

CIRCUIT-BREAKER SZ S0, FOR TRANSFORMER PROT. A-
RELEASE 13...20A, N-RELEASE 325A, SCREW CONNECTION,
STANDARD SW. CAPACITY



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|--------------------------|----------------------------|
| product brandname | SIRIUS |
| Product designation | Circuit breaker |
| Design of the product | For transformer protection |
| Product type designation | 3RV2 |

| General technical data | |
|---------------------------------------------------------------------------|---------|
| Size of the circuit-breaker | S0 |
| Size of contactor can be combined company-specific | S00, S0 |
| Product extension | |
| • Auxiliary switch | Yes |
| Power loss [W] total typical | 8 W |
| Insulation voltage with degree of pollution 3 rated value | 690 V |
| Surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for safe isolation | |
| • in networks with grounded star point between main and auxiliary circuit | 400 V |
| • in networks with grounded star point between main and auxiliary circuit | 400 V |
| Protection class IP | |

| | |
|-----------------------------------------------------------------------------------|-------------|
| <ul style="list-style-type: none"> • on the front | IP20 |
| <ul style="list-style-type: none"> • of the terminal | IP20 |
| Mechanical service life (switching cycles) | |
| <ul style="list-style-type: none"> • of the main contacts typical | 100 000 |
| <ul style="list-style-type: none"> • of auxiliary contacts typical | 100 000 |
| Electrical endurance (switching cycles) | |
| <ul style="list-style-type: none"> • typical | 100 000 |
| Protection against electrical shock | finger-safe |
| Equipment marking acc. to DIN EN 81346-2 | Q |

Ambient conditions

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| Ambient temperature | |
| <ul style="list-style-type: none"> • during operation | -20 ... +60 °C |
| <ul style="list-style-type: none"> • during storage | -50 ... +80 °C |
| <ul style="list-style-type: none"> • during transport | -50 ... +80 °C |
| Temperature compensation | -20 ... +60 °C |

Main circuit

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| Number of poles for main current circuit | 3 |
| Adjustable pick-up value current of the current-dependent overload release | 13 ... 20 A |
| Operating voltage | |
| <ul style="list-style-type: none"> • rated value | 690 V |
| <ul style="list-style-type: none"> • at AC-3 rated value maximum | 690 V |
| Operating frequency rated value | 50 ... 60 Hz |
| Operating current rated value | 20 A |
| Operating current | |
| <ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value | 20 A |
| Operating power | |
| <ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value | 5 500 W 7 500 W 11 000 W 15 000 W |
| Operating frequency | |
| <ul style="list-style-type: none"> • at AC-3 maximum | 15 1/h |

Auxiliary circuit

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|----------------------------------------------------------------------------|---|
| Number of NC contacts | |
| <ul style="list-style-type: none"> • for auxiliary contacts | 0 |
| Number of NO contacts | |
| <ul style="list-style-type: none"> • for auxiliary contacts | 0 |
| Number of CO contacts | |

- for auxiliary contacts

0

Protective and monitoring functions

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| Product function | |
| <ul style="list-style-type: none"> • Ground fault detection | No |
| <ul style="list-style-type: none"> • Phase failure detection | Yes |
| Trip class | CLASS 10 |
| Design of the overload release | thermal |
| Operational short-circuit current breaking capacity (Ics) at AC | |
| <ul style="list-style-type: none"> • at 240 V rated value | 100 kA |
| <ul style="list-style-type: none"> • at 400 V rated value | 25 kA |
| <ul style="list-style-type: none"> • at 500 V rated value | 5 kA |
| <ul style="list-style-type: none"> • at 690 V rated value | 2 kA |
| Maximum short-circuit current breaking capacity (Icu) | |
| <ul style="list-style-type: none"> • at AC at 240 V rated value | 100 kA |
| <ul style="list-style-type: none"> • at AC at 400 V rated value | 55 kA |
| <ul style="list-style-type: none"> • at AC at 500 V rated value | 10 kA |
| <ul style="list-style-type: none"> • at AC at 690 V rated value | 4 kA |
| Breaking capacity short-circuit current (Icn) | |
| <ul style="list-style-type: none"> • at 1 current path at DC at 150 V rated value | 10 kA |
| <ul style="list-style-type: none"> • with 2 current paths in series at DC at 300 V rated value | 10 kA |
| <ul style="list-style-type: none"> • with 3 current paths in series at DC at 450 V rated value | 10 kA |

UL/CSA ratings

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Full-load current (FLA) for three-phase AC motor | |
| <ul style="list-style-type: none"> • at 480 V rated value | 20 A |
| <ul style="list-style-type: none"> • at 600 V rated value | 20 A |
| Yielded mechanical performance [hp] | |
| <ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 110/120 V rated value — at 230 V rated value | 1.5 hp 3 hp |
| <ul style="list-style-type: none"> • for three-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value | 5 hp 5 hp 10 hp |

Short-circuit protection

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| Product function Short circuit protection | Yes |
| Design of the short-circuit trip | magnetic |
| Design of the fuse link for IT network for short-circuit protection of the main circuit | |

