



Power contactor, AC-3 65 A, 30 kW / 400 V 1 NO + 1 NC, 230 V AC, 50 Hz  
3-pole, size S2 Spring-type terminals

|                                 |                 |
|---------------------------------|-----------------|
| <b>product brand name</b>       | SIRIUS          |
| <b>product designation</b>      | Power contactor |
| <b>product type designation</b> | 3RT2            |

### General technical data

|                                                                                                       |                             |
|-------------------------------------------------------------------------------------------------------|-----------------------------|
| <b>size of contactor</b>                                                                              | S2                          |
| <b>product extension</b>                                                                              |                             |
| • function module for communication                                                                   | No                          |
| • auxiliary switch                                                                                    | Yes                         |
| <b>power loss [W] for rated value of the current</b>                                                  |                             |
| • at AC in hot operating state                                                                        | 11.4 W                      |
| • at AC in hot operating state per pole                                                               | 3.8 W                       |
| • without load current share typical                                                                  | 16 W                        |
| <b>insulation voltage</b>                                                                             |                             |
| • of main circuit with degree of pollution 3 rated value                                              | 690 V                       |
| • of auxiliary circuit with degree of pollution 3 rated value                                         | 690 V                       |
| <b>surge voltage resistance</b>                                                                       |                             |
| • of main circuit rated value                                                                         | 6 kV                        |
| • of auxiliary circuit rated value                                                                    | 6 kV                        |
| maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1 | 400 V                       |
| <b>shock resistance at rectangular impulse</b>                                                        |                             |
| • at AC                                                                                               | 11.8g / 5 ms, 7.4g / 10 ms  |
| <b>shock resistance with sine pulse</b>                                                               |                             |
| • at AC                                                                                               | 18.5g / 5 ms, 11.6g / 10 ms |
| <b>mechanical service life (switching cycles)</b>                                                     |                             |
| • of contactor typical                                                                                | 10 000 000                  |
| • of the contactor with added electronically optimized auxiliary switch block typical                 | 5 000 000                   |
| • of the contactor with added auxiliary switch block typical                                          | 10 000 000                  |
| <b>reference code according to IEC 81346-2</b>                                                        | Q                           |
| <b>Substance Prohibitance (Date)</b>                                                                  | 10/01/2014                  |

### Ambient conditions

|                                                                       |                |
|-----------------------------------------------------------------------|----------------|
| installation altitude at height above sea level maximum               | 2 000 m        |
| <b>ambient temperature</b>                                            |                |
| • during operation                                                    | -25 ... +60 °C |
| • during storage                                                      | -55 ... +80 °C |
| <b>relative humidity minimum</b>                                      | 10 %           |
| <b>relative humidity at 55 °C according to IEC 60068-2-30 maximum</b> | 95 %           |

### Main circuit

|                                                                        |                    |
|------------------------------------------------------------------------|--------------------|
| <b>number of poles for main current circuit</b>                        | 3                  |
| <b>number of NO contacts for main contacts</b>                         | 3                  |
| <b>operating voltage</b>                                               |                    |
| • at AC-3 rated value maximum                                          | 690 V              |
| • at AC-3e rated value maximum                                         | 690 V              |
| <b>operational current</b>                                             |                    |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value            | 80 A               |
| • at AC-1                                                              |                    |
| — up to 690 V at ambient temperature 40 °C rated value                 | 80 A               |
| — up to 690 V at ambient temperature 60 °C rated value                 | 70 A               |
| • at AC-3                                                              |                    |
| — at 400 V rated value                                                 | 65 A               |
| — at 500 V rated value                                                 | 65 A               |
| — at 690 V rated value                                                 | 47 A               |
| • at AC-3e                                                             |                    |
| — at 400 V rated value                                                 | 65 A               |
| — at 500 V rated value                                                 | 65 A               |
| — at 690 V rated value                                                 | 47 A               |
| • at AC-4 at 400 V rated value                                         | 55 A               |
| • at AC-5a up to 690 V rated value                                     | 70.4 A             |
| • at AC-5b up to 400 V rated value                                     | 53.9 A             |
| • at AC-6a                                                             |                    |
| — up to 230 V for current peak value n=20 rated value                  | 56.9 A             |
| — up to 400 V for current peak value n=20 rated value                  | 56.9 A             |
| — up to 500 V for current peak value n=20 rated value                  | 56.9 A             |
| — up to 690 V for current peak value n=20 rated value                  | 47 A               |
| • at AC-6a                                                             |                    |
| — up to 230 V for current peak value n=30 rated value                  | 38 A               |
| — up to 400 V for current peak value n=30 rated value                  | 38 A               |
| — up to 500 V for current peak value n=30 rated value                  | 38 A               |
| — up to 690 V for current peak value n=30 rated value                  | 38 A               |
| minimum cross-section in main circuit at maximum AC-1 rated value      | 25 mm <sup>2</sup> |
| <b>operational current for approx. 200000 operating cycles at AC-4</b> |                    |
| • at 400 V rated value                                                 | 28 A               |
| • at 690 V rated value                                                 | 22 A               |
| <b>operational current</b>                                             |                    |
| • <b>at 1 current path at DC-1</b>                                     |                    |
| — at 24 V rated value                                                  | 55 A               |
| — at 110 V rated value                                                 | 4.5 A              |
| — at 220 V rated value                                                 | 1 A                |
| — at 440 V rated value                                                 | 0.4 A              |
| — at 600 V rated value                                                 | 0.25 A             |
| • <b>with 2 current paths in series at DC-1</b>                        |                    |
| — at 24 V rated value                                                  | 55 A               |
| — at 110 V rated value                                                 | 45 A               |
| — at 220 V rated value                                                 | 5 A                |
| — at 440 V rated value                                                 | 1 A                |
| — at 600 V rated value                                                 | 0.8 A              |
| • <b>with 3 current paths in series at DC-1</b>                        |                    |
| — at 24 V rated value                                                  | 55 A               |
| — at 110 V rated value                                                 | 55 A               |
| — at 220 V rated value                                                 | 45 A               |
| — at 440 V rated value                                                 | 2.9 A              |

