SIEMENS

Data sheet

3RV2042-4JB10



Circuit breaker size S3 for motor protection, Class 20 A-release 45...63 A N-release 819 A screw terminal Increased switching capacity 100 kA $\,$

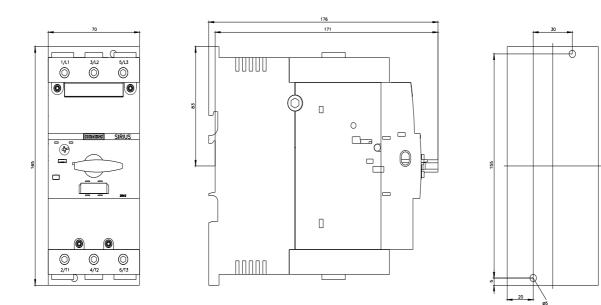
| size of the circuit-breaker\$3size of contactor can be combined company-specific\$3product extension auxiliary switchYespower loss [VI] for rated value of the current********************************* | 419 | |
|--|---|----------------------|
| design of the product For motor protection product type designation 3RV2 Seneral technical data size of the circuit-breaker size of the circuit-breaker S3 size of contactor can be combined company-specific S3 product extension auxiliary switch Yes product extension auxiliary switch Yes power loss RV[for rated value of the current 44 W et at C in hot operating state per pole 11.3 W insulation voltage with degree of pollution 3 at AC rated value 8 kV stree voltage resistance according to IEC 60068-2-27 Z5 (27) (11 ms Sinus mechanical service life (operating cycles) 25 000 of the main contacts typical 25 000 electrical endurance (operating cycles) typical 25 000 efforence code according to IEC 60068-2-27 Q Substance Prohibitance (Date) 03/01/2017 Substance Prohibitance (Date) 03/01/2017 Substance Prohibitance (Date) 20/01 m installation attitude at height above sea level maximum 2000 m eduring operation -20+60 °C | product brand name | SIRIUS |
| product type designation 3RV2 Sonoral technical data | product designation | Circuit breaker |
| Peneral technical data size of the circuit-breaker S3 size of contactor can be combined company-specific S3 size of contactor can be combined company-specific S3 power loss [W] for rated value of the current ************************************ | design of the product | For motor protection |
| size of the circuit-breaker \$3 size of contactor can be combined company-specific \$3 product extension auxiliary switch Yes prover loss [VI] for rated value of the current • at AC in hot operating state per pole 11.3 W • at AC in hot operating state per pole 11.3 W • at AC in hot operating state per pole 11.3 W • at AC in hot operating state per pole 8 KV shock resistance according to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (operating cycles) • of the main contacts typical 25 000 • of auxiliary contacts typical 25 000 electrical endurance (operating cycles) typical 25 000 m ambient temperature • during storage -50 +80 °C • during transport -50 +80 °C • during transport -50 +80 °C • calced value 20 690 V • at AC-3 rated value maximum 690 V • at AC-3 rated value maximum 690 V | product type designation | 3RV2 |
| size of contactor can be combined company-specific S3 product extension auxiliary switch Yes power loss [W] for rated value of the current - • at AC in hot operating state 34 W • at AC in hot operating state per pole 11.3 W insulation voltage with degree of pollution 3 at AC rated value 1000 V surge voltage resistance rated value 8 kV shock resistance according to IEC 60068-2-27 25g /11 ms Sinus mechanical service life (operating cycles) - • of the main contacts typical 25 000 • of auxiliary contacts typical 25 000 substance nome Lead - 7439-92-1 while transport 0 subtance name 200 m ambient temperature - • during operation -20 +60 °C • during storage -50 +80 °C • during tansport -50 +80 °C <t< th=""><th>General technical data</th><th></th></t<> | General technical data | |
| product extension auxiliary switch Yes power loss [W] for rated value of the current 34 W • at AC in hot operating state per pole 11.3 W • insulation voltage with degree of pollution 3 at AC rated value 100 V surge voltage resistance rated value 8 kV shock resistance according to IEC 60068-2-27 25g / 11 ms Sinus mechanical service IIfe (operating cycles) - • of the main contacts typical 25 000 • of auxiliary contacts typical 25 000 electrical endurance (operating cycles) typical 25 000 voltatece name Lead - 7439-92-1 voltatece name Lead - 7439-92-1 voltation attitude at height above sea level maximum 2 000 m ambient temperature -20 +60 °C • during strage -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % | size of the circuit-breaker | S3 |
| power loss [W] for rated value of the current 34 W • at AC in hot operating state 34 W • at AC in hot operating state 34 W • at AC in hot operating state 11.3 W insulation voltage with degree of pollution 3 at AC rated value 1000 V surge voltage resistance rated value 8 kV shock resistance according to IEC 60068-2-27 25g / 11 ms Sinus mechanical service Iffe (operating cycles) 6 • of the main contacts typical 25 000 • of auxiliary contacts typical 25 000 electrical endurance (operating cycles) typical 25 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 03/01/2017 SVHC substance name Lead - 7439-92-1 whient conditions 2000 m ambient temperature -20 +60 °C • during operation -20 +60 °C • during transport -50 +80 °C • during transport -50 +80 °C • during transport -50 +80 °C • during transports -50 +80 °C • during transport -50 + | size of contactor can be combined company-specific | S3 |
| • at AC in hot operating state34 W• at AC in hot operating state per pole11.3 Winsulation voltage with degree of pollution 3 at AC rated value1000 Vsurge voltage resistance rated value8 kVshock resistance according to IEC 60068-2-2725g / 11 ms Sinusmechanical service life (operating cycles) of the main contacts typical25 000- of auxiliary contacts typical25 000electrical endurance (operating cycles) typical25 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)03/01/2017SVHC substance nameLead - 7439-92-1whilent conditions-20 +60 °C- during operation-20 +60 °C- during storage-50 +80 °C- during storage-50 +80 °C- during transport-50 +80 °C- during transport3adjustable current circuit3adjustable current circuit3adjustable current circuit3- operating voltage-60 oV- intel value20 690 V- intel value20 690 V- intel Coltare maximum690 V | product extension auxiliary switch | Yes |
| • at AC in hot operating state per pole11.3 Winsulation voltage with degree of pollution 3 at AC rated value1 000 Vsurge voltage resistance rated value8 kVshock resistance according to IEC 60068-2-2725 000• of the main contacts typical25 000• of the main contacts typical25 000• of auxiliary contacts typical25 000• of auxiliary contacts typical03 001/2017Substance Prohibitance (Date)03001/2017Substance Prohibitance (Date)03001/2017Substance Prohibitance (Date)02 0 | power loss [W] for rated value of the current | |
| insulation voltage with degree of pollution 3 at AC rated value 1000 V surge voltage resistance rated value 8 kV shock resistance according to IEC 60068-2:27 25g / 11 ms Sinus mechanical service life (operating cycles) - • of the main contacts typical 25 000 electrical endurance (operating cycles) typical 25 000 electrical endurance (operating cycles) typical 25 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 03/01/2017 SVHC substance name 2 000 m ambient temperature - • during operation -20 +60 °C • during storage -50 +60 °C • during transport -50 +60 °C | at AC in hot operating state | 34 W |
| surge voltage resistance rated value 8 kV shock resistance according to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (operating cycles) • of the main contacts typical 25 000 • of auxiliary contacts typical 25 000 electrical endurance (operating cycles) typical 25 000 electrical endurance (operating cycles) typical 25 000 substance Prohibitance (Date) 03/01/2017 SVHC substance Iname Lead - 7439-92-1 Vmblent conditions installation altitude at height above sea level maximum 2 000 m amblent temperature • during operation - 20 +60 °C • during storage -50 +80 °C relative humidity during operation 10 95 % Atin circuit number of poles for main current circuit 3 adjustable current response value current of the current- dependent overload release • operating voltage • rated value • at AC-3 rated value maximum 690 V | at AC in hot operating state per pole | 11.3 W |
