



CIRCUIT-BREAKER SZ S0, FOR TRANSFORMER PROTECTION, WITH APPROBATION CIRCUIT-BREAKER UL 489. CSA C22.2 NO.5-02. A-RELEASE 20 A, N-RELEASE 325 A, SCREW CONNECTION, STANDARD SW. CAPACITY

|   |                      |
|---|----------------------|
| product brand name  | SIRIUS               |
| Product designation   | 3RV2 circuit breaker |
| <b>General technical data:</b>  |                      |
| Active power loss total typical   | 8 W                  |
| Insulation voltage  | 690 V                |
| • with degree of pollution 3 Rated value                                    |                      |
| Surge voltage resistance Rated value  | 6 kV                 |
| Mechanical service life (switching cycles)                                  |                      |
| • of the main contacts typical  | 100 000              |
| • of the auxiliary contacts typical   | 100 000              |
| Electrical endurance (switching cycles)                                     |                      |
| • typical   | 100 000              |
| Temperature compensation  | -20 ... +60 °C       |
| Protection class IP   |                      |
| • on the front  | IP20                 |
| • of the terminal   | IP20                 |
| Equipment marking   |                      |
| • acc. to DIN EN 81346-2  | Q                    |
| <b>Main circuit:</b>  |                      |
| Number of poles for main current circuit                                    | 3                    |
| Adjustable response value current of the current-dependent overload release | 14 ... 20 A          |
| Operating voltage   |                      |
| • Rated value   | 690 V                |
| • at AC-3 Rated value maximum   | 690 V                |

|   |              |
|---|--------------|
| <b>Operating frequency Rated value</b>                              | 50 ... 60 Hz |
| <b>Operating frequency</b>  |              |
| <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul> | 15 1/h       |

#### Auxiliary circuit:

|  |     |
|--|-----|
| <b>Number of NC contacts</b>   |     |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul> | 0   |
| <b>Number of NO contacts</b>   |     |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul> | 0   |
| <b>Number of CO contacts</b>   |     |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul> | 0   |
| <b>Product expansion Auxiliary switch</b>                                  | Yes |

#### Protective and monitoring functions:

|  |  |
|--|--|
| <b>Design of the overload circuit breaker</b>  | thermal                                      |
| <b>Operational short-circuit current breaking capacity (Ics) with AC</b>   |  |
| <ul style="list-style-type: none"> <li>• at 240 V Rated value</li> <li>• at 400 V Rated value</li> <li>• at 500 V Rated value</li> <li>• at 690 V Rated value</li> </ul>   | 100 kA<br>25 kA<br>5 kA<br>2 kA              |
| <b>Maximum short-circuit current breaking capacity (Icu)</b>   |  |
| <ul style="list-style-type: none"> <li>• with AC at 240 V Rated value</li> <li>• with AC at 400 V Rated value</li> <li>• with AC at 500 V Rated value</li> <li>• with AC at 690 V Rated value</li> <li>• at 480 AC Y/277 V acc. to UL 489 Rated value</li> </ul> | 100 kA<br>55 kA<br>10 kA<br>4 kA<br>50 000 A |
| <b>Breaking capacity short-circuit current (Icn)</b>   |  |
| <ul style="list-style-type: none"> <li>• with 1 current path for DC at 150 V Rated value</li> <li>• with 2 current paths in series for DC at 300 V Rated value</li> <li>• with 3 current paths in series for DC at 450 V Rated value</li> </ul>                  | 10 kA<br>10 kA<br>10 kA                      |
| <b>Response value current of the instantaneous short-circuit release</b>   | 325 A  |

#### Short-circuit:

|  |  |
|--|--|
| <b>Design of the short-circuit trip</b>  | magnetic                               |
| <b>Design of the fuse link for IT network for short-circuit protection of the main circuit</b>       |  |
| <ul style="list-style-type: none"> <li>• at 400 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul> | gL/gG 63 A<br>gL/gG 50 A<br>gL/gG 50 A |

#### Installation/ mounting/ dimensions:

|   |  |
|---|--|
| <b>mounting position</b>  | any  |
| <b>Mounting type</b>  | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 |
| <b>Height</b>   | 144 mm   |
| <b>Width</b>  | 45 mm  |
| <b>Depth</b>  | 97 mm  |
| <b>Required spacing</b>   |  |
| <ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 50 mm</li> <li>— downwards 50 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 50 mm</li> <li>— at the side 30 mm</li> <li>— downwards 50 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 50 mm</li> <li>— downwards 50 mm</li> <li>— at the side 30 mm</li> </ul> </li> </ul> |  |

#### Connections/ Terminals:

|  |                      |
|--|----------------------|
| <b>Product function</b>  |                      |
| <ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>   | No                   |
| <b>Type of electrical connection</b>   |                      |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>   | screw-type terminals |
| <b>Arrangement of electrical connectors for main current circuit</b>   | Top and bottom       |
| <b>Type of connectable conductor cross-section</b>   |                      |
| <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— single or multi-stranded 1 ... 10 mm<sup>2</sup>, max. 2x 10 mm<sup>2</sup></li> <li>— finely stranded with core end processing 1 ... 16 mm<sup>2</sup>, max. 6 + 16 mm<sup>2</sup></li> </ul> </li> <li>• for AWG conductors for main contacts 2x 12</li> </ul> |                      |
| <b>Design of screwdriver shaft</b>   | Diameter 5 to 6 mm   |
| <b>Design of the thread of the connection screw</b>  |                      |
| <ul style="list-style-type: none"> <li>• for main contacts</li> </ul>  | M4                   |

