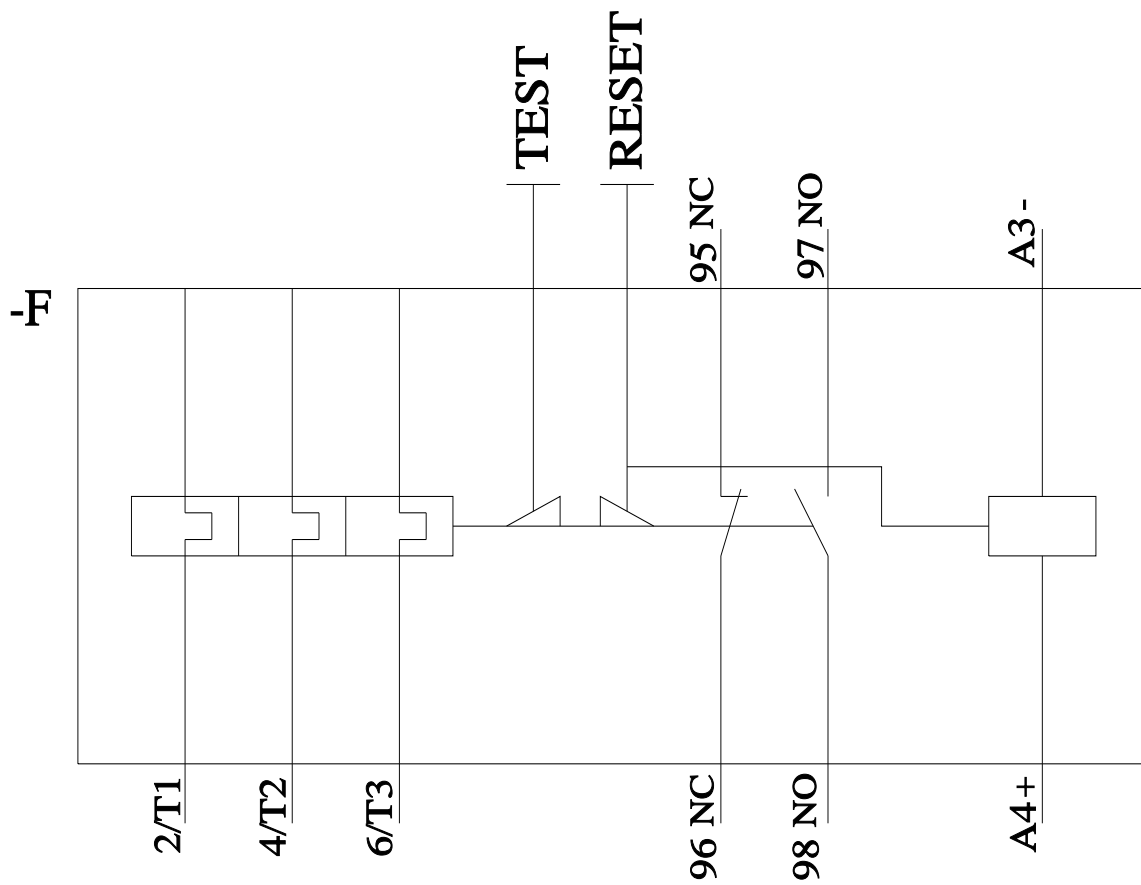
Characteristic: Tripping characteristics, I^t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3133-4UD0/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3133-4UD0&objecttype=14&gridview=view1>





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3/11/2024 