

CIRCUIT-BREAKER SIZE S00, FOR MOTOR PROTECTION,  
CLASS 10, A-REL. 2.8...4A, N-REL. 52A, SCREW TERMINAL,  
STANDARD SWITCHING CAPACITY



|                                                                           |                      |
|---------------------------------------------------------------------------|----------------------|
| Product brand name                                                        | SIRIUS               |
| Product designation                                                       | Circuit breaker      |
| Design of the product                                                     | For motor protection |
| Product type designation                                                  | 3RV1                 |
| General technical data                                                    |                      |
| Size of the circuit-breaker                                               | S00                  |
| Size of contactor can be combined company-specific                        | S00                  |
| Product extension                                                         |                      |
| • Auxiliary switch                                                        | Yes                  |
| Power loss [W] total typical                                              | 6 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             |
| <b>Mechanical service life (switching cycles)</b> |                  |
| • of the main contacts typical                    | 100 000          |
| • of auxiliary contacts typical                   | 100 000          |
| <b>Electrical endurance (switching cycles)</b>    |                  |
| • typical                                         | 100 000          |
| <b>Type of protection</b>                         | Increased safety |
| <b>Protection against electrical shock</b>        | finger-safe      |
| Equipment marking acc. to DIN EN 81346-2          | Q                |

#### Ambient conditions

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

#### Main circuit

|                                                                                   |              |
|-----------------------------------------------------------------------------------|--------------|
| <b>Number of poles for main current circuit</b>                                   | 3            |
| <b>Adjustable pick-up value current of the current-dependent overload release</b> | 2.8 ... 4 A  |
| <b>Operating voltage</b>                                                          |              |
| • rated value                                                                     | 690 V        |
| • at AC-3 rated value maximum                                                     | 690 V        |
| <b>Operating frequency rated value</b>                                            | 50 ... 60 Hz |
| <b>Operating current rated value</b>                                              | 4 A          |
| <b>Operating current</b>                                                          |              |
| • at AC-3                                                                         |              |
| — at 400 V rated value                                                            | 4 A          |
| <b>Operating power</b>                                                            |              |
| • at AC-3                                                                         |              |
| — at 230 V rated value                                                            | 750 W        |
| — at 400 V rated value                                                            | 1 500 W      |
| — at 500 V rated value                                                            | 2 200 W      |
| — at 690 V rated value                                                            | 3 000 W      |
| <b>Operating frequency</b>                                                        |              |
| • at AC-3 maximum                                                                 | 15 1/h       |

#### Auxiliary circuit

|                              |  |
|------------------------------|--|
| <b>Number of CO contacts</b> |  |
|------------------------------|--|

- for auxiliary contacts

0

## Protective and monitoring functions

|                                                                        |           |
|------------------------------------------------------------------------|-----------|
| <b>Product function</b>                                                |           |
| • Ground fault detection                                               | No        |
| • Phase failure detection                                              | Yes       |
| <b>Trip class</b>                                                      | CLASS 10  |
| <b>Design of the overload release</b>                                  | thermal   |
| <b>Operational short-circuit current breaking capacity (Ics) at AC</b> |           |
| • at 240 V rated value                                                 | 100 000 A |
| • at 400 V rated value                                                 | 100 000 A |
| • at 500 V rated value                                                 | 3 000 A   |
| • at 690 V rated value                                                 | 2 000 A   |
| <b>Maximum short-circuit current breaking capacity (Icu)</b>           |           |
| • 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                                           | 3 kA      |
| • at AC at 690 V rated value                                           | 2 kA      |
| <b>Breaking capacity short-circuit current (Icn)</b>                   |           |
| • at 1 current path at DC at 150 V rated value                         | 10 kA     |
| • with 2 current paths in series at DC at 300 V rated value            | 10 kA     |
| • with 3 current paths in series at DC at 450 V rated value            | 10 kA     |
| <b>Response value current</b>                                          |           |
| • of instantaneous short-circuit trip unit                             | 52 A      |