|                                                                         |                                                             |
|-------------------------------------------------------------------------|-------------------------------------------------------------|
| — at 600 V rated value                                                  | 1.4 A                                                       |
| • <b>at 1 current path at DC-3 at DC-5</b>                              |                                                             |
| — at 24 V rated value                                                   | 35 A                                                        |
| — at 220 V rated value                                                  | 1 A                                                         |
| — at 440 V rated value                                                  | 0.1 A                                                       |
| — at 600 V rated value                                                  | 0.06 A                                                      |
| • <b>with 2 current paths in series at DC-3 at DC-5</b>                 |                                                             |
| — at 24 V rated value                                                   | 55 A                                                        |
| — at 110 V rated value                                                  | 25 A                                                        |
| — at 220 V rated value                                                  | 5 A                                                         |
| — at 440 V rated value                                                  | 0.27 A                                                      |
| — at 600 V rated value                                                  | 0.16 A                                                      |
| • <b>with 3 current paths in series at DC-3 at DC-5</b>                 |                                                             |
| — at 24 V rated value                                                   | 55 A                                                        |
| — at 110 V rated value                                                  | 55 A                                                        |
| — at 220 V rated value                                                  | 25 A                                                        |
| — at 440 V rated value                                                  | 0.6 A                                                       |
| — at 600 V rated value                                                  | 0.35 A                                                      |
| <b>operating power</b>                                                  |                                                             |
| • at AC-2 at 400 V rated value                                          | 30 kW                                                       |
| • at AC-3                                                               |                                                             |
| — at 230 V rated value                                                  | 18.5 kW                                                     |
| — at 400 V rated value                                                  | 30 kW                                                       |
| — at 500 V rated value                                                  | 37 kW                                                       |
| — at 690 V rated value                                                  | 37 kW                                                       |
| • at AC-3e                                                              |                                                             |
| — at 230 V rated value                                                  | 18.5 kW                                                     |
| — at 400 V rated value                                                  | 30 kW                                                       |
| — at 500 V rated value                                                  | 37 kW                                                       |
| — at 690 V rated value                                                  | 37 kW                                                       |
| <b>operating power for approx. 200000 operating cycles at AC-4</b>      |                                                             |
| • at 400 V rated value                                                  | 14.7 kW                                                     |
| • at 690 V rated value                                                  | 20 kW                                                       |
| <b>operating apparent power at AC-6a</b>                                |                                                             |
| • up to 230 V for current peak value n=20 rated value                   | 22.6 kVA                                                    |
| • up to 400 V for current peak value n=20 rated value                   | 39.4 kVA                                                    |
| • up to 500 V for current peak value n=20 rated value                   | 49.2 kVA                                                    |
| • up to 690 V for current peak value n=20 rated value                   | 56.1 kVA                                                    |
| <b>operating apparent power at AC-6a</b>                                |                                                             |
| • up to 230 V for current peak value n=30 rated value                   | 15.1 kVA                                                    |
| • up to 400 V for current peak value n=30 rated value                   | 26.2 kVA                                                    |
| • up to 500 V for current peak value n=30 rated value                   | 32.8 kVA                                                    |
| • up to 690 V for current peak value n=30 rated value                   | 45.3 kVA                                                    |
| <b>short-time withstand current in cold operating state up to 40 °C</b> |                                                             |
| • limited to 1 s switching at zero current maximum                      | 1 055 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 5 s switching at zero current maximum                      | 730 A; Use minimum cross-section acc. to AC-1 rated value   |
| • limited to 10 s switching at zero current maximum                     | 520 A; Use minimum cross-section acc. to AC-1 rated value   |
| • limited to 30 s switching at zero current maximum                     | 336 A; Use minimum cross-section acc. to AC-1 rated value   |
| • limited to 60 s switching at zero current maximum                     | 272 A; Use minimum cross-section acc. to AC-1 rated value   |
| <b>no-load switching frequency</b>                                      |                                                             |
| • at AC                                                                 | 5 000 1/h                                                   |
| <b>operating frequency</b>                                              |                                                             |
| • at AC-1 maximum                                                       | 800 1/h                                                     |
| • at AC-2 maximum                                                       | 400 1/h                                                     |
| • at AC-3 maximum                                                       | 700 1/h                                                     |
| • at AC-3e maximum                                                      | 700 1/h                                                     |
| • at AC-4 maximum                                                       | 200 1/h                                                     |
| <b>Control circuit/ Control</b>                                         |                                                             |
| <b>type of voltage of the control supply voltage</b>                    | AC                                                          |
| <b>control supply voltage at AC</b>                                     |                                                             |
| • at 50 Hz rated value                                                  | 230 V                                                       |
| <b>operating range factor control supply voltage rated</b>              |                                                             |

