## **SIEMENS**

Data sheet 3RV2011-0EA10



Circuit breaker size S00 for motor protection, CLASS 10 A-release 0.28...0.4 A N-release 5.2 A screw terminal Standard switching capacity

| December 2011   December 3      | product brand name                                       | SIRIUS               |
|--|--|----------------------|
| Separal technical data   | product designation                                      | Circuit breaker      |
| size of the circuit-breaker  size of contactor can be combined company-specific product extension auxiliary switch  power loss [W] for rated value of the current  • at AC in hot operating state • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • of auxiliary contacts typical • of auxiliary contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2 Q Ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport temperature compensation relative humidity during operation  Main circuit number of poles for main current circuit  3 800 V  800 V | design of the product                                    | For motor protection |
| size of the circuit-breaker  size of contactor can be combined company-specific product extension auxiliary switch  power loss [W] for rated value of the current  at AC in hot operating state  at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point  between main and auxiliary circuit  between  | product type designation                                 | 3RV2                 |
| size of contactor can be combined company-specific product extension auxiliary switch  power loss [W] for rated value of the current  • at AC in hot operating state 5.5 W  • at AC in hot operating state per pole 1.8 W  insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value 680 V  maximum permissible voltage for safe isolation in networks with grounded star point 0 between main and auxiliary circuit 400 V  • between main and auxiliary circuit 400 V  shock resistance acc. to IEC 60068-2-27 25g / 11 ms  mechanical service life (switching cycles) of the main contacts typical 100 000 100 00 | General technical data                                   |                      |
| product extension auxiliary switch  power loss [M] for rated value of the current  • at AC in hot operating state • at AC in hot operating state per pole  insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • between main and suxiliary circuit • between main and suxiliary circuit • of the main contacts typical • of the main contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2 Q Ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during poperation  temperature compensation  100 000  200 m  200 m  400 V  50 L/1 ms  400 V  50 L/2 ms  400 V  50 L/2 ms  50 L/2 ms  60 C  60 L/2 ms  | size of the circuit-breaker                              | S00                  |
| power loss [W] for rated value of the current  • at AC in hot operating state   5.5 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 networks with grounded star point   400 V  • between main and auxiliary circuit   400 V  • between main and auxiliary circuit   400 V  shock resistance acc. to IEC 60068-2-27   25g / 11 ms  mechanical service life (switching cycles)  • of the main contacts typical   100 000  • of auxiliary contacts typical   100 000  electrical endurance (switching cycles) typical   100 000  type of protection according to ATEX directive   2014/34/EU   2014/34/EU   2014/34/EU   2014/34/EU   200 mm  • ambient temperature during operation   -20 +60 °C   -30 +80 °C   -30 .   | size of contactor can be combined company-specific       | S00, S0              |
| at AC in hot operating state  at AC in hot operating state per pole  insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  maximum permissible voltage for safe isolation in networks with grounded star point  between main and auxiliary circuit  between main and auxiliary circuit  between main and auxiliary circuit  contains a service life (switching cycles)  of the main contacts typical  of auxiliary contacts typical  electrical endurance (switching cycles) typical  type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature during operation  ambient temperature during storage  ambient temperature during storage  ambient temperature during operation  relative humidity during operation  altitude to poles for main current circuit  at AC in hot operating state per pole  for V  480 V  400 V  | product extension auxiliary switch                       | Yes                  |
| at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  asurge voltage resistance rated value  between main and auxiliary circuit between main auxiliary circuit between main and auxiliary circuit between main auxiliary circuit between main and a  | power loss [W] for rated value of the current            |                      |
| insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  maximum permissible voltage for safe isolation in networks with grounded star point  • between main and auxiliary circuit • both resistance acc. to IEC 60068-2-27  shock resistance acc. to IEC 60068-2-27  e of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Q  Ambient conditions installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport  -50 +80 °C  • ambient temperature during transport  -50 +80 °C  relative humidity during operation 10 95 %  Main circuit number of poles for main current circuit  3  | <ul> <li>at AC in hot operating state</li> </ul>         | 5.5 W                |
| value  surge voltage resistance rated value  maximum permissible voltage for safe isolation in networks with grounded star point  • between main and auxiliary circuit  • obetween main and auxiliary circuit  • of the main contacts typical  • of auxiliary contacts typical  • bo 000  • of auxiliary contacts typical  • bo 000  • Ex II (2) GD  DMT 02 ATEX F 001  • ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation  • ambient temperature during operation  • ambient temperature during storage  • ambient temperature during transport  • 50 +60 °C  • ambient temperature during transport  • 50 +80 °C  • ambient temperature during transport  • 20 +60 °C  • ambient temperature during transport  • 50 +80 °C  • ambient temperature during transport  • 50 +80 °C  • ambient temperature during transport  • 50 +80 °C  • ambient temperature during transport  • 50 +80 °C  • ambient temperature during transport  • 50 +80 °C  • ambient temperature during transport  • 50 +80 °C  • ambient temperature during transport  • 50 +80 °C  • ambient temperature during transport  • 50 +80 °C  | at AC in hot operating state per pole                    | 1.8 W                |
| maximum permissible voltage for safe isolation in networks with grounded star point  • between main and auxiliary circuit • between main and auxiliary circuit 400 V  shock resistance acc. to IEC 60068-2-27 25g / 11 ms  mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical 100 000 electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2 Q  Ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport  -50 +80 °C  -ambient temperature during transport relative humidity during operation  10 95 %  Main circuit number of poles for main current circuit  3  | 0 0 1  | 690 V                |
| networks with grounded star point  • between main and auxiliary circuit  • between main and auxiliary circuit  • between main and auxiliary circuit  400 V  shock resistance acc. to IEC 60068-2-27  prechanical service life (switching cycles)  • of the main contacts typical  • of auxiliary contacts typical  • of auxiliary contacts typical  electrical endurance (switching cycles) typical  type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Q  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation  • ambient temperature during storage  • ambient temperature during storage  • ambient temperature during transport  • ambient temperature during transport  • ambient temperature during transport  • 50 +80 °C  • ambient temperature during operation  -20 +60 °C  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  3   | surge voltage resistance rated value                     | 6 kV                 |