## UL/CSA ratings

|                                                         |          |
|---------------------------------------------------------|----------|
| <b>Full-load current (FLA) for three-phase AC motor</b> |          |
| • at 480 V rated value                                  | 4 A      |
| • at 600 V rated value                                  | 4 A      |
| <b>Yielded mechanical performance [hp]</b>              |          |
| • for single-phase AC motor                             |          |
| — at 110/120 V rated value                              | 0.125 hp |
| — at 230 V rated value                                  | 0.33 hp  |
| • for three-phase AC motor                              |          |
| — at 200/208 V rated value                              | 0.75 hp  |
| — at 220/230 V rated value                              | 0.75 hp  |
| — at 460/480 V rated value                              | 2 hp     |
| — at 575/600 V rated value                              | 3 hp     |

## Short-circuit protection

|                                                  |     |
|--------------------------------------------------|-----|
| <b>Product function Short circuit protection</b> | Yes |
|--------------------------------------------------|-----|

|                                                                                                |               |
|------------------------------------------------------------------------------------------------|---------------|
| <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> |               |
| • at 240 V                                                                                     | none required |
| • at 400 V                                                                                     | gL/gG 40 A    |
| • at 500 V                                                                                     | gL/gG 35 A    |
| • at 690 V                                                                                     | gL/gG 35 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 60715 |
| <b>Height</b>                      | 90 mm                                                                                  |
| <b>Width</b>                       | 45 mm                                                                                  |
| <b>Depth</b>                       | 81 mm                                                                                  |

| Connections/Terminals                                                |                                                                                                      |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Product function</b>                                              |                                                                                                      |
| • removable terminal for auxiliary and control circuit               | No                                                                                                   |
| <b>Type of electrical connection</b>                                 |                                                                                                      |
| • for main current circuit                                           | screw-type terminals                                                                                 |
| <b>Arrangement of electrical connectors for main current circuit</b> | Top and bottom                                                                                       |
| <b>Type of connectable conductor cross-sections</b>                  |                                                                                                      |
| • for main contacts                                                  |                                                                                                      |
| — single or multi-stranded                                           | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x (1 ... 4 mm <sup>2</sup> ) |
| — finely stranded with core end processing                           | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                                |
| <b>Type of connectable conductor cross-sections</b>                  |                                                                                                      |
| • for auxiliary contacts                                             |                                                                                                      |
| — single or multi-stranded                                           | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )                                |
| <b>Tightening torque</b>                                             |                                                                                                      |
| • for main contacts with screw-type terminals                        | 0.8 ... 1.2 N·m                                                                                      |
| • for auxiliary contacts with screw-type terminals                   | 0.8 ... 1.2 N·m                                                                                      |
| <b>Size of the screwdriver tip</b>                                   | Pozidriv 2                                                                                           |
| <b>Design of the thread of the connection screw</b>                  |                                                                                                      |
| • for main contacts                                                  | M3                                                                                                   |

| Safety related data                      |       |
|------------------------------------------|-------|
| <b>B10 value</b>                         |       |
| • with high demand rate acc. to SN 31920 | 5 000 |
| <b>Proportion of dangerous failures</b>  |       |
| • with low demand rate acc. to SN 31920  | 50 %  |
| • with high demand rate acc. to SN 31920 | 50 %  |
| <b>Failure rate [FIT]</b>                |       |

- with low demand rate acc. to SN 31920

50 FIT

#### Display version

- for switching status

Rocker switch

#### Certificates/approvals

##### General Product Approval

##### For use in hazardous locations



##### Declaration of Conformity

##### Test Certificates

##### Marine / Shipping



[Special Test Certificate](#)



##### Marine / Shipping

##### other



[Miscellaneous](#)

[Confirmation](#)