|                                                                  |                  |
|------------------------------------------------------------------|------------------|
| <b>value of magnet coil at AC</b>                                |                  |
| • at 50 Hz                                                       | 0.8 ... 1.1      |
| <b>apparent pick-up power of magnet coil at AC</b>               |                  |
| • at 50 Hz                                                       | 190 VA           |
| <b>inductive power factor with closing power of the coil</b>     |                  |
| • at 50 Hz                                                       | 0.72             |
| <b>apparent holding power of magnet coil at AC</b>               |                  |
| • at 50 Hz                                                       | 16 VA            |
| <b>inductive power factor with the holding power of the coil</b> |                  |
| • at 50 Hz                                                       | 0.37             |
| <b>closing delay</b>                                             |                  |
| • at AC                                                          | 10 ... 80 ms     |
| <b>opening delay</b>                                             |                  |
| • at AC                                                          | 10 ... 18 ms     |
| <b>arcing time</b>                                               | 10 ... 20 ms     |
| <b>control version of the switch operating mechanism</b>         | Standard A1 - A2 |

#### Auxiliary circuit

|                                                                    |                                                 |
|--------------------------------------------------------------------|-------------------------------------------------|
| number of NC contacts for auxiliary contacts instantaneous contact | 1                                               |
| number of NO contacts for auxiliary contacts instantaneous contact | 1                                               |
| operational current at AC-12 maximum                               | 10 A                                            |
| <b>operational current at AC-15</b>                                |                                                 |
| • at 230 V rated value                                             | 10 A                                            |
| • at 400 V rated value                                             | 3 A                                             |
| • at 500 V rated value                                             | 2 A                                             |
| • at 690 V rated value                                             | 1 A                                             |
| <b>operational current at DC-12</b>                                |                                                 |
| • at 24 V rated value                                              | 10 A                                            |
| • at 48 V rated value                                              | 6 A                                             |
| • at 60 V rated value                                              | 6 A                                             |
| • at 110 V rated value                                             | 3 A                                             |
| • at 125 V rated value                                             | 2 A                                             |
| • at 220 V rated value                                             | 1 A                                             |
| • at 600 V rated value                                             | 0.15 A                                          |
| <b>operational current at DC-13</b>                                |                                                 |
| • at 24 V rated value                                              | 10 A                                            |
| • at 48 V rated value                                              | 2 A                                             |
| • at 60 V rated value                                              | 2 A                                             |
| • at 110 V rated value                                             | 1 A                                             |
| • at 125 V rated value                                             | 0.9 A                                           |
| • at 220 V rated value                                             | 0.3 A                                           |
| • at 600 V rated value                                             | 0.1 A                                           |
| <b>contact reliability of auxiliary contacts</b>                   | 1 faulty switching per 100 million (17 V, 1 mA) |

#### UL/CSA ratings

|                                                             |             |
|-------------------------------------------------------------|-------------|
| <b>full-load current (FLA) for 3-phase AC motor</b>         |             |
| • at 480 V rated value                                      | 65 A        |
| • at 600 V rated value                                      | 52 A        |
| <b>yielded mechanical performance [hp]</b>                  |             |
| • for single-phase AC motor                                 |             |
| — at 110/120 V rated value                                  | 5 hp        |
| — at 230 V rated value                                      | 10 hp       |
| • for 3-phase AC motor                                      |             |
| — at 200/208 V rated value                                  | 20 hp       |
| — at 220/230 V rated value                                  | 20 hp       |
| — at 460/480 V rated value                                  | 50 hp       |
| — at 575/600 V rated value                                  | 50 hp       |
| <b>contact rating of auxiliary contacts according to UL</b> | A600 / P600 |