| shock resistance according to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (operating cycles) 25 000 • of the main contacts typical 25 000 • of auxiliary contacts typical 25 000 electrical endurance (operating cycles) typical 25 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 03/01/2017 SVHC substance name Lead - 7439-92-1 wholent conditions 2000 m ambient temperature -20 460 °C • during operation -20 460 °C • during storage -50 +80 °C • during transport 50 +80 °C relative humidity during operation 10 95 % Atain circuit 3 adjustable current response value current of the current- 45 63 A operating voltage 20 690 V • rated value 20 690 V • at AC-3 rated value maximum 690 V | insulation voltage with degree of pollution 3 at AC rated value | 1 000 V |
| mechanical service life (operating cycles) o • of the main contacts typical 25 000 • of auxiliary contacts typical 25 000 electrical endurance (operating cycles) typical 25 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 03/01/2017 SVHC substance name Lead - 7439-92-1 Vmbient conditions 2000 m ambient temperature 2000 m • during operation -20 +60 °C • during strage -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Afain circuit 3 adjustable current response value current of the current-dependent overload release 45 63 A operating voltage 20 690 V • at AC-3 rated value maximum 690 V | surge voltage resistance rated value | 8 kV |
| • of the main contacts typical25 000• of auxiliary contacts typical25 000electrical endurance (operating cycles) typical25 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)03/01/2017SVHC substance nameLead - 7439-92-1unbient conditions2 000 mambient temperature2 000 m• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation10 95 %Aain circuit3adjustable current response value current of the current- dependent overload release3operating voltage20 690 V• at AC-3 rated value maximum690 V• at AC-3 rated value maximum690 V | shock resistance according to IEC 60068-2-27 | 25g / 11 ms Sinus |
| • of auxiliary contacts typical25 000electrical endurance (operating cycles) typical25 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)03/01/2017SVHC substance nameLead - 7439-92-1Ambient conditions2 000 mambient temperature-20 +60 °C• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation01 95 %Atain circuit3adjustable current response value current of the current dependent overload release3operating voltage20 600 V• at AC-3 rated value maximum20 690 V• at AC-3 rated value maximum690 V• at AC-3 rated value maximum690 V | mechanical service life (operating cycles) | |
| electrical endurance (operating cycles) typical 25 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 03/01/2017 SVHC substance name Lead - 7439-92-1 Ambient conditions 2 000 m ambient temperature - • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Atain circuit 3 adjustable current response value current of the current-dependent overload release 45 63 A operating voltage - • rated value 20 690 V • at AC-3 rated value maximum 690 V | of the main contacts typical | 25 000 |
| reference code according to IEC 81346-2 Substance Prohibitance (Date) SVHC substance name Lead - 7439-92-1 Mbient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage • during transport relative humidity during operation trelative humidity during operation 10 95 % Alain circuit number of poles for main current circuit adjustable current response value current of the current- dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maxi | of auxiliary contacts typical | 25 000 |
| Substance Prohibitance (Date) 03/01/2017 SVHC substance name Lead - 7439-92-1 Ambient conditions 2 000 m installation altitude at height above sea level maximum 2 000 m ambient temperature -20 +60 °C • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Ahin circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current- 45 63 A operating voltage - • rated value 20 690 V • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V | electrical endurance (operating cycles) typical | 25 000 |
| SVHC substance name Lead - 7439-92-1 Ambient conditions 2 000 m installation altitude at height above sea level maximum 2 000 m ambient temperature -20 +60 °C • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Aain circuit 3 adjustable current response value current of the current- dependent overload release 45 63 A operating voltage - • rated value 20 690 V • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V | reference code according to IEC 81346-2 | Q |
| Ambient conditions 2 000 m ambient temperature 2 000 m • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Anin circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current- dependent overload release 45 63 A operating voltage • rated value 20 690 V • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V | Substance Prohibitance (Date) | 03/01/2017 |
| installation altitude at height above sea level maximum 2 000 m ambient temperature -20 +60 °C • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Alain circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current- dependent overload release 45 63 A operating voltage 20 690 V • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V | SVHC substance name | Lead - 7439-92-1 |
| ambient temperature-20 +60 °C• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation10 95 %Alain circuit3number of poles for main current circuit3adjustable current response value current of the current- dependent overload release45 63 Aoperating voltage20 690 V• rated value20 690 V• at AC-3 rated value maximum690 V• at AC-3e rated value maximum690 V | Ambient conditions | |
| • during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation10 95 %Main circuit3Adjustable current response value current of the current- dependent overload release3operating voltage-• rated value20 690 V• at AC-3 rated value maximum690 V• at AC-3e rated value maximum690 V | installation altitude at height above sea level maximum | 2 000 m |
| | ambient temperature | |
| • during transport -50 +80 °C relative humidity during operation 10 95 % Aain circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current- dependent overload release 45 63 A operating voltage 20 690 V • rated value 20 690 V • at AC-3 rated value maximum 690 V | during operation | -20 +60 °C |
| relative humidity during operation 10 95 % Aain circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current- dependent overload release 45 63 A operating voltage rated value at AC-3 rated value maximum 690 V at AC-3e rated value maximum 690 V 690 V | during storage | -50 +80 °C |
| Alain circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current- dependent overload release 45 63 A operating voltage 20 690 V • rated value 690 V • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V | during transport | -50 +80 °C |
| number of poles for main current circuit 3 adjustable current response value current of the current- dependent overload release 45 63 A operating voltage rated value at AC-3 rated value maximum eat AC-3e rated value maximum 690 V 690 V | relative humidity during operation | 10 95 % |
| adjustable current response value current of the current- 45 63 A operating voltage 20 690 V • rated value 20 690 V • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V | Main circuit | |
| dependent overload release operating voltage • rated value • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum • at AC-3e rated value maximum | number of poles for main current circuit | 3 |
| • rated value20 690 V• at AC-3 rated value maximum690 V• at AC-3e rated value maximum690 V | | 45 63 A |
| at AC-3 rated value maximum 690 V at AC-3e rated value maximum 690 V | operating voltage | |
| • at AC-3e rated value maximum 690 V | rated value | 20 690 V |
| | at AC-3 rated value maximum | 690 V |
| operating frequency rated value 50 60 Hz | at AC-3e rated value maximum | 690 V |
| | operating frequency rated value | 50 60 Hz |