- at 400 V
- at 500 V
- at 690 V

gL/gG 63 A
gL/gG 50 A
gL/gG 50 A

Installation/ mounting/ dimensions

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| Mounting position | any |
| Mounting type | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 |
| Height | 97 mm |
| Width | 45 mm |
| Depth | 96 mm |
| Required spacing | |
| <ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side | <p>0 mm 0 mm 50 mm 50 mm 0 mm</p> <p>0 mm 0 mm 50 mm 30 mm 50 mm</p> <p>0 mm 0 mm 50 mm 50 mm 30 mm</p> |

Connections/Terminals

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| Product function | |
| <ul style="list-style-type: none"> • removable terminal for auxiliary and control circuit | No |
| Type of electrical connection | |
| <ul style="list-style-type: none"> • for main current circuit | screw-type terminals |
| Arrangement of electrical connectors for main current circuit | Top and bottom |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing | <p>2x (1 ... 2,5 mm²), 2x (2,5 ... 10 mm²) 2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm²</p> |

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| <ul style="list-style-type: none"> • at AWG conductors for main contacts | 2x (16 ... 12), 2x (14 ... 8) |
| Tightening torque <ul style="list-style-type: none"> • for main contacts with screw-type terminals | 2 ... 2.5 N·m |
| Design of screwdriver shaft | Diameter 5 to 6 mm |

Safety related data

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| B10 value <ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 | 5 000 |
| 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 | 50 % 50 % |
| Failure rate [FIT] <ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 | 50 FIT |
| T1 value for proof test interval or service life acc. to IEC 61508 | 10 y |
| Display version <ul style="list-style-type: none"> • for switching status | Handle |

Certificates/approvals

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| General Product Approval | Declaration of Conformity |
|--------------------------|---------------------------|



[KC](#)



| | |
|-------------------|-------------------|
| Test Certificates | Shipping Approval |
|-------------------|-------------------|

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



| | |
|-------------------|-------|
| Shipping Approval | other |
|-------------------|-------|



[Confirmation](#)

[Environmental Confirmations](#)



[Miscellaneous](#)

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| Railway |
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[Vibration and Shock](#)

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| Further information |
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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=3RV2421-4BA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2421-4BA10>

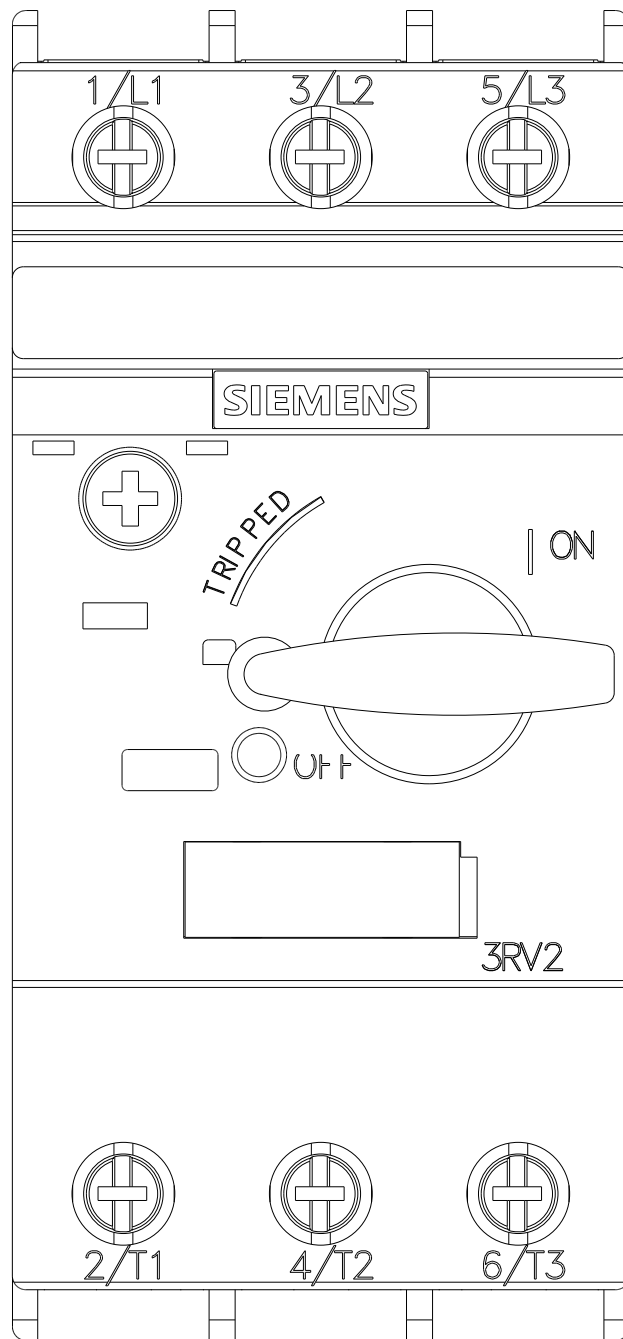
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2421-4BA10>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2421-4BA10&lang=en







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