SIEMENS

## Data sheet 3RH2131-2BM40


Contactor relay, 3 NO + 1 NC, 220 V DC, Size S00, Spring-type terminal

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| **product brand name** | SIRIUS |
| **product designation** | Auxiliary contactor |
| **product type designation** | 3RH2 |
| **General technical data** | |
| **size of contactor** | S00 |
| product extension auxiliary switch | Yes |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V |
| **degree of pollution** | 3 |
| **surge voltage resistance rated value** | 6 kV |
| **shock resistance at rectangular impulse** | |
| ● at DC | 10g / 5 ms, 5g / 10 ms |
| **shock resistance with sine pulse** | |
| ● at DC | 15g / 5 ms, 8g / 10 ms |
| **mechanical service life (operating cycles)** | |
| ● of contactor typical | 30 000 000 |
| ● of the contactor with added electronically optimized auxiliary switch block typical | 5 000 000 |
| ● of the contactor with added auxiliary switch block typical | 10 000 000 |
| **reference code according to IEC 81346-2** | K |
| **Substance Prohibitance (Date)** | 10/01/2009 |
| **Ambient conditions** | |
| installation altitude at height above sea level maximum | 2 000 m |
| **ambient temperature** | |
| ● during operation | -25 ... +60 °C |
| ● during storage | -55 ... +80 °C |
| **relative humidity minimum** | 10 % |
| **relative humidity at 55 °C according to IEC 60068-2-30 maximum** | 95 % |
| **Main circuit** | |
| **no-load switching frequency** | |
| ● at AC | 10 000 1/h |
| ● at DC | 10 000 1/h |
| **Control circuit/ Control** | |
| **type of voltage of the control supply voltage** | DC |
| **control supply voltage at DC** | |
| ● rated value | 220 V |
| **operating range factor control supply voltage rated value of magnet coil at DC** | |
| ● initial value | 0.8 |
| ● full-scale value | 1.1 |
| **closing power of magnet coil at DC** | 4 W |

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| **holding power of magnet coil at DC** | 4 W |
| **closing delay** | |
| ● at DC | 30 ... 100 ms |
| **opening delay** | |
| ● at DC | 7 ... 13 ms |
| **arcing time** | 10 ... 15 ms |
| **Auxiliary circuit** | |
| **number of NC contacts for auxiliary contacts** | 1 |
| ● instantaneous contact | 1 |
| **number of NO contacts for auxiliary contacts** | 3 |
| ● instantaneous contact | 3 |
| **identification number and letter for switching elements** | 31 E |
| operational current at AC-12 maximum | 10 A |
| **operational current at AC-15** | |
| ● at 230 V rated value | 10 A |
| ● at 400 V rated value | 3 A |
| ● at 500 V rated value | 2 A |
| ● at 690 V rated value | 1 A |
| **operational current at 1 current path at DC-12** | |
| ● at 24 V rated value | 10 A |
| ● at 110 V rated value | 3 A |
| ● at 220 V rated value | 1 A |
| ● at 440 V rated value | 0.3 A |
| ● at 600 V rated value | 0.15 A |
| **operational current with 2 current paths in series at DC-12** | |
| ● at 24 V rated value | 10 A |
| ● at 60 V rated value | 10 A |
| ● at 110 V rated value | 4 A |
| ● at 220 V rated value | 2 A |
| ● at 440 V rated value | 1.3 A |
| ● at 600 V rated value | 0.65 A |
| **operational current with 3 current paths in series at DC-12** | |
| ● at 24 V rated value | 10 A |
| ● at 60 V rated value | 10 A |
| ● at 110 V rated value | 10 A |
| ● at 220 V rated value | 3.6 A |
| ● at 440 V rated value | 2.5 A |
| ● at 600 V rated value | 1.8 A |
| **operating frequency at DC-12 maximum** | 1 000 1/h |
| **operational current at 1 current path at DC-13** | |
| ● at 24 V rated value | 10 A |
| ● at 110 V rated value | 1 A |
| ● at 220 V rated value | 0.3 A |
| ● at 440 V rated value | 0.14 A |
| ● at 600 V rated value | 0.1 A |
| **operational current with 2 current paths in series at DC-13** | |
| ● at 24 V rated value | 10 A |
| ● at 60 V rated value | 3.5 A |
| ● at 110 V rated value | 1.3 A |
| ● at 220 V rated value | 0.9 A |
| ● at 440 V rated value | 0.2 A |
| ● at 600 V rated value | 0.1 A |
| **operational current with 3 current paths in series at DC-13** | |
| ● at 24 V rated value | 10 A |
| ● at 60 V rated value | 4.7 A |
| ● at 110 V rated value | 3 A |
| ● at 220 V rated value | 1.2 A |
| ● at 440 V rated value | 0.5 A |
| ● at 600 V rated value | 0.26 A |
| **operating frequency at DC-13 maximum** | 1 000 1/h |
| design of the miniature circuit breaker for short-circuit protection | C characteristic: 6 A; 0.4 kA |

