# **SIEMENS**

Data sheet 3RV2011-1AA15



Circuit breaker size S00 for motor protection, CLASS 10 A-release 1.1...1.6 A N-release 21 A screw terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC

| product brand name  | SIRIUS               |
|---|----------------------|
| product designation   | Circuit breaker      |
| design of the product   | For motor protection |
| product type designation  | 3RV2                 |
| General technical data  |                      |
| size of the circuit-breaker   | S00                  |
| 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>  | 7.25 W               |
| <ul> <li>at AC in hot operating state per pole</li> </ul>                               | 2.4 W                |
| insulation voltage with degree of pollution 3 at AC rated value                         | 690 V                |
| surge voltage resistance rated value  | 6 kV                 |
| shock resistance according to IEC 60068-2-27  | 25g / 11 ms          |
| mechanical service life (operating cycles)  |                      |
| <ul> <li>of the main contacts typical</li> </ul>  | 100 000              |
| <ul> <li>of auxiliary contacts typical</li> </ul>                                       | 100 000              |
| electrical endurance (operating cycles) typical   | 100 000              |
| type of protection according to ATEX directive 2014/34/EU                               | Ex II (2) GD         |
| certificate of suitability according to ATEX directive 2014/34/EU                       | DMT 02 ATEX F 001    |
| reference code according to IEC 81346-2   | Q                    |
| Substance Prohibitance (Date)   | 10/01/2009           |
| Ambient conditions  |                      |
| installation altitude at height above sea level maximum                                 | 2 000 m              |
| ambient temperature   |                      |
| <ul> <li>during operation</li> </ul>  | -20 +60 °C           |
| during storage  | -50 +80 °C           |
| during transport  | -50 +80 °C           |
| relative humidity during operation  | 10 95 %              |
| Main circuit  |                      |
| number of poles for main current circuit  | 3                    |
| adjustable current response value current of the current-<br>dependent overload release | 1.1 1.6 A            |
| operating voltage   |                      |
| • rated value   | 20 690 V             |
| <ul> <li>at AC-3 rated value maximum</li> </ul>   | 690 V                |
| at AC-3e rated value maximum  | 690 V                |
| operating frequency rated value   | 50 60 Hz             |
| operational current rated value   | 1.6 A                |
| operational current   |                      |

