



Overload relay 50...200 A for motor protection Size S6, CLASS 5...30E Contactor mounting/stand-alone installation Main circuit: straight-through transformer Auxiliary circuit: Screw 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 | 3RB2 |
| General technical data | |
| size of overload relay | S6 |
| size of contactor can be combined company-specific | S6 |
| 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 <ul style="list-style-type: none"> in networks with ungrounded star point between auxiliary and auxiliary circuit in networks with grounded star point between auxiliary and auxiliary circuit in networks with ungrounded star point between main and auxiliary circuit in networks with grounded star point between main and auxiliary circuit | 300 V 300 V 600 V 690 V |
| shock resistance <ul style="list-style-type: none"> according to IEC 60068-2-27 | 15g / 11 ms 15g / 11 ms |
| vibration resistance | 1-6 Hz, 15 mm; 6-500 Hz, 20 m/s ² ; 10 cycles |
| thermal current | 200 A |
| recovery time after overload trip <ul style="list-style-type: none"> with automatic reset typical with remote-reset with manual reset | 3 min 0 min 0 min |
| reference code according to IEC 81346-2 | F |
| Substance Prohibition (Date) | 07/01/2006 |
| SVHC substance name | Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 |
| Weight | 0.698 kg |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |
| ambient temperature <ul style="list-style-type: none"> during operation during storage during transport | -25 ... +60 °C -40 ... +80 °C -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 | 50 ... 200 A |

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| operating voltage | |
| • rated value | 1 000 V |
| • for remote-reset function at DC | 24 V |
| • at AC-3e rated value maximum | 1 000 V |
| operating frequency rated value | 50 ... 60 Hz |
| operational current rated value | 200 A |
| operational current at AC-3e at 400 V rated value | 200 A |
| operating power | |
| • for 3-phase motors at 400 V at 50 Hz | 30 ... 90 kW |
| • for AC motors at 500 V at 50 Hz | 30 ... 132 kW |
| • for AC motors at 690 V at 50 Hz | 55 ... 160 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 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 | |
| • minimum | IMotor > lower current setting value |
| • maximum | IMotor < upper current setting value x 3.5 |
| UL/CSA ratings | |
| full-load current (FLA) for 3-phase AC motor | |
| • at 480 V rated value | 200 A |
| • at 600 V rated value | 200 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: 355 A, Class L: 601 A |
| — with type of assignment 2 required | gG: 315 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 |
| Connections/ Terminals | |
| product component removable terminal for auxiliary and control circuit | Yes |
| type of electrical connection | |
| • for main current circuit | straight-through transformers |

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| • 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 mm ²), 2x (0.5 ... 2.5 mm ²) |
| — solid or stranded | 1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) |
| — finely stranded with core end processing | 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) |
| • for AWG cables for auxiliary contacts | 2x (20 ... 14) |
| tightening torque | |
| • for auxiliary contacts with screw-type terminals | 0.8 ... 1.2 N·m |
| design of the thread of the connection screw | |
| • of the auxiliary and control contacts | M3 |
| 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 |
| 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 | |
| General Product Approval | |



[Confirmation](#)



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|-----|--------------------------------|-------------------|-------------------|
| EMV | For use in hazardous locations | Test Certificates | Marine / Shipping |
|-----|--------------------------------|-------------------|-------------------|



[KC](#)



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



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|-------------------|-------|-------------|
| Marine / Shipping | other | Environment |
|-------------------|-------|-------------|



[Miscellaneous](#)

[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=3RB2153-4FW2>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2153-4FW2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2153-4FW2>

