

Circuit breaker size S2 for transformer protection A-release 22...32 A
N-release 640 A screw terminal Standard switching capacity



Figure similar

| | |
|---------------------------------------------------------------------------|----------------------------|
| Product brand name | SIRIUS |
| Product designation | Circuit breaker |
| Design of the product | For transformer protection |
| Product type designation | 3RV2 |
| General technical data | |
| Size of the circuit-breaker | S2 |
| Size of contactor can be combined company-specific | S2 |
| Product extension | Yes |
| • Auxiliary switch | Yes |
| Power loss [W] total typical | 14 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 | |
| • on the front | IP20 |
| • of the terminal | IP00 |
| Shock resistance | |
| • acc. to IEC 60068-2-27 | 25g / 11 ms Sinus |
| Mechanical service life (switching cycles) | |
| • of the main contacts typical | 50 000 |
| • of auxiliary contacts typical | 50 000 |
| Electrical endurance (switching cycles) | |
| • typical | 50 000 |
| Certificate of suitability ATEX | No |
| Protection against electrical shock | finger-safe when touched vertically from front acc. to IEC 60529 |
| Reference code acc. to DIN EN 81346-2 | Q |

Ambient conditions

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|--------------------------------------------------------|----------------|
| Installation altitude at height above sea level | |
| • maximum | 2 000 m |
| Ambient temperature | |
| • during operation | -20 ... +60 °C |
| • during storage | -50 ... +80 °C |
| • during transport | -50 ... +80 °C |
| Temperature compensation | -20 ... +60 °C |
| Relative humidity during operation | 10 ... 95 % |

Main circuit

| | |
|-----------------------------------------------------------------------------------|--------------|
| Number of poles for main current circuit | 3 |
| Adjustable pick-up value current of the current-dependent overload release | 22 ... 32 A |
| Operating voltage | |
| • rated value | 690 V |
| • at AC-3 rated value maximum | 690 V |
| Operating frequency rated value | 50 ... 60 Hz |
| Operating current rated value | 32 A |
| Operating current | |
| • at AC-3 | |
| — at 400 V rated value | 32 A |
| Operating power | |
| • at AC-3 | |
| — at 230 V rated value | 7 500 W |
| — at 400 V rated value | 15 000 W |
| — at 500 V rated value | 18 500 W |
| — at 690 V rated value | 30 000 W |
| Operating frequency | |
| • at AC-3 maximum | 15 1/h |

| Auxiliary circuit | |
|------------------------------------------------------------------------|----------|
| Number of NC contacts for auxiliary contacts | 0 |
| Number of NO contacts for auxiliary contacts | 0 |
| Protective and monitoring functions | |
| Product function | |
| • Ground fault detection | No |
| • Phase failure detection | Yes |
| Trip class | CLASS 10 |
| Design of the overload release | thermal |
| Operational short-circuit current breaking capacity (Ics) at AC | |
| • at 240 V rated value | 100 A |
| • at 400 V rated value | 30 kA |
| • at 500 V rated value | 5 kA |
| • at 690 V rated value | 2 kA |
| Maximum short-circuit current breaking capacity (Icu) | |
| • at AC at 240 V rated value | 100 kA |
| • at AC at 400 V rated value | 65 kA |
| • at AC at 500 V rated value | 10 kA |
| • at AC at 690 V rated value | 4 kA |
| Response value current | |
| • of instantaneous short-circuit trip unit | 656 A |
| UL/CSA ratings | |
| Full-load current (FLA) for three-phase AC motor | |
| • at 480 V rated value | 32 A |
| • at 600 V rated value | 32 A |
| Yielded mechanical performance [hp] | |
| • for single-phase AC motor | |
| — at 110/120 V rated value | 3 hp |
| — at 230 V rated value | 5 hp |
| • for three-phase AC motor | |
| — at 200/208 V rated value | 10 hp |
| — at 220/230 V rated value | 10 hp |
| — at 460/480 V rated value | 25 hp |
| — at 575/600 V rated value | 30 hp |
| Short-circuit protection | |
| Product function Short circuit protection | Yes |
| Design of the short-circuit trip | magnetic |
| Installation/ mounting/ dimensions | |
| Mounting position | any |