#### 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=3RV1011-1EA10>

##### Cax online generator

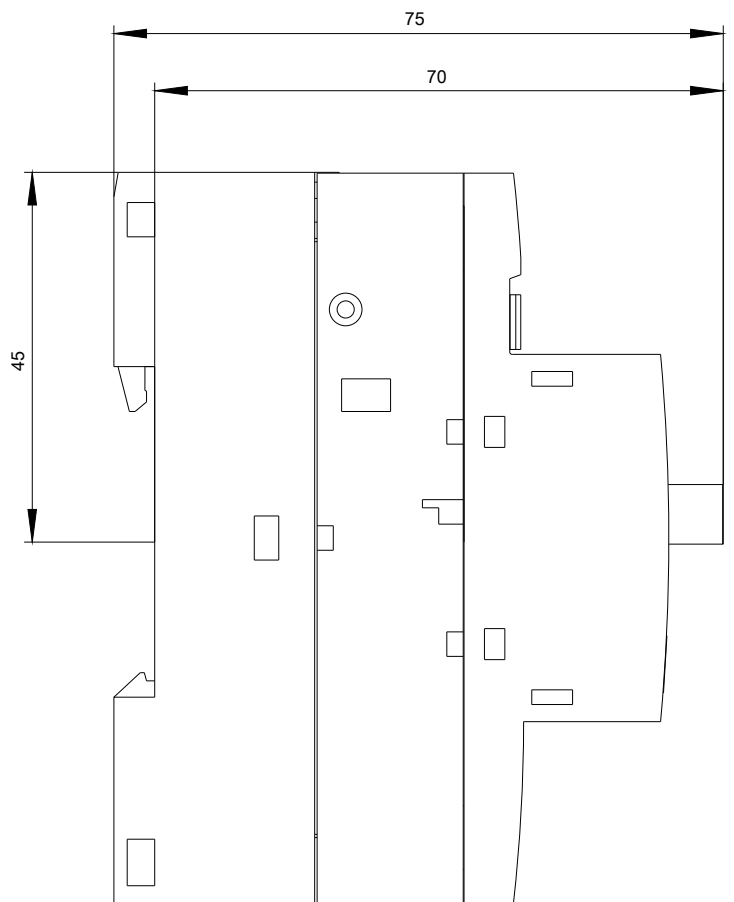
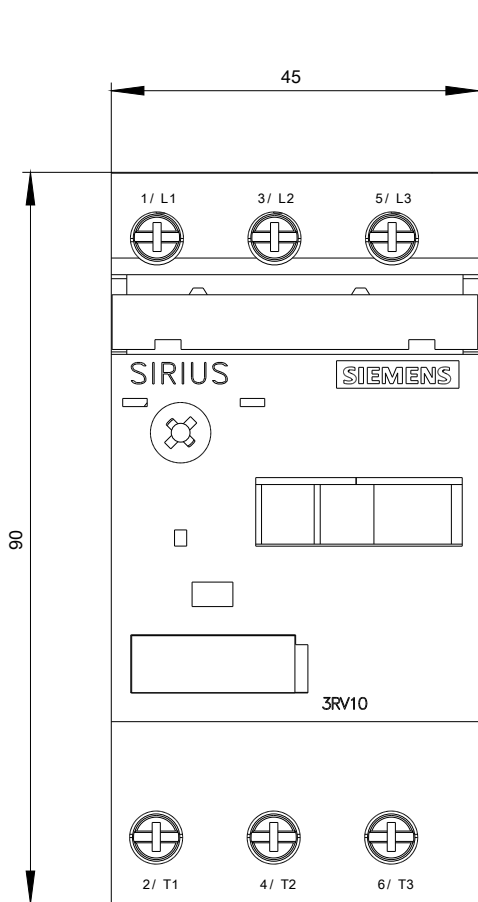
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV1011-1EA10>

