

Contactor relay, 4 NO, 24 V AC, 50 / 60 Hz, Size S00, screw terminal



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| Product brand name | SIRIUS |
| Product designation | contactor relay |
| Product type designation | 3RH2 |
| General technical data | |
| Size of contactor | S00 |
| Product extension | |
| • Auxiliary switch | Yes |
| Insulation voltage | |
| • with degree of pollution 3 rated value | 690 V |
| Degree of pollution | 3 |
| Surge voltage resistance rated value | 6 kV |
| Protection class IP | |
| • on the front | IP20 |
| Shock resistance at rectangular impulse | |
| • at AC | 7,3g / 5 ms, 4,7g / 10 ms |
| Shock resistance with sine pulse | |
| • at AC | 11,4g / 5 ms, 7,3g / 10 ms |
| Mechanical service life (switching cycles) | |
| • of contactor typical | 30 000 000 |

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| <ul style="list-style-type: none"> • of the contactor with added electronics-compatible auxiliary switch block typical | 5 000 000 |
| <ul style="list-style-type: none"> • of the contactor with added auxiliary switch block typical | 10 000 000 |
| Reference code acc. to DIN EN 81346-2 | K |
| Reference code acc. to DIN EN 61346-2 | K |

Ambient conditions

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| Installation altitude at height above sea level | |
| <ul style="list-style-type: none"> • maximum | 2 000 m |
| Ambient temperature | |
| <ul style="list-style-type: none"> • during operation | -25 ... +60 °C |
| <ul style="list-style-type: none"> • during storage | -55 ... +80 °C |

Main circuit

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| No-load switching frequency | |
| <ul style="list-style-type: none"> • at AC | 10 000 1/h |
| <ul style="list-style-type: none"> • at DC | 10 000 1/h |

Control circuit/ Control

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| Type of voltage of the control supply voltage | AC |
| Control supply voltage at AC | |
| <ul style="list-style-type: none"> • at 50 Hz rated value | 24 V |
| <ul style="list-style-type: none"> • at 60 Hz rated value | 24 V |
| Control supply voltage frequency | |
| <ul style="list-style-type: none"> • 1 rated value | 50 Hz |
| <ul style="list-style-type: none"> • 2 rated value | 60 Hz |
| Operating range factor control supply voltage rated value of magnet coil at AC | |
| <ul style="list-style-type: none"> • at 50 Hz | 0.8 ... 1.1 |
| <ul style="list-style-type: none"> • at 60 Hz | 0.85 ... 1.1 |
| Apparent pick-up power of magnet coil at AC | 37 V·A |
| Inductive power factor with closing power of the coil | 0.8 |
| Apparent holding power of magnet coil at AC | 5.7 V·A |
| Inductive power factor with the holding power of the coil | 0.25 |
| Closing delay | |
| <ul style="list-style-type: none"> • at AC | 8 ... 33 ms |
| Opening delay | |
| <ul style="list-style-type: none"> • at AC | 4 ... 15 ms |
| Arcing time | 10 ... 15 ms |

Auxiliary circuit

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|---|---|
| Number of NO contacts for auxiliary contacts | 4 |
| <ul style="list-style-type: none"> • instantaneous contact | 4 |

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| Identification number and letter for switching elements | 40 E |
| Operating current at AC-12 maximum | 10 A |
| Operating 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 |
| Operating 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 |
| Operating 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 |
| Operating 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 |
| Operating 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 |
| Operating 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 |

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| <ul style="list-style-type: none"> • at 220 V rated value • at 440 V rated value • at 600 V rated value | <p>0.9 A</p> <p>0.2 A</p> <p>0.1 A</p> |
| Operating current with 3 current paths in series at DC-13 | |
| <ul style="list-style-type: none"> • at 24 V rated value • at 60 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value | <p>10 A</p> <p>4.7 A</p> <p>3 A</p> <p>1.2 A</p> <p>0.5 A</p> <p>0.26 A</p> |
| Operating frequency at DC-13 maximum | 1 000 1/h |
| Design of the miniature circuit breaker | |
| <ul style="list-style-type: none"> • for short-circuit protection of the auxiliary circuit up to 230 V | C characteristic: 6 A; 0.4 kA |
| Contact reliability of auxiliary contacts | 1 faulty switching per 100 million (17 V, 1 mA) |