| between main and auxiliary circuit     shock resistance acc. to IEC 60068-2-27     25g / 11 ms  mechanical service life (switching cycles)     of the main contacts typical     of auxiliary contacts typical     electrical endurance (switching cycles) typical     type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Q  Ambient conditions  installation altitude at height above sea level maximum      one ambient temperature during operation     one ambient temperature during storage     one ambient temperature during storage     one ambient temperature during transport  temperature compensation  relative humidity during operation  Main circuit  number of poles for main current circuit  3   |  |                      |
| shock resistance acc. to IEC 60068-2-27  mechanical service life (switching cycles)  of the main contacts typical of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Q  Ambient conditions installation altitude at height above sea level maximum  ambient temperature during operation ambient temperature during storage ambient temperature during transport  temperature compensation -20 +60 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 %  Main circuit number of poles for main current circuit  3  | <ul> <li>between main and auxiliary circuit</li> </ul>   | 400 V                |
| mechanical service life (switching cycles)  of the main contacts typical of auxiliary contacts typical low 000 electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2 Q  Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation ambient temperature during storage ambient temperature during transport ambient temperature during transport temperature compensation relative humidity during operation 10 95 %  Main circuit number of poles for main current circuit  3   | <ul> <li>between main and auxiliary circuit</li> </ul>   | 400 V                |
| of the main contacts typical     of auxiliary contacts typical     electrical endurance (switching cycles) typical     type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Ambient conditions  installation altitude at height above sea level maximum      o ambient temperature during operation     o ambient temperature during storage     o ambient temperature during transport  temperature compensation  relative humidity during operation  number of poles for main current circuit  100 000  Ex II (2) GD  DMT 02 ATEX F 001  DMT 02 ATEX F 001  200 m  2 000 m  3 000       | shock resistance acc. to IEC 60068-2-27                  | 25g / 11 ms          |
| of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Ambient conditions installation altitude at height above sea level maximum      o ambient temperature during operation     o ambient temperature during storage     o ambient temperature during transport  temperature compensation  relative humidity during operation  100 000  EX II (2) GD  DMT 02 ATEX F 001  Q  ATEX F 001  2 000 m  3       | mechanical service life (switching cycles)               |                      |
| electrical endurance (switching cycles) typical  type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during storage • ambient temperature during transport  temperature compensation  relative humidity during operation  Main circuit  number of poles for main current circuit  100 000  Ex II (2) GD  DMT 02 ATEX F 001  DMT 02 ATEX F 001  2 000 m  - 20 +60 °C  - 20 +60 °C  - 20 +60 °C  - 20 +60 °C  - 20 +80 °C  - 20 +60 °C   | <ul> <li>of the main contacts typical</li> </ul>         | 100 000              |
| type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Q  Ambient conditions  installation altitude at height above sea level maximum 2 000 m  • ambient temperature during operation -20 +60 °C  • ambient temperature during storage -50 +80 °C  • ambient temperature during transport -50 +80 °C  temperature compensation -20 +60 °C  relative humidity during operation -20 +60 °C  relative humidity during operation 3  | of auxiliary contacts typical                            | 100 000              |
| certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Q  Ambient conditions installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport  • ambient temperature during transport  -50 +80 °C  temperature compensation -20 +60 °C  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  3  | electrical endurance (switching cycles) typical          | 100 000              |
| reference code acc. to IEC 81346-2  Ambient conditions installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport • ambient temperature during transport • 50 +80 °C  temperature compensation -20 +60 °C  relative humidity during operation 10 95 %  Main circuit  number of poles for main current circuit  3  |  | Ex II (2) GD         |
| installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage • ambient temperature during storage • ambient temperature during transport • 50 +80 °C  • ambient temperature during transport -50 +80 °C  temperature compensation -20 +60 °C  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  3   |  | DMT 02 ATEX F 001    |
| installation altitude at height above sea level maximum  • ambient temperature during operation  • ambient temperature during storage  • ambient temperature during transport  • ambient temperature during transport  -50 +80 °C  temperature compensation  -20 +60 °C  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  3  | reference code acc. to IEC 81346-2                       | Q                    |
| <ul> <li>ambient temperature during operation</li> <li>ambient temperature during storage</li> <li>ambient temperature during transport</li> <li>ambient temperature during transport</li> <li>-50 +80 °C</li> <li>temperature compensation</li> <li>-20 +60 °C</li> <li>relative humidity during operation</li> <li>10 95 %</li> <li>Main circuit</li> <li>number of poles for main current circuit</li> <li>3</li> </ul>   | Ambient conditions                                       |                      |
| <ul> <li>ambient temperature during storage</li> <li>ambient temperature during transport</li> <li>ambient temperature during storage</li> <li>ambie</li></ul>   | installation altitude at height above sea level maximum  | 2 000 m              |
| <ul> <li>ambient temperature during transport</li> <li>-50 +80 °C</li> <li>temperature compensation</li> <li>relative humidity during operation</li> <li>Main circuit</li> <li>number of poles for main current circuit</li> <li>3</li> </ul>  | <ul> <li>ambient temperature during operation</li> </ul> | -20 +60 °C           |
| temperature compensation -20 +60 °C relative humidity during operation 10 95 %  Main circuit number of poles for main current circuit 3  | <ul> <li>ambient temperature during storage</li> </ul>   | -50 +80 °C           |
| relative humidity during operation 10 95 %  Main circuit  number of poles for main current circuit 3   | ambient temperature during transport                     | -50 +80 °C           |
| Main circuit number of poles for main current circuit 3  | temperature compensation                                 | -20 +60 °C           |
| number of poles for main current circuit 3   | relative humidity during operation                       | 10 95 %              |
| ·  | Main circuit   |                      |
| adjustable current response value current of the 0.28 0.4 A  | number of poles for main current circuit                 | 3                    |
|  | adjustable current response value current of the         | 0.28 0.4 A           |