#### Safety related data:

|  |             |
|--|-------------|
| B10 value with high demand rate acc. to SN 31920                   | 50 000      |
| Proportion of dangerous failures                                   |             |
| • with low demand rate acc. to SN 31920                            | 40 %        |
| • with high demand rate acc. to SN 31920                           | 40 %        |
| T1 value for proof test interval or service life acc. to IEC 61508 | 10 y        |
| Protection against electrical shock                                | finger-safe |

#### Mechanical data:

|                             |    |
|-----------------------------|----|
| Size of the circuit-breaker | S0 |
|-----------------------------|----|






#### Ambient conditions:





|   |                |
|---|----------------|
| 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 |
| Relative humidity during operation                      | 10 ... 95 %    |


#### Display:

|                        |        |
|------------------------|--------|
| Display version        |        |
| • for switching status | Handle |

#### Certificates/ approvals:

| General Product Approval  | Declaration of Conformity                | Test Certificates   | Shipping Approval |
|---|--|---|-------------------|
|  CSA  UL  EAC  CE<br>EG-Konf. | <a href="#">Special Test Certificate</a> |  ABS |                   |

| Shipping Approval   | other   |
|---|---|
|  BUREAU VERITAS  GL  Lloyd's Register LRS  RMRS | <a href="#">Confirmation</a><br><a href="#">Environmental Confirmations</a> |

| other  |
|--|
|  VDE<br><a href="#">other</a> |

## Further information

### Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

### Industry Mall (Online ordering system)

<http://www.siemens.com/industrymall>

### Cax online generator

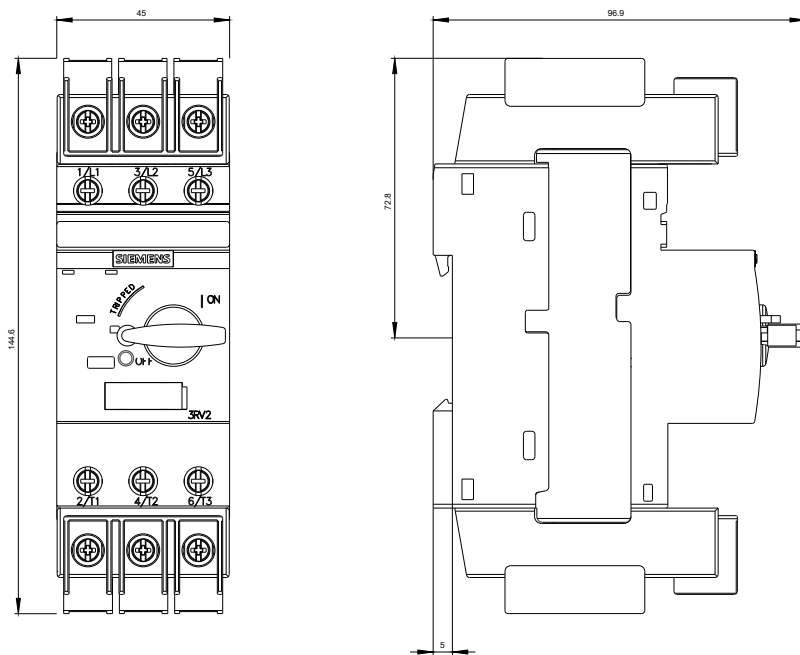
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RV28214BD10>

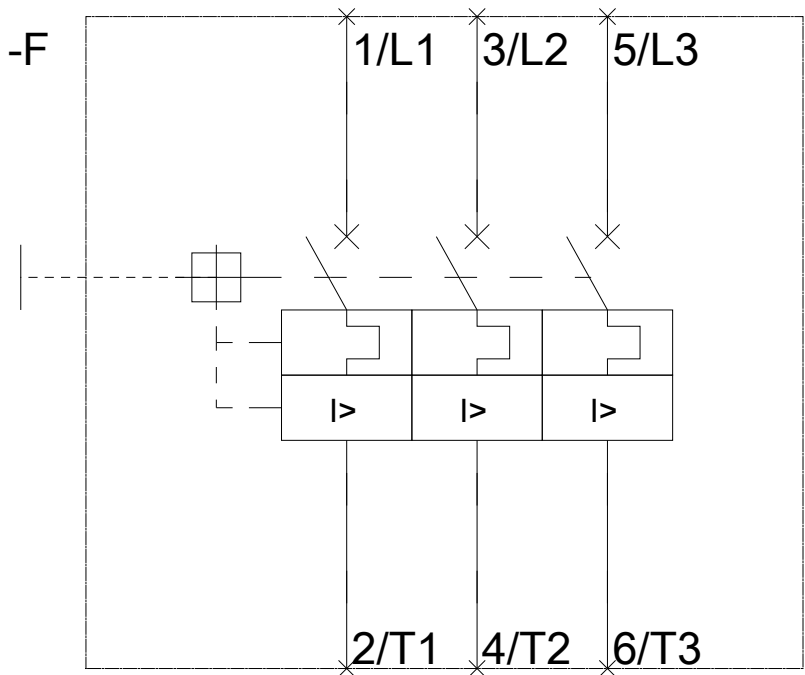
### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RV28214BD10>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RV28214BD10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RV28214BD10&lang=en)





last modified:

14.05.2015