| • at AC-3 at 400 V rated value   | 1.6 A   |
|--|---|
| at AC-3e at 400 V rated value  | 1.6 A   |
| operating power  |   |
| • at AC-3  |   |
| — at 230 V rated value   | 0.3 kW  |
| — at 400 V rated value   | 0.55 kW   |
| — at 500 V rated value   | 0.8 kW  |
| — at 690 V rated value   | 1.1 kW  |
| • at AC-3e   |   |
| — at 230 V rated value   | 0.3 kW  |
| — at 400 V rated value   | 0.55 kW   |
| — at 500 V rated value   | 0.8 kW  |
| — at 690 V rated value   | 1.1 kW  |
| operating frequency  |   |
| • at AC-3 maximum  | 15 1/h  |
| at AC-3e maximum   | 15 1/h  |
| Auxiliary circuit  |   |
| design of the auxiliary switch   | transverse  |
| number of NC contacts for auxiliary contacts   | 1   |
| number of NO contacts for auxiliary contacts   | 1   |
| number of CO contacts for auxiliary contacts   | 0   |
| operational current of auxiliary contacts at AC-15   |   |
| • at 24 V  | 2 A   |
| • at 120 V   | 0.5 A   |
| • at 125 V   | 0.5 A   |
| • at 230 V   | 0.5 A   |
|  | 0.5 A   |
| operational current of auxiliary contacts at DC-13   | 1.8   |
| • at 24 V  |   |
| • at 60 V  | 0.15 A  |
| Protective and monitoring functions  |   |
| product function   |   |
| ·  |   |
| ground fault detection   | No  |
| ground fault detection     phase failure detection   | Yes   |
| ground fault detection     phase failure detection  trip class   | Yes<br>CLASS 10   |
| ground fault detection     phase failure detection  trip class design of the overload release  | Yes   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)  | Yes CLASS 10 thermal  |
| ground fault detection     phase failure detection  trip class design of the overload release maximum short-circuit current breaking capacity (Icu)     at AC at 240 V rated value   | Yes CLASS 10 thermal  |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)  | Yes CLASS 10 thermal  100 kA 100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value      at AC at 400 V rated value      at AC at 500 V rated value  | Yes CLASS 10 thermal  100 kA 100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value      at AC at 400 V rated value      at AC at 500 V rated value      at AC at 690 V rated value  | Yes CLASS 10 thermal  100 kA 100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value      at AC at 400 V rated value      at AC at 500 V rated value  | Yes CLASS 10 thermal  100 kA 100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value      at AC at 400 V rated value      at AC at 500 V rated value      at AC at 690 V rated value  | Yes CLASS 10 thermal  100 kA 100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value      at AC at 400 V rated value      at AC at 500 V rated value      at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC   | Yes CLASS 10 thermal  100 kA 100 kA 100 kA 100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value     at AC at 400 V rated value     at AC at 500 V rated value      at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC     at 240 V rated value  | Yes CLASS 10 thermal  100 kA 100 kA 100 kA 100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value     at AC at 400 V rated value     at AC at 500 V rated value     at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC     at 240 V rated value     at 400 V rated value  at 400 V rated value  | Yes CLASS 10 thermal  100 kA 100 kA 100 kA 100 kA   |
| ground fault detection     phase failure detection     trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)         • at AC at 240 V rated value         • at AC at 500 V rated value         • at AC at 500 V rated value         • at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC         • at 240 V rated value         • at 400 V rated value         • at 500 V rated value         • at 500 V rated value         • at 500 V rated value   | Yes CLASS 10 thermal  100 kA 100 kA 100 kA 100 kA 100 kA 100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value     at AC at 400 V rated value     at AC at 500 V rated value     at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC     at 240 V rated value     at 400 V rated value     at 500 V rated value     at 500 V rated value     at 690 V rated value     at 690 V rated value  | Yes CLASS 10 thermal  100 kA  |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value     at AC at 400 V rated value     at AC at 500 V rated value      at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC      at 240 V rated value      at 400 V rated value      at 400 V rated value      at 500 V rated value      at 690 V rated value      at 690 V rated value  response value current of instantaneous short-circuit trip unit  | Yes CLASS 10 thermal  100 kA  |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value     at AC at 400 V rated value     at AC at 500 V rated value     at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC     at 240 V rated value     at 400 V rated value     at 400 V rated value     at 500 V rated value     at 690 V rated value     at 690 V rated value response value current of instantaneous short-circuit trip unit  UL/CSA ratings  | Yes CLASS 10 thermal  100 kA  |
| ground fault detection     phase failure detection     trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value     at AC at 500 V rated value     at AC at 500 V rated value     at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC     at 240 V rated value     at 400 V rated value     at 500 V rated value     at 690 V rated value     at 690 V rated value     at 690 V rated value response value current of instantaneous short-circuit trip unit  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor   | Yes CLASS 10 thermal  100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value     at AC at 500 V rated value     at AC at 500 V rated value     at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC     at 240 V rated value     at 400 V rated value     at 500 V rated value     at 690 V rated value     at 690 V rated value  response value current of instantaneous short-circuit trip unit  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor     at 480 V rated value   | Yes CLASS 10 thermal  100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)         • at AC at 240 V rated value         • at AC at 500 V rated value         • at AC at 690 V rated value         • at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC         • at 240 V rated value         • at 400 V rated value         • at 500 V rated value         • at 690 V rated value         • at 690 V rated value          • at 690 V rated value          • at 690 V rated value  response value current of instantaneous short-circuit trip unit  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor         • at 480 V rated value         • at 600 V rated value   | Yes CLASS 10 thermal  100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value     at AC at 500 V rated value     at AC at 500 V rated value      at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC      at 240 V rated value      at 400 V rated value      at 500 V rated value      at 690 V rated value      at 690 V rated value  response value current of instantaneous short-circuit trip unit  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor      at 480 V rated value      at 600 V rated value  | Yes CLASS 10 thermal  100 kA   |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value     at AC at 500 V rated value     at AC at 690 V rated value      at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC     at 240 V rated value      at 400 V rated value     at 500 V rated value      at 690 V rated value      at 690 V rated value      at 690 V rated value  response value current of instantaneous short-circuit trip unit  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor      at 480 V rated value      at 600 V rated value      int 600 V rated value  yielded mechanical performance [hp]  for single-phase AC motor   | Yes CLASS 10 thermal  100 kA  |
| ground fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value     at AC at 500 V rated value     at AC at 690 V rated value      at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC      at 240 V rated value      at 400 V rated value      at 500 V rated value      at 690 V rated value  response value current of instantaneous short-circuit trip unit  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor      at 480 V rated value      at 600 V rated value      if on single-phase AC motor      — at 230 V rated value   | Yes CLASS 10 thermal  100 kA  |
| pround fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)      at AC at 240 V rated value     at AC at 500 V rated value     at AC at 690 V rated value      at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC     at 240 V rated value      at 500 V rated value      at 690 V rated value  response value current of instantaneous short-circuit trip unit  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor      at 480 V rated value      at 600 V rated value      int 600 V rated value      int 600 V rated value      int 600 V rated value  yielded mechanical performance [hp]      for single-phase AC motor  — at 230 V rated value  for 3-phase AC motor                                    | Yes CLASS 10 thermal  100 kA 100 hA 101 hp 1 hp   |
| • ground fault detection  • phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)  • at AC at 240 V rated value  • at AC at 500 V rated value  • at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC  • at 240 V rated value  • at 400 V rated value  • at 690 V rated value  • at 690 V rated value  response value current of instantaneous short-circuit trip unit  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  vielded mechanical performance [hp]  • for single-phase AC motor  — at 230 V rated value  • for 3-phase AC motor  — at 460/480 V rated value  — at 575/600 V rated value   | Yes CLASS 10 thermal  100 kA 100 hA |
|  | Yes CLASS 10 thermal  100 kA 100 hA 101 hp 1 hp   |
| pround fault detection     phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)     at AC at 240 V rated value     at AC at 400 V rated value     at AC at 500 V rated value     at AC at 690 V rated value     at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC     at 240 V rated value     at 400 V rated value     at 690 V rated value     at 690 V rated value  response value current of instantaneous short-circuit trip unit  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor     at 480 V rated value     at 600 V rated value  yielded mechanical performance [hp]     for single-phase AC motor     — at 230 V rated value     for 3-phase AC motor     — at 460/480 V rated value     at 575/600 V rated value contact rating of auxiliary contacts according to UL  Short-circuit protection | Yes CLASS 10 thermal  100 kA 100 hA 100 hA 100 hA 100 hA 100 hA 21 A  1.6 A 1.6 A 0.1 hp 1 hp 0.8 hp C300 / R300        |
|  | Yes CLASS 10 thermal  100 kA 100 hA |