| current-dependent overload release  |  |
|---|--|
| <ul> <li>operating voltage rated value</li> </ul>                                   | 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   | 0.4 A  |
| operational current at AC-3 at 400 V rated value                                    | 0.4 A  |
| operating power at AC-3   |  |
| <ul> <li>at 230 V rated value</li> </ul>  | 60 W   |
| <ul><li>at 400 V rated value</li></ul>  | 90 W   |
| • at 500 V rated value  | 120 W  |
| • at 690 V rated value  | 180 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  |  |
| ground fault detection  | No   |
| phase failure detection   | Yes  |
| trip class  | CLASS 10   |
| design of the overload release  | thermal  |
| breaking capacity operating short-circuit current (Ics)                             |  |
| at AC  • at 240 V rated value   | 100 kA   |
| at 400 V rated value  | 100 kA   |
| at 500 V rated value     at 500 V rated value                                       | 100 KA   |
| at 690 V rated value     at 690 V rated value                                       | 100 KA   |
|   | 100 KA   |
| breaking capacity maximum short-circuit current (Icu)  • 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      at AC at 500 V rated value                          | 100 KA   |
| at AC at 500 V rated value     at AC at 690 V rated value                           | 100 KA   |
| response value current of instantaneous short-circuit trip                          | 5.2 A  |
| unit  | 5.2 A  |
| UL/CSA ratings  |  |
| full-load current (FLA) for 3-phase AC motor  |  |
| <ul> <li>at 480 V rated value</li> </ul>  | 0.4 A  |
| • at 600 V rated value  | 0.4 A  |
| Short-circuit protection  |  |
| 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 standard mounting rail according to DIN EN 60715 |
| height  | 97 mm  |
| width   | 45 mm  |
| depth   | 97 mm  |
| required spacing  |  |
| • for grounded parts at 400 V   |  |
| — downwards   | 30 mm  |
| — upwards   | 30 mm  |
| — at the side   | 9 mm   |
| • for live parts at 400 V   | •  |
| — downwards   | 30 mm  |
| — upwards   | 30 mm  |
| — upwards<br>— at the side  | 9 mm   |
| at the olde   | V  |



