## SIEMENS

## Data sheet

## 3RV2321-4DC10



Circuit breaker size S0 for starter combination Rated current 25 A N-release 325 A Screw terminal Standard switching capacity

| product brand name   | SIRIUS                   |
|--|--------------------------|
| product designation  | Circuit breaker          |
| design of the product  | For starter combinations |
| product type designation   | 3RV2                     |
| General technical data   |                          |
| size of the circuit-breaker  | SO                       |
| size of contactor can be combined company-specific                                     | S00, S0                  |
| product extension auxiliary switch   | Yes                      |
| power loss [W] for rated value of the current  |                          |
| <ul> <li>at AC in hot operating state</li> </ul>                                       | 10.5 W                   |
| <ul> <li>at AC in hot operating state per pole</li> </ul>                              | 3.5 W                    |
| insulation voltage with degree of pollution 3 at AC rated value                        | 690 V                    |
| surge voltage resistance rated value   | 6 kV                     |
| maximum permissible voltage for safe isolation in<br>networks with grounded star point |                          |
| <ul> <li>between main and auxiliary circuit</li> </ul>                                 | 400 V                    |
| <ul> <li>between main and auxiliary circuit</li> </ul>                                 | 400 V                    |
| shock resistance acc. to IEC 60068-2-27  | 25g / 11 ms              |
| mechanical service life (switching cycles)   |                          |
| <ul> <li>of the main contacts typical</li> </ul>                                       | 100 000                  |
| <ul> <li>of auxiliary contacts typical</li> </ul>                                      | 100 000                  |
| electrical endurance (switching cycles) typical  | 100 000                  |
| reference code acc. to IEC 81346-2   | Q                        |
| Substance Prohibitance (Date)  | 01.10.2009 00:00:00      |
| Ambient conditions   |                          |
| installation altitude at height above sea level maximum                                | 2 000 m                  |
| <ul> <li>ambient temperature during operation</li> </ul>                               | -20 +60 °C               |
| ambient temperature during storage   | -50 +80 °C               |
| <ul> <li>ambient temperature during transport</li> </ul>                               | -50 +80 °C               |
| relative humidity during operation   | 10 95 %                  |
| Main circuit   |                          |
| number of poles for main current circuit   | 3                        |
| <ul> <li>operating voltage rated value</li> </ul>                                      | -<br>690 V               |
| <ul> <li>operating voltage at AC-3 rated value maximum</li> </ul>                      | 690 V                    |
| operating frequency rated value  | 50 60 Hz                 |
| operational current rated value  | 25 A                     |
| -  |                          |

| operational current at AC-3 at 400 V rated value  | 25 A   |  |  |  |
|---|--|--|--|--|
| operating power at AC-3   |  |  |  |  |
| at 230 V rated value  | 5 500 W  |  |  |  |
| at 400 V rated value  |  |  |  |  |
|   | 11 000 W   |  |  |  |
| at 500 V rated value  | 15 000 W   |  |  |  |
| at 690 V rated value  | 22 000 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  |  |  |  |
| number of CO contacts for auxiliary contacts  | 0  |  |  |  |
| Protective and monitoring functions   |  |  |  |  |
| product function  |  |  |  |  |
| <ul> <li>ground fault detection</li> </ul>  | No   |  |  |  |
| phase failure detection   | No   |  |  |  |
| breaking capacity operating short-circuit current (Ics)<br>at AC                        |  |  |  |  |
| • at 240 V rated value  | 100 kA   |  |  |  |
| • at 400 V rated value  | 25 kA  |  |  |  |
| • at 500 V rated value  | 5 kA   |  |  |  |
| • at 690 V rated value  | 2 kA   |  |  |  |
| breaking capacity maximum short-circuit current (lcu)                                   |  |  |  |  |
| <ul> <li>at AC at 240 V rated value</li> </ul>  | 100 kA   |  |  |  |
| <ul> <li>at AC at 400 V rated value</li> </ul>  | 55 kA  |  |  |  |
| <ul> <li>at AC at 500 V rated value</li> </ul>  | 10 kA  |  |  |  |
| <ul> <li>at AC at 690 V rated value</li> </ul>  | 4 kA   |  |  |  |
| response value current of instantaneous short-circuit trip                              | 325 A  |  |  |  |
| unit  |  |  |  |  |
| UL/CSA ratings  |  |  |  |  |
| full-load current (FLA) for 3-phase AC motor  |  |  |  |  |
| <ul> <li>at 480 V rated value</li> </ul>  | 25 A   |  |  |  |
| at 600 V rated value  | 25 A   |  |  |  |
| yielded mechanical performance [hp]   |  |  |  |  |
| <ul> <li>for single-phase AC motor</li> </ul>   |  |  |  |  |
| — at 110/120 V rated value  | 2 hp   |  |  |  |
| — at 230 V rated value  | 3 hp   |  |  |  |
| <ul> <li>for 3-phase AC motor</li> </ul>  |  |  |  |  |
| — at 200/208 V rated value  | 5 hp   |  |  |  |
| — at 220/230 V rated value  | 7.5 hp   |  |  |  |
| — at 460/480 V rated value  | 15 hp  |  |  |  |
| Short-circuit protection  |  |  |  |  |
| 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  | gL/gG 63 A   |  |  |  |
| ● at 500 V  | gL/gG 50 A   |  |  |  |
| • at 690 V  | gL/gG 50 A   |  |  |  |
| Installation/ mounting/ dimensions  |  |  |  |  |
| mounting position   | any  |  |  |  |
| fastening method  | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 |  |  |  |
| height  | 97 mm  |  |  |  |
| width   | 45 mm  |  |  |  |
| depth   | 97 mm  |  |  |  |
| required spacing  |  |  |  |  |
| <ul> <li>for grounded parts at 400 V</li> </ul>   |  |  |  |  |
| — downwards   | 30 mm  |  |  |  |
|   |  |  |  |  |
| — upwards   | 30 mm  |  |  |  |