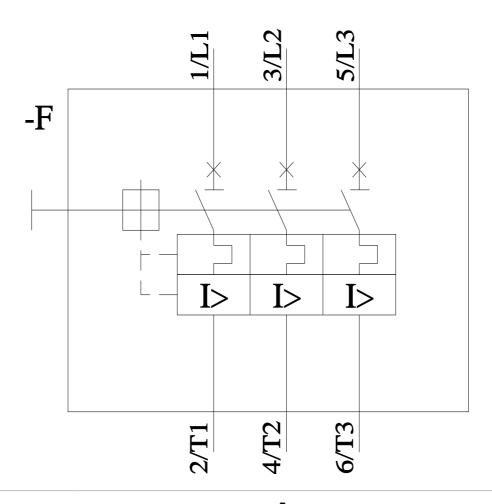
| operational current rated value | 63 A |
|---|--|
| operational current | |
| at AC-3 at 400 V rated value | 63 A |
| at AC-3e at 400 V rated value | 63 A |
| operating power | |
| • at AC-3 | |
| — at 230 V rated value | 18.5 kW |
| — at 400 V rated value | 30 kW |
| — at 500 V rated value | 37 kW |
| — at 690 V rated value | 55 kW |
| ● at AC-3e | |
| — at 230 V rated value | 18.5 kW |
| — at 400 V rated value | 30 kW |
| — at 500 V rated value | 37 kW |
| — at 690 V rated value | 55 kW |
| operating frequency | |
| • at AC-3 maximum | 15 1/h |
| • at AC-3e maximum | 15 1/h |
| Protective and monitoring functions | |
| product function | |
| ground fault detection | No |
| - | Yes |
| phase failure detection | CLASS 20 |
| trip class | |
| design of the overload release | thermal |
| maximum short-circuit current breaking capacity (Icu) | 400 1 4 |
| at AC at 240 V rated value | 100 kA |
| at AC at 400 V rated value | 100 kA |
| at AC at 500 V rated value | 15 kA |
| at AC at 690 V rated value | 7.5 kA |
| operating short-circuit current breaking capacity (Ics) at AC | |
| • at 240 V rated value | 100 kA |
| • at 400 V rated value | 50 kA |
| • at 500 V rated value | 7.5 kA |
| • at 690 V rated value | 4 kA |
| response value current of instantaneous short-circuit trip unit | 819 A |
| UL/CSA ratings | |
| full-load current (FLA) for 3-phase AC motor | |
| • at 480 V rated value | 63 A |
| • at 600 V rated value | 63 A |
| yielded mechanical performance [hp] | |
| for single-phase AC motor | |
| — at 110/120 V rated value | 5 hp |
| — at 230 V rated value | 15 hp |
| for 3-phase AC motor | |
| — at 200/208 V rated value | 20 hp |
| — at 220/230 V rated value | 25 hp |
| — at 460/480 V rated value | 50 hp |
| — at 575/600 V rated value | 60 hp |
| Short-circuit protection | |
| | Vos |
| product function short circuit protection | Yes |
| design of the short-circuit trip | magnetic |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| fastening method | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 |
| height | 165 mm |
| width | 70 mm |
| depth | 176 mm |
| required spacing | |
| with side-by-side mounting at the side | 0 mm |
| | |