UL/CSA ratings

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|---|-------------|
| Contact rating of auxiliary contacts according to UL | A600 / Q600 |
|---|-------------|

Short-circuit protection

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| Design of the fuse link | |
| <ul style="list-style-type: none"> • for short-circuit protection of the auxiliary switch required | fuse gL/gG: 10 A |

Installation/ mounting/ dimensions

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| Mounting position | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| Mounting type | screw and snap-on mounting onto 35 mm standard mounting rail |
| Height | 57.5 mm |
| Width | 45 mm |
| Depth | 73 mm |
| Required spacing | |
| <ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — upwards — at the side — downwards • for live parts | <p>10 mm</p> <p>10 mm</p> <p>10 mm</p> <p>0 mm</p> <p>10 mm</p> <p>10 mm</p> <p>6 mm</p> <p>10 mm</p> |

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| — forwards | 10 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 6 mm |

Connections/Terminals

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| Type of electrical connection | |
| <ul style="list-style-type: none"> • for auxiliary and control current circuit | screw-type terminals |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts | <p>2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm²</p> <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14), 2x 12</p> |

Safety related data

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|---|--------------------------------------|
| B10 value | |
| <ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 | 1 000 000; With 0.3 x I _e |
| Proportion of dangerous failures | |
| <ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 | <p>40 %</p> <p>73 %</p> |
| Failure rate [FIT] | |
| <ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 | 100 FIT |
| Product function | |
| <ul style="list-style-type: none"> • positively driven operation acc. to IEC 60947-5-1 | Yes |
| T1 value for proof test interval or service life acc. to IEC 61508 | 20 y |

Certificates/approvals

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|--------------------------|---------------------------------------|---------------------------|
| General Product Approval | Functional Safety/Safety of Machinery | Declaration of Conformity |
|--------------------------|---------------------------------------|---------------------------|



[Type Examination](#)



| | |
|-------------------|-------------------|
| Test Certificates | Marine / Shipping |
|-------------------|-------------------|

[Type Test Certificates/Test Report](#)



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



[Confirmation](#)



Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RH2140-1AB00>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2140-1AB00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-1AB00>

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

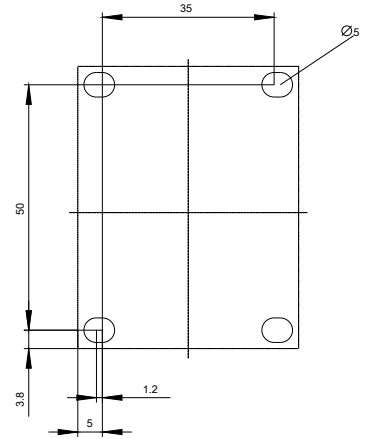
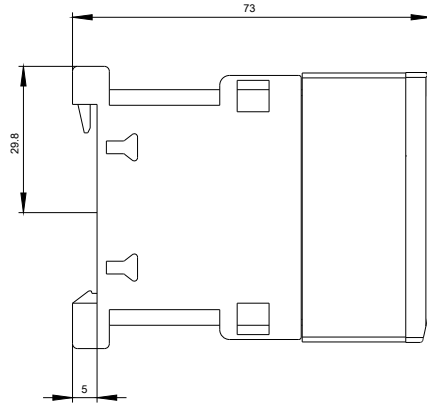
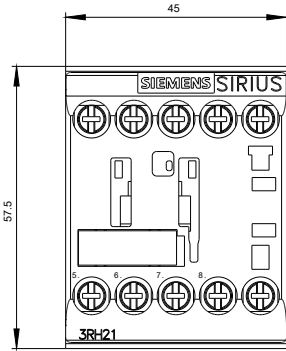
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2140-1AB00&lang=en