| — at the side   | 9 mm   |  |  |  |
|---|--|--|--|--|
| • for live parts at 400 V   |  |  |  |  |
| — downwards   | 30 mm  |  |  |  |
| — upwards   | 30 mm  |  |  |  |
| — at the side   | 9 mm   |  |  |  |
| <ul> <li>for grounded parts at 500 V</li> </ul>                                   |  |  |  |  |
| — downwards   | 30 mm  |  |  |  |
| — upwards   | 30 mm  |  |  |  |
| — at the side   | 9 mm   |  |  |  |
| <ul> <li>for live parts at 500 V</li> </ul>                                       |  |  |  |  |
| — downwards   | 30 mm  |  |  |  |
| — upwards   | 30 mm  |  |  |  |
| — at the side   | 9 mm   |  |  |  |
| <ul> <li>for grounded parts at 690 V</li> </ul>                                   |  |  |  |  |
| — downwards   | 50 mm  |  |  |  |
| — upwards   | 50 mm  |  |  |  |
| — backwards   | 0 mm   |  |  |  |
| — at the side   | 30 mm  |  |  |  |
| — forwards  | 0 mm   |  |  |  |
| • for live parts at 690 V   |  |  |  |  |
| — downwards   | 50 mm  |  |  |  |
| — upwards   | 50 mm  |  |  |  |
| — upwards<br>— backwards  | 0 mm   |  |  |  |
| — at the side   | 30 mm  |  |  |  |
| — forwards  | 0 mm   |  |  |  |
| Connections/ Terminals  | 011111   |  |  |  |
|   | AL   |  |  |  |
| product function removable terminal for auxiliary and<br>control circuit          | No   |  |  |  |
| type of electrical connection   |  |  |  |  |
| for main current circuit  | screw-type terminals                             |  |  |  |
| arrangement of electrical connectors for main current<br>circuit                  | Top and bottom                                   |  |  |  |
| type of connectable conductor cross-sections                                      |  |  |  |  |
| <ul> <li>for main contacts</li> </ul>   |  |  |  |  |
| — solid or stranded   | 2x (1 2,5 mm²), 2x (2,5 10 mm²)                  |  |  |  |
| <ul> <li>finely stranded with core end processing</li> </ul>                      | 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²        |  |  |  |
| at AWG cables for main contacts   | 2x (16 12), 2x (14 8)                            |  |  |  |
| <ul> <li>tightening torque for main contacts with screw-type terminals</li> </ul> | 2 2.5 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   | M4   |  |  |  |
|   | דויו   |  |  |  |
| Safety related data   |  |  |  |  |
| B10 value   |  |  |  |  |
| with high demand rate acc. to SN 31920  | 5 000  |  |  |  |
| proportion of dangerous failures  |  |  |  |  |
| <ul> <li>with low demand rate acc. to SN 31920</li> </ul>                         | 50 %   |  |  |  |
| <ul> <li>with high demand rate acc. to SN 31920</li> </ul>                        | 50 %   |  |  |  |
| failure rate [FIT]  |  |  |  |  |
| <ul> <li>with low demand rate acc. to SN 31920</li> </ul>                         | 50 FIT   |  |  |  |
| T1 value for proof test interval or service life acc. to IEC 61508                | 10 у   |  |  |  |
| protection class IP on the front acc. to IEC 60529                                | IP20   |  |  |  |
| touch protection on the front acc. to IEC 60529                                   | finger-safe, for vertical contact from the front |  |  |  |
| display version for switching status  | Handle   |  |  |  |
| Certificates/ approvals   |  |  |  |  |
| General Product Approval  | Declaration of                                   |  |  |  |
| oundrai i roudet Approval   | Decidiation of                                   |  |  |  |