| design of the fuse link   |  |
|---|--|
| for short-circuit protection of the auxiliary switch required                           | Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current lk < 400 A) |
| design of the fuse link for IT network for short-circuit protection of the main circuit |  |
| ● at 500 V  | gL/gG 20 A   |
| ● at 690 V  | gL/gG 16 A   |
| nstallation/ mounting/ dimensions   |  |
| mounting position   | any  |
| fastening method  | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715             |
| height  | 97 mm  |
| width   | 45 mm  |
| depth   | 97 mm  |
| required spacing  |  |
| <ul> <li>with side-by-side mounting at the side</li> </ul>                              | 0 mm   |
| <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   | 00   |
| — downwards   | 30 mm  |
| — upwards   | 30 mm  |
| — at the side   | 9 mm   |
| • for grounded parts at 500 V   | 00   |
| — downwards   | 30 mm  |
| — upwards   | 30 mm  |
| — at the side   | 9 mm   |
| for live parts at 500 V          — downwards  | 30 mm  |
| — upwards   | 30 mm  |
| — at the side   | 9 mm   |
| for grounded parts at 690 V   | 5 11111  |
| — downwards   | 50 mm  |
| — upwards   | 50 mm  |
| — backwards   | 0 mm   |
| — at the side   | 30 mm  |
| — forwards  | 0 mm   |
| • for live parts at 690 V   | <b>V</b>   |
| — downwards   | 50 mm  |
| — upwards   | 50 mm  |
| — backwards   | 0 mm   |
| — at the side   | 30 mm  |
| — forwards  | 0 mm   |
| Connections/ Terminals  |  |
| type of electrical connection   |  |
| • for main current circuit  | screw-type terminals   |
| for auxiliary and control circuit   | screw-type terminals   |
| arrangement of electrical connectors for main current circuit                           | Top and bottom   |
| type of connectable conductor cross-sections  |  |
| • for main contacts   |  |
| — solid or stranded   | 2x (0,75 2,5 mm²), 2x 4 mm²  |
| <ul> <li>finely stranded with core end processing</li> </ul>                            | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  |
| for AWG cables for main contacts  | 2x (18 14), 2x 12  |
| type of connectable conductor cross-sections  |  |
| for auxiliary contacts  |  |
| — solid or stranded   | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  |
| <ul> <li>finely stranded with core end processing</li> </ul>                            | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  |
| for AWG cables for auxiliary contacts   | 2x (20 16), 2x (18 14)   |
| tightening torque   |  |
| <ul> <li>for main contacts with screw-type terminals</li> </ul>                         | 0.8 1.2 N·m  |