| — downwards | 70 mm | | | |
|--|----------------------------------|--|--|--|
| — upwards | 70 mm | | | |
| — at the side | 10 mm | | | |
| for live parts at 400 V | | | | |
| — downwards | 70 mm | | | |
| — upwards | 70 mm | | | |
| — at the side | 10 mm | | | |
| for grounded parts at 500 V | | | | |
| — downwards | 110 mm | | | |
| — upwards | 110 mm | | | |
| — at the side | 10 mm | | | |
| • for live parts at 500 V | | | | |
| — downwards | 110 mm | | | |
| — upwards | 110 mm | | | |
| | 10 mm | | | |
| — at the side | 10 mm | | | |
| • for grounded parts at 690 V | | | | |
| — downwards | 150 mm | | | |
| — upwards | 150 mm | | | |
| — at the side | 30 mm | | | |
| • for live parts at 690 V | | | | |
| — downwards | 150 mm | | | |
| — upwards | 150 mm | | | |
| — at the side | 30 mm | | | |
| Connections/ Terminals | | | | |
| type of electrical connection | | | | |
| for main current circuit | screw-type terminals | | | |
| arrangement of electrical connectors for main current | Top and bottom | | | |
| circuit | | | | |
| type of connectable conductor cross-sections | | | | |
| for main contacts | | | | |
| — solid | 2x (2.5 16 mm²) | | | |
| — solid or stranded | 2x (2,5 50 mm²), 1x (10 70 mm²) | | | |
| finely stranded with core end processing | 2x (2.5 35 mm²), 1x (2.5 50 mm²) | | | |
| finely stranded without core end processing | 2x (10 35 mm²), 1x (10 50 mm²) | | | |
| tightening torque | | | | |
| for main contacts for ring cable lug | 4.5 6 N·m | | | |
| outer diameter of the usable ring cable lug maximum | 19 mm | | | |
| tightening torque | | | | |
| for main contacts with screw-type terminals | 4.5 6 N·m | | | |
| Safety related data | | | | |
| product function suitable for safety function | Yes | | | |
| suitability for use | | | | |
| safety-related switching on | No | | | |
| safety-related switching OFF | Yes | | | |
| service life maximum | 10 a | | | |
| test wear-related service life necessary | Yes | | | |
| proportion of dangerous failures | 100 | | | |
| | 40.9/ | | | |
| with low demand rate according to SN 31920 | 40 % | | | |
| with high demand rate according to SN 31920 | 50 % | | | |
| B10 value with high demand rate according to SN 31920 | 5 000 | | | |
| failure rate [FIT] with low demand rate according to SN 31920 | 50 FIT | | | |
| ISO 13849 | | | | |
| device type according to ISO 13849-1 | 3 | | | |
| overdimensioning according to ISO 13849-2 necessary | Yes | | | |
| IEC 61508 | | | | |
| | | | | |
| safety device type according to IEC 61508-2 | Туре А | | | |
| T1 value for proof test interval or service life according to IEC 61508 | 10 a | | | |
| Electrical Safety | | | | |
| | | | | |