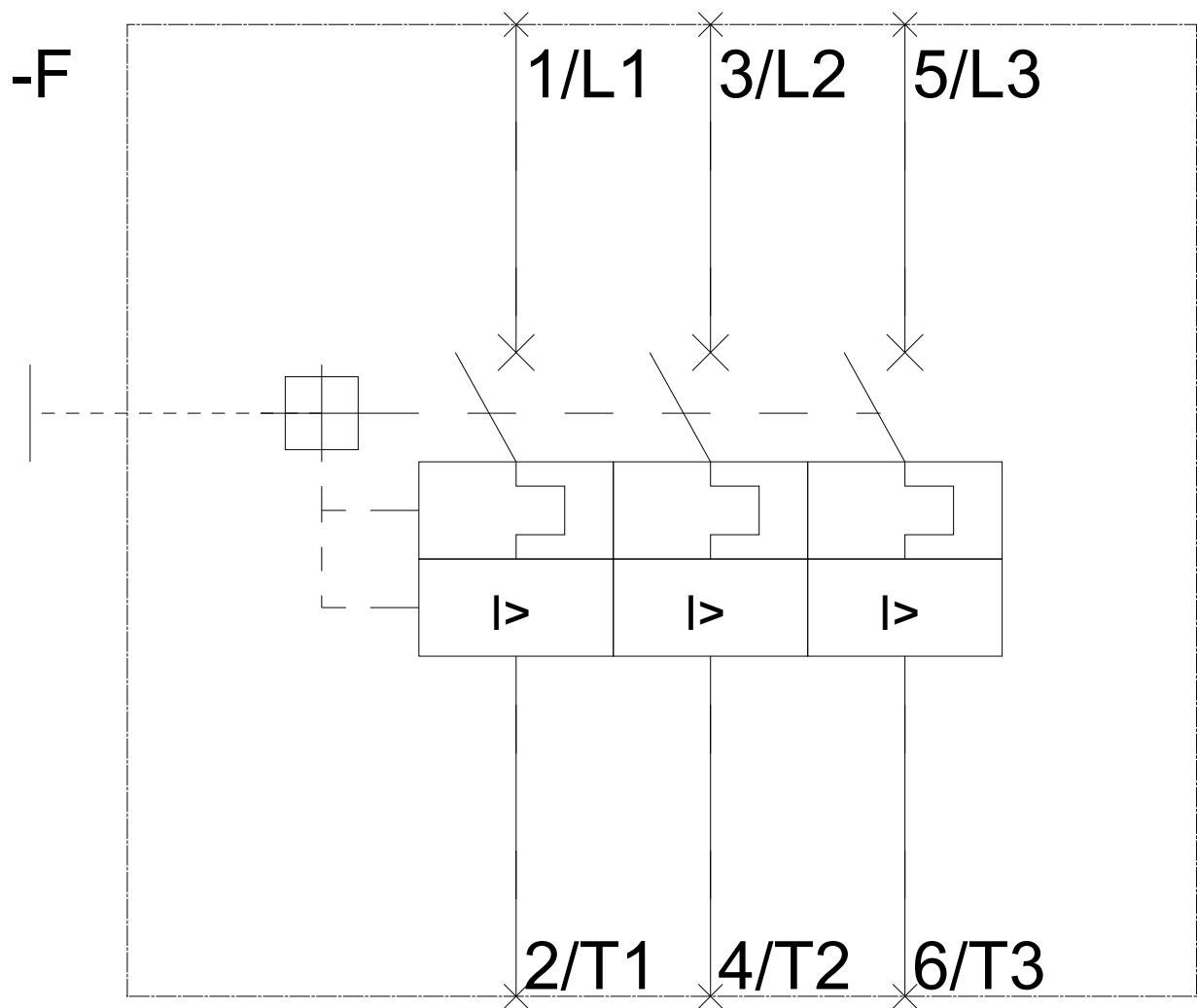
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1EA10>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV1011-1EA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV1011-1EA10&lang=en)





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