|   |   |   |                       |                     | Conformity                |  |
|---|---|---|-----------------------|---------------------|---------------------------|--|
| (SA)  | CCC                                       |   | <u>KC</u>             | EHC                 | <u>Miscellaneous</u>      |  |
| Declaration of<br>Conformity  | Test Certificates                         |   | Marine / Shipping     |                     |                           |  |
| CE<br>EG-Konf.  | <u>Special Test</u><br><u>Certificate</u> | <u>Type Test</u><br><u>Certificates/Test</u><br><u>Report</u> | ABS                   | BUREAU<br>VERITAS   | Lloyds<br>Register<br>uis |  |
| Marine / Shipping   |   |   |                       | other               |                           |  |
| PRS   | RINA                                      | RMRS  | CINV-GL<br>ENVILCOMON | <u>Confirmation</u> | VDE                       |  |
| Railway   |   |   |                       |                     |                           |  |
| Vibration and Shock   | <u>Confirmation</u>                       |   |                       |                     |                           |  |
| Further information   |   |   |                       |                     |                           |  |
| Information- and Downloadcenter (Catalogs, Brochures,)<br>https://www.siemens.com/ic10<br>Industry Mall (Online ordering system)<br>https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2321-4DC10 |   |   |                       |                     |                           |  |

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2321-4DC10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2321-4DC10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2321-4DC10

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

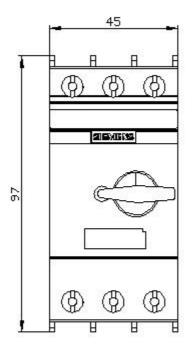
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2321-4DC10&lang=en

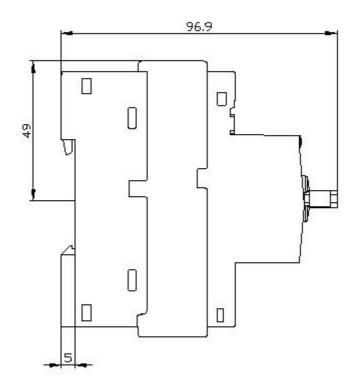
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

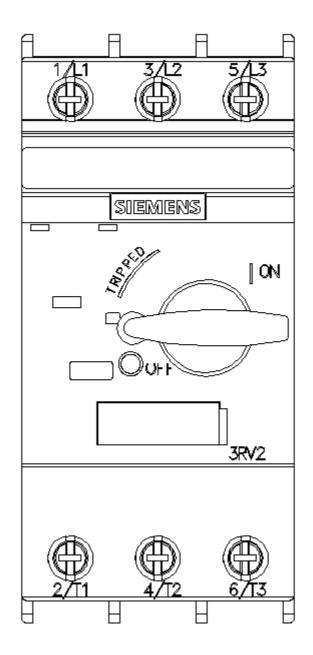
https://support.industry.siemens.com/cs/ww/en/ps/3RV2321-4DC10/char

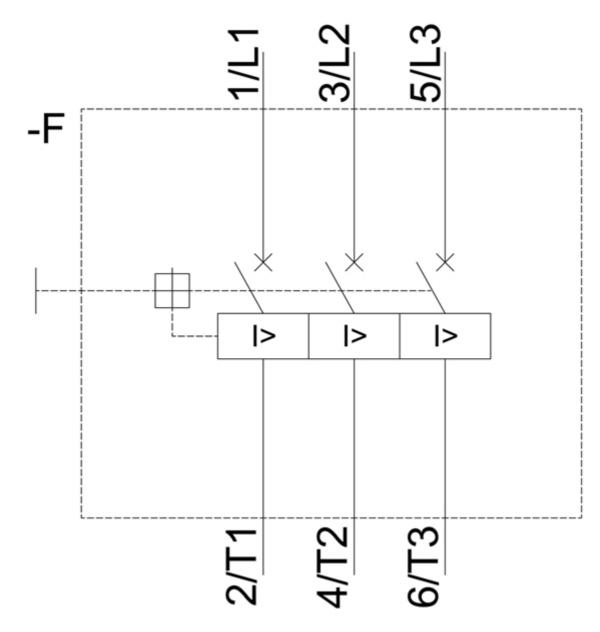
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2321-4DC10&objecttype=14&gridview=view1









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