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

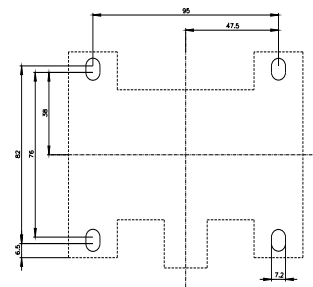
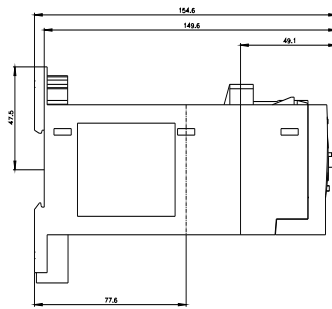
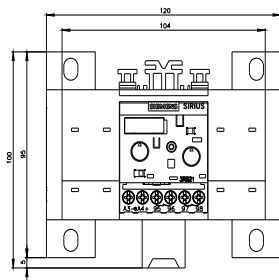
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2153-4FW2&lang=en

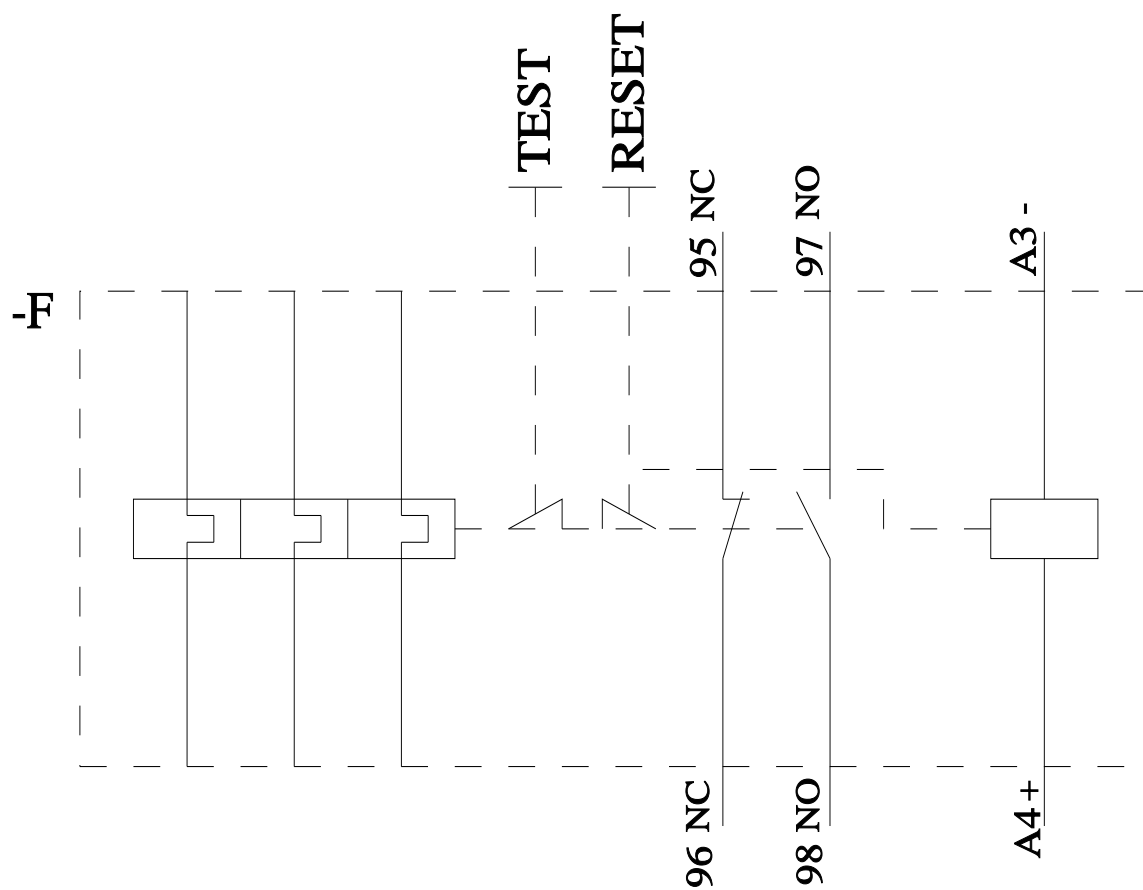
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2153-4FW2/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB2153-4FW2&objecttype=14&gridview=view1>





last modified:

3/11/2024 