|  |  | locations  |
|--|--|------------|
| General Product Approval   |  | hazardous  |
|  |  | For use in |
| Certificates/ approvals  |  |            |
| display version for switching status   | Handle   |            |
| touch protection on the front acc. to IEC 60529  | finger-safe, for vertical contact from the front |            |
| protection class IP on the front acc. to IEC 60529   | IP20   |            |
| T1 value for proof test interval or service life acc. to IEC 61508                               | 10 y   |            |
| with low demand rate acc. to SN 31920  The value for proof test interval or convice life acc. to | 50 FIT   |            |
| failure rate [FIT]   |  |            |
| with high demand rate acc. to SN 31920   | 50 %   |            |
| <ul> <li>with low demand rate acc. to SN 31920</li> </ul>  | 50 %   |            |
| proportion of dangerous failures   |  |            |
| with high demand rate acc. to SN 31920   | 5 000  |            |
| B10 value  |  |            |
| Safety related data  |  |            |
| for main contacts  | M3   |            |
| design of the thread of the connection screw   |  |            |
| size of the screwdriver tip  | Pozidriv 2                                       |            |
| design of screwdriver shaft  | Diameter 5 to 6 mm                               |            |
| tightening torque for main contacts with screw-type terminals                                    | 0.8 1.2 N·m                                      |            |
| at AWG cables for main contacts  | 2x (18 14), 2x 12                                |            |
| <ul> <li>finely stranded with core end processing</li> </ul>                                     | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)              |            |
| <ul><li>— solid or stranded</li></ul>  | 2x (0,75 2,5 mm²), 2x 4 mm²                      |            |
| • for main contacts  |  |            |
| type of connectable conductor cross-sections   |  |            |
| circuit  |  |            |
| arrangement of electrical connectors for main current  | Top and bottom                                   |            |
| • for main current circuit   | screw-type terminals                             |            |
| control circuit type of electrical connection  |  |            |
| product function removable terminal for auxiliary and  | No   |            |
| Connections/ Terminals   |  |            |
| — forwards   | 0 mm   |            |
| — at the side  | 30 mm  |            |
| — backwards  | 0 mm   |            |
| — upwards  | 50 mm  |            |
| — downwards  | 50 mm  |            |
| <ul> <li>for live parts at 690 V</li> </ul>  |  |            |
| — forwards   | 0 mm   |            |
| — at the side  | 30 mm  |            |
| — backwards  | 0 mm   |            |
| — upwards  | 50 mm  |            |
| — downwards  | 50 mm  |            |
| ● for grounded parts at 690 V  |  |            |
| — at the side  | 9 mm   |            |
| — upwards  | 30 mm  |            |
| — downwards  | 30 mm  |            |
| • for live parts at 500 V  |  |            |
| — at the side  | 9 mm   |            |
| — upwards  | 30 mm  |            |
| — downwards  | 30 mm  |            |
| <ul> <li>for grounded parts at 500 V</li> </ul>  |  |            |
|  |  |            |