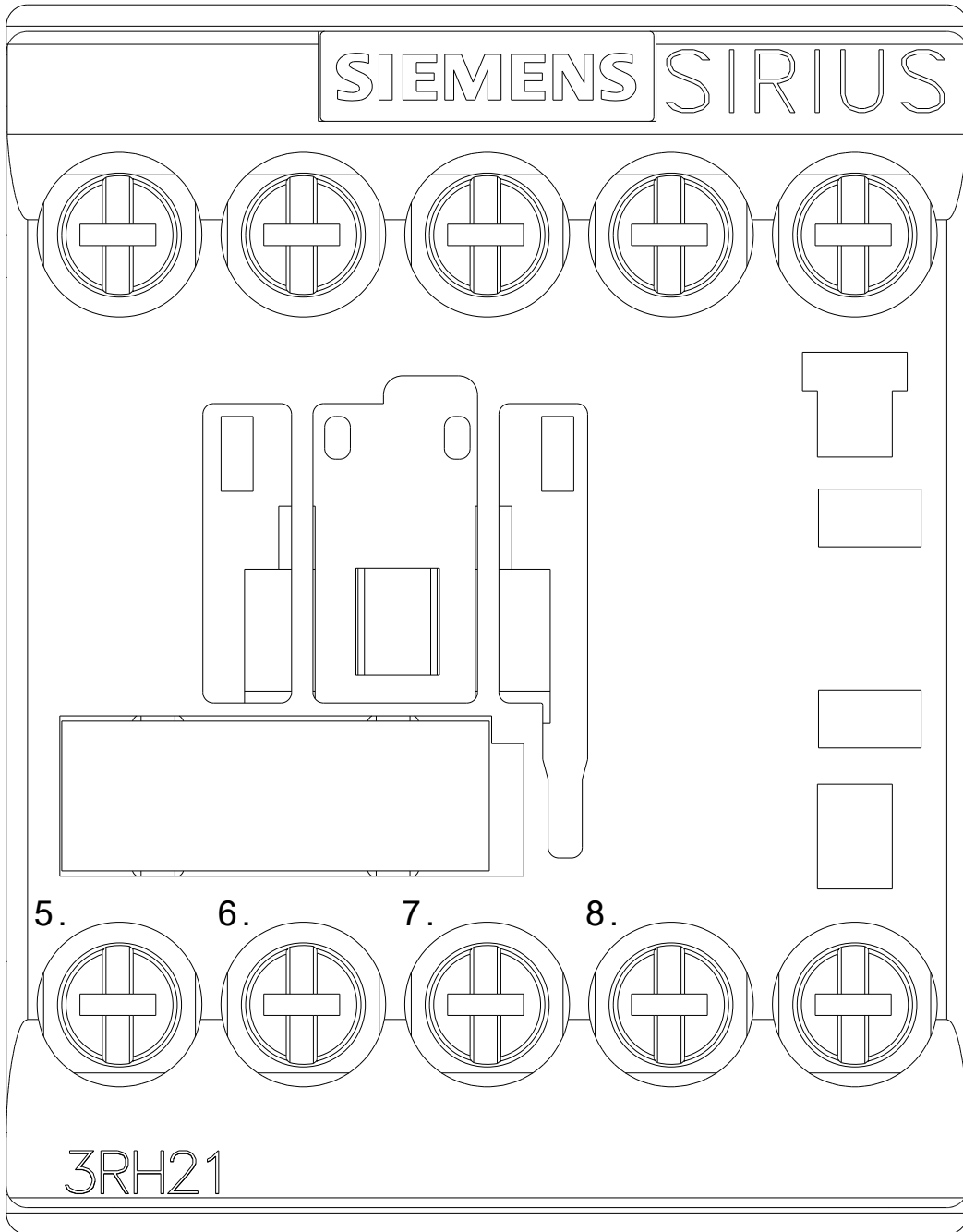
Characteristic: Tripping characteristics, I^t, Let-through current