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mounting type | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 |
| Height | 140 mm |
| Width | 55 mm |
| Depth | 149 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 | <ul style="list-style-type: none"> 0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 0 mm 50 mm 50 mm 10 mm |

| Connections/Terminals | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 • at AWG conductors for main contacts | <ul style="list-style-type: none"> 2x (1 ... 25 mm²), 1x (1 ... 35 mm²) 2x (1 ... 16 mm²), 1x (1 ... 25 mm²) 2x (18 ... 3), 1x (18 ... 2) |
| 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 2 |
| Design of the thread of the connection screw | |






- for main contacts





M6





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 | 50 % |
| <ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 | 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

| General Product Approval | Declaration of Conformity |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  CCC  CSA  UL | <p style="text-align: center;">KC</p>  EAC  CE EG-Konf. |

| Test Certificates | Marine / Shipping |
|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Special Test Certificate</p> <p>Type Test Certificates/Test Report</p> |  ABS  BUREAU VERITAS  Lloyd's Register LRS  PRS |

| Marine / Shipping | other |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  RINA  RMRS  TYPE APPROVED PRODUCT DNV-GL DNVGL.COM/AF | <p>Confirmation</p>  VDE <p>Miscellaneous</p> |

| Railway |
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| Vibration and Shock |

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=3RV2431-4EA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2431-4EA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2431-4EA10>

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

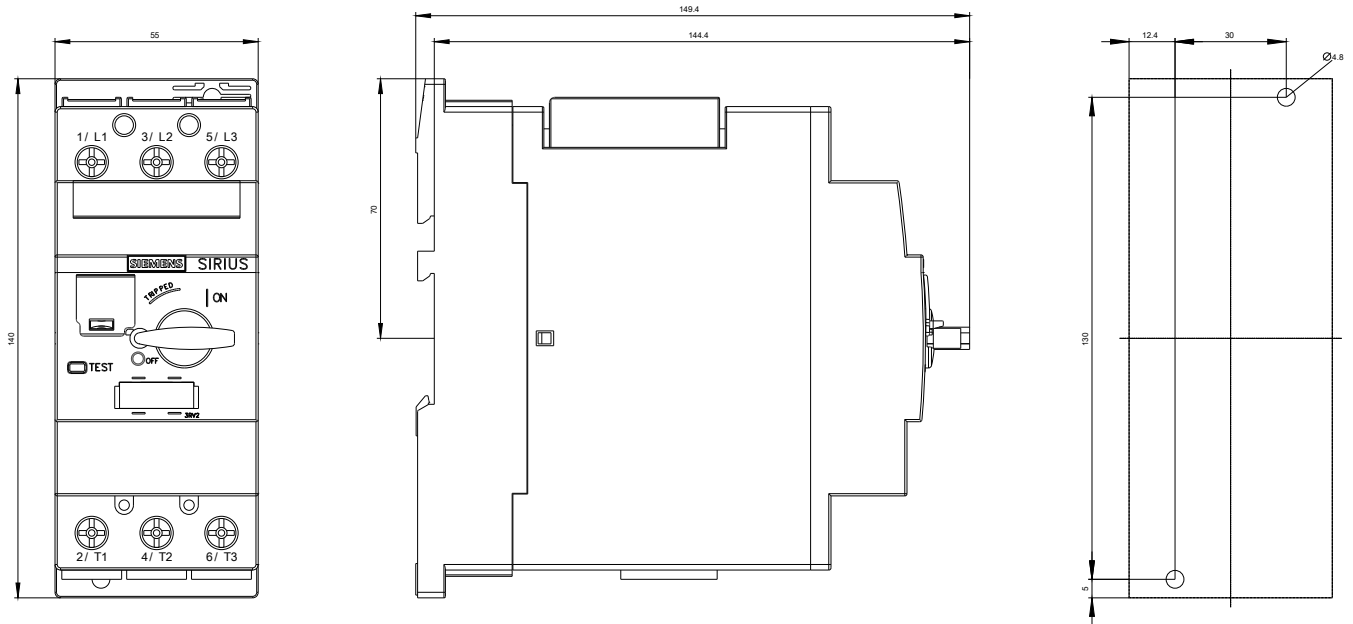
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2431-4EA10&lang=en