| <ul> <li>for auxiliary contacts with screw-type terminals</li> </ul>    | 0.8 1.2 N·m                                      |
|---|--|
| design of screwdriver shaft   | Diameter 5 to 6 mm                               |
| size of the screwdriver tip   | Pozidriv size 2                                  |
| design of the thread of the connection screw                            |  |
| • for main contacts   | M3   |
| <ul> <li>of the auxiliary and control contacts</li> </ul>               | M3   |
| Safety related data   |  |
| B10 value   |  |
| <ul> <li>with high demand rate according to SN 31920</li> </ul>         | 5 000  |
| proportion of dangerous failures  |  |
| <ul> <li>with low demand rate according to SN 31920</li> </ul>          | 50 %   |
| <ul> <li>with high demand rate according to SN 31920</li> </ul>         | 50 %   |
| failure rate [FIT]  |  |
| <ul> <li>with low demand rate according to SN 31920</li> </ul>          | 50 FIT   |
| T1 value for proof test interval or service life according to IEC 61508 | 10 a   |
| protection class IP on the front according to IEC 60529                 | IP20   |
| touch protection on the front according to IEC 60529                    | finger-safe, for vertical contact from the front |
| display version for switching status                                    | Handle   |
| Certificates/ approvals   |  |

#### **General Product Approval**

For use in hazardous locations

Confirmation





<u>KC</u>





For use in hazardous locations

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping







Type Test Certificates/Test Report

**Special Test Certific-**<u>ate</u>



Marine / Shipping











Confirmation

other

other

Railway



Confirmation

Vibration and Shock

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

#### Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

### 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=3RV2011-1AA15

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-1AA15

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

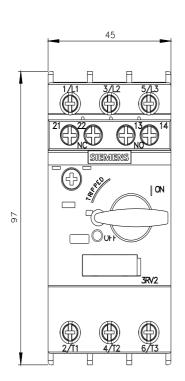
https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1AA15

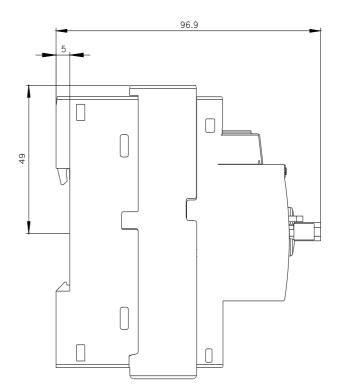
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2011-1AA15&lang=en

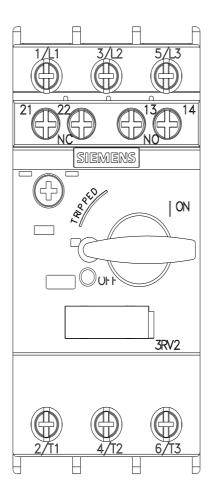
Characteristic: Tripping characteristics, I2t, Let-through current

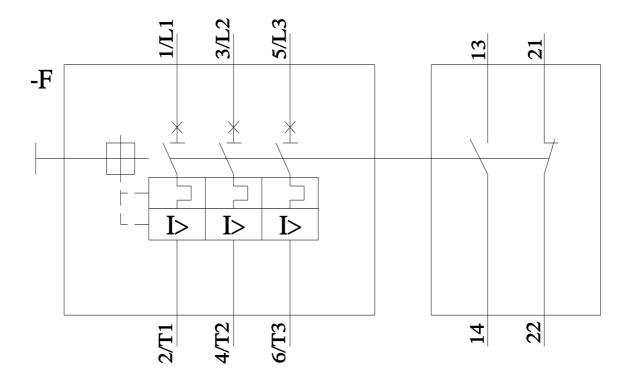
https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1AA15/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2011-1AA15&objecttype=14&gridview=view1









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**Authorized Distributor** 

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