| protection class IP on | the front according to | IEC 60529 IP20 | | | | |
|---|--|--|--------------------------------|----------------------------------|---------|--|
| touch protection on the | | | r-safe, for vertical contact f | rom the front | | |
| Display | | | | | | |
| display version for switch | ning status | Hand | lle | | | |
| Approvals Certificates | | | | | | |
| General Product Appro | oval | | | | | |
| | | | | | | |
| | UK CA | CE EG-Konf. | <u>Confirmation</u> | | KC | |
| General Product Approval | Test Certificates | | Marine / Shipping | | | |
| EHC | Type Test Certific- ates/Test Report | Special Test Certific- ate | ABS | BUREAU VERITAS | | |
| Marine / Shipping | | | other | | | |
| | | | | | | |
| Lloyd's Register uis | PRS | RINA | <u>Miscellaneous</u> | <u>Confirmation</u> | UDE VDE | |
| Railway | | Environment | | | | |
| <u>Special Test Certific-</u> <u>ate</u> | <u>Confirmation</u> | EPD | Siemens EcoTech | Environmental Con- firmations | | |
| 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=3RV2042-4JB10 | | | | | | |
| Cax online generator | | | | | | |
| http://support.automation | | Korder/default.aspx?lang= | en&mlfb=3RV2042-4JB10 | | | |
| Service&Support (Man https://support.industry.s | | | | | | |
| Image database (produ http://www.automation.si Characteristic: Trippin https://support.industry.si | ict images, 2D dimensi iemens.com/bilddb/cax g characteristics, I²t, Lo iemens.com/cs/ww/en/p | on drawings, 3D models de.aspx?mlfb=3RV2042-4 et-through current | | , EPLAN macros,) | | |

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2042-4JB10&objecttype=14&gridview=view1





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