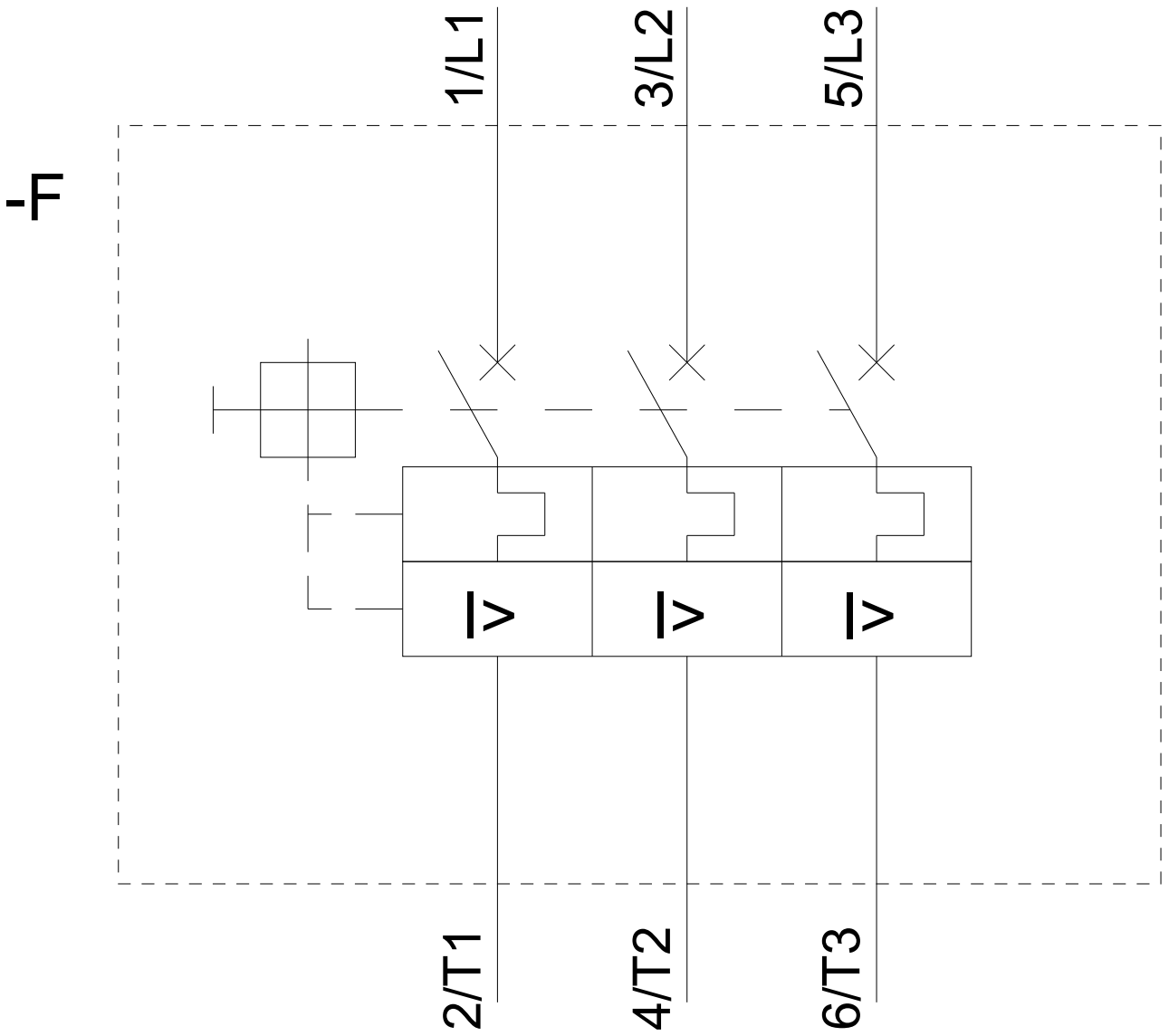
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2431-4EA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2431-4EA10&objecttype=14&gridview=view1>





last modified:

07/21/2018