For use in hazardous locations

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping



**Miscellaneous** 



Type Test Certificates/Test Report Special Test Certificate



## Marine / Shipping













other

Railway

Confirmation



Vibration and Shock

Confirmation

## Further information

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=3RV2011-0EA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-0EA10

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

 $\underline{https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-0EA10}$ 

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2011-0EA10&lang=en

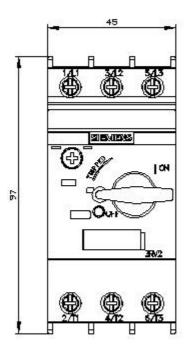
Characteristic: Tripping characteristics, I2t, Let-through current

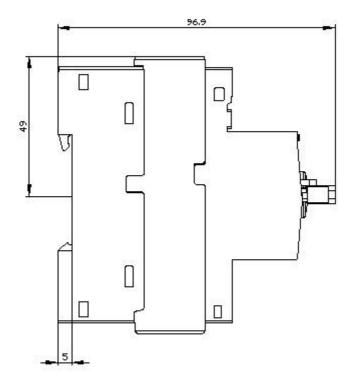
https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-0EA10/char

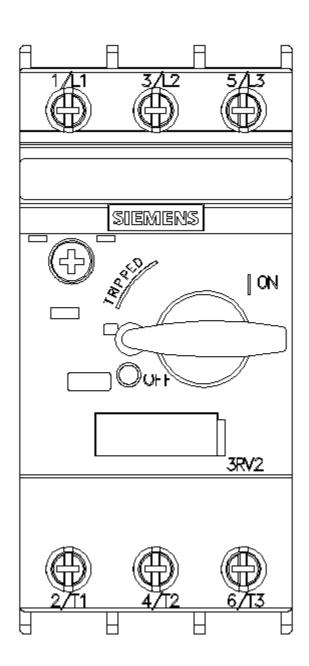
Further characteristics (e.g. electrical endurance, switching frequency)

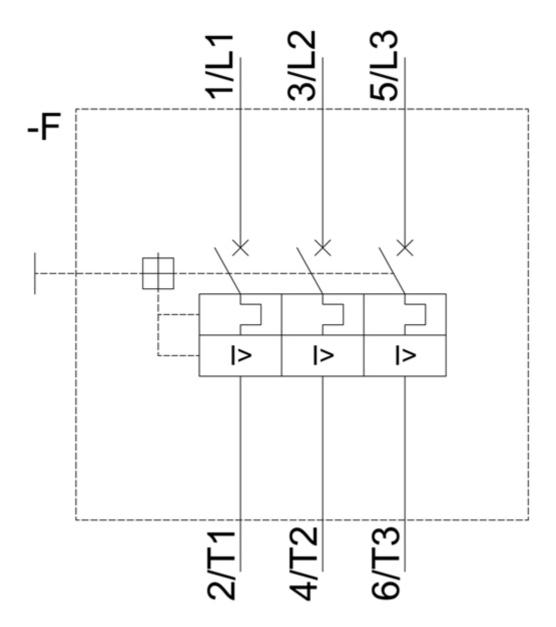
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2011-0EA10&objecttype=14&gridview=view1











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