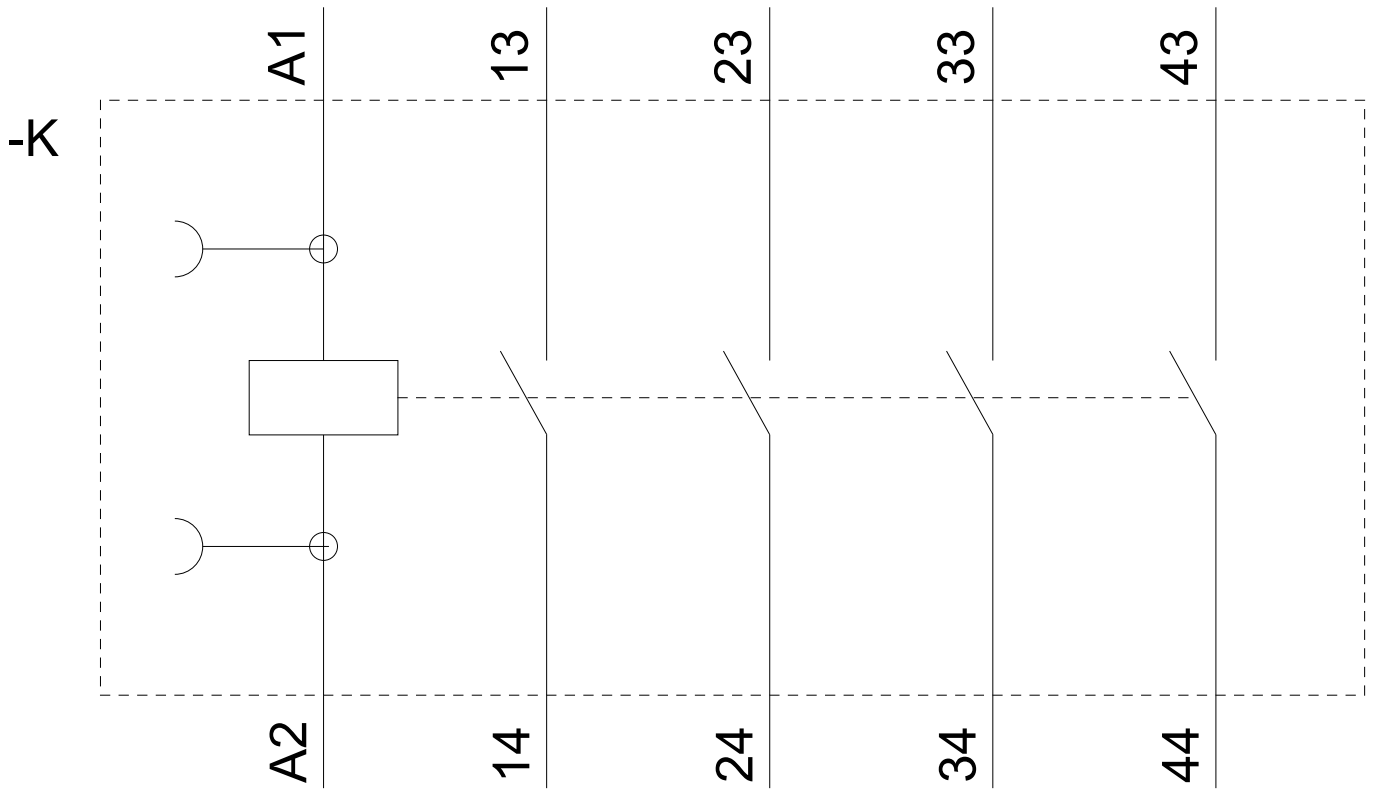
<https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-1AB00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2140-1AB00&objecttype=14&gridview=view1>







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