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| of the auxiliary circuit up to 230 V | |
| **contact reliability of auxiliary contacts** | 1 faulty switching per 100 million (17 V, 1 mA) |
| **UL/CSA ratings** | |
| **contact rating of auxiliary contacts according to UL** | A600 / Q600 |
| **Short-circuit protection** | |
| design of the fuse link for short-circuit protection of the auxiliary switch required | fuse gL/gG: 10 A |
| **Installation/ mounting/ dimensions** | |
| **mounting position** | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| **fastening method** | screw and snap-on mounting onto 35 mm DIN rail |
| **height** | 70 mm |
| **width** | 45 mm |
| **depth** | 73 mm |
| **required spacing** | |
| ● with side-by-side mounting | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 0 mm |
| ● for grounded parts | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — at the side | 6 mm |
| — downwards | 10 mm |
| ● for live parts | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 6 mm |
| **Connections/ Terminals** | |
| type of electrical connection for auxiliary and control circuit | spring-loaded terminals |
| **type of connectable conductor cross-sections** | |
| ● for auxiliary contacts | |
| — solid or stranded | 2x (0,5 ... 4 mm²) |
| — finely stranded with core end processing | 2x (0.5 ... 2.5 mm²) |
| — finely stranded without core end processing | 2x (0.5 ... 2.5 mm²) |
| ● for AWG cables for auxiliary contacts | 2x (20 ... 12) |
| **Safety related data** | |
| product function positively driven operation according to IEC 60947-5-1 | Yes |
| B10 value with high demand rate according to SN 31920 | 1 000 000; With 0.3 x Ie |
| **proportion of dangerous failures** | |
| ● with low demand rate according to SN 31920 | 40 % |
| ● with high demand rate according to SN 31920 | 73 % |
| failure rate [FIT] with low demand rate according to SN 31920 | 100 FIT |
| T1 value for proof test interval or service life according to IEC 61508 | 20 a |
| **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 |
| **Certificates/ approvals** | |
| **General Product Approval** | |

Confirmation

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| EMC | Functional Safety/Safety of Machinery | Declaration of Conformity | Test Certificates |
|---|---|---|---|

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|---|---|---|---|---|---|
| RCM | Type Examination Certificate | EG-Konf. | UKCA | Special Test Certificate | Type Test Certificates/Test Report |

| Marine / Shipping | | | | | |
|---|---|---|---|---|---|
| ABS | BUREAU VERITAS | DNV | Lloyd's Register LRS | PRS | RINA |

| Marine / Shipping | other | | Railway | Dangerous Good | Environment |
|---|---|---|---|---|---|
| RMRS | Confirmation | VDE | Vibration and Shock | Transport Information | Environmental Confirmations |

## Further information

**Siemens has decided to exit the Russian market (see here).**
https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

**Siemens is working on the renewal of the current EAC certificates.**
Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

**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=3RH2131-2BM40

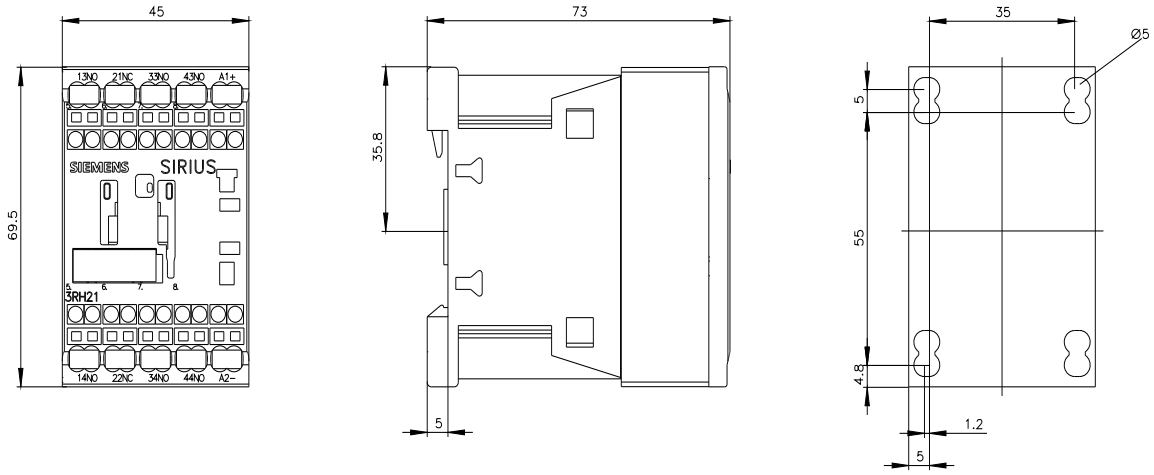
**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2131-2BM40

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RH2131-2BM40

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2131-2BM40&lang=en

**Characteristic: Tripping characteristics, I²t, Let-through current**
https://support.industry.siemens.com/cs/ww/en/ps/3RH2131-2BM40/char

**Further characteristics (e.g. electrical endurance, switching frequency)**
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2131-2BM40&objecttype=14&gridview=view1

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