#### Short-circuit protection

|                                                    |                                                                                  |
|----------------------------------------------------|----------------------------------------------------------------------------------|
| <b>design of the fuse link</b>                     |                                                                                  |
| • for short-circuit protection of the main circuit |                                                                                  |
| — with type of coordination 1 required             | gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA) |

— with type of assignment 2 required

- for short-circuit protection of the auxiliary switch required

gG: 125A (690V,100kA), aM: 63A (690V,100kA), BS88: 100A (415V,80kA)

gG: 10 A (500 V, 1 kA)

## Installation/ mounting/ dimensions

### mounting position

+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface

### fastening method

screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715

- side-by-side mounting

Yes

### height

114 mm

### width

55 mm

### depth

130 mm

### required spacing

- with side-by-side mounting

— forwards

10 mm

— upwards

10 mm

— downwards

10 mm

— at the side

0 mm

- for grounded parts

— forwards

10 mm

— upwards

10 mm

— at the side

6 mm

— downwards

10 mm

- for live parts

— forwards

10 mm

— upwards

10 mm

— downwards

10 mm

— at the side

6 mm

## Connections/ Terminals

### type of electrical connection

- for main current circuit
- for auxiliary and control circuit
- at contactor for auxiliary contacts
- of magnet coil

screw-type terminals  
spring-loaded terminals  
Spring-type terminals  
Spring-type terminals

### type of connectable conductor cross-sections

- for main contacts

— solid or stranded

2x (1 ... 35 mm<sup>2</sup>), 1x (1 ... 50 mm<sup>2</sup>)

— finely stranded with core end processing

2x (1 ... 25 mm<sup>2</sup>), 1x (1 ... 35 mm<sup>2</sup>)

- at AWG cables for main contacts

2x (18 ... 2), 1x (18 ... 1)

### connectable conductor cross-section for main contacts

- finely stranded with core end processing

1 ... 35 mm<sup>2</sup>

### connectable conductor cross-section for auxiliary contacts

- solid or stranded
- finely stranded with core end processing
- finely stranded without core end processing

0.5 ... 2.5 mm<sup>2</sup>

0.5 ... 1.5 mm<sup>2</sup>

0.5 ... 2.5 mm<sup>2</sup>

### type of connectable conductor cross-sections

- for auxiliary contacts

— solid or stranded

2x (0.5 ... 2.5 mm<sup>2</sup>)

— finely stranded with core end processing

2x (0.5 ... 1.5 mm<sup>2</sup>)

— finely stranded without core end processing

2x (0.5 ... 2.5 mm<sup>2</sup>)

- at AWG cables for auxiliary contacts

2x (20 ... 14)

### AWG number as coded connectable conductor cross section

- for main contacts

18 ... 1

- for auxiliary contacts

20 ... 14

## Safety related data

### product function

- mirror contact according to IEC 60947-4-1
- positively driven operation according to IEC 60947-5-1

Yes

No

B10 value with high demand rate according to SN 31920

1 000 000

### proportion of dangerous failures

|                                                                                                                                                       |                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <ul style="list-style-type: none"> <li>• with low demand rate according to SN 31920</li> <li>• with high demand rate according to SN 31920</li> </ul> | 40 %                                             |
| failure rate [FIT] with low demand rate according to SN 31920                                                                                         | 73 %                                             |
| T1 value for proof test interval or service life according to IEC 61508                                                                               | 100 FIT                                          |
| protection class IP on the front according to IEC 60529                                                                                               | 20 y                                             |
| touch protection on the front according to IEC 60529                                                                                                  | IP20                                             |
| suitability for use                                                                                                                                   | finger-safe, for vertical contact from the front |
| <ul style="list-style-type: none"> <li>• safety-related switching OFF</li> </ul>                                                                      | Yes                                              |

#### Certificates/ approvals

|                          |     |
|--------------------------|-----|
| General Product Approval | EMC |
|--------------------------|-----|



[Confirmation](#)



[KC](#)



|                                       |                           |                   |                   |
|---------------------------------------|---------------------------|-------------------|-------------------|
| Functional Safety/Safety of Machinery | Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------------------|---------------------------|-------------------|-------------------|

[Type Examination Certificate](#)



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



#### Marine / Shipping



|       |         |                |
|-------|---------|----------------|
| other | Railway | Dangerous Good |
|-------|---------|----------------|

[Confirmation](#)

[Confirmation](#)

[Vibration and Shock](#)

[Transport Information](#)

#### 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=3RT2037-3AP00>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2037-3AP00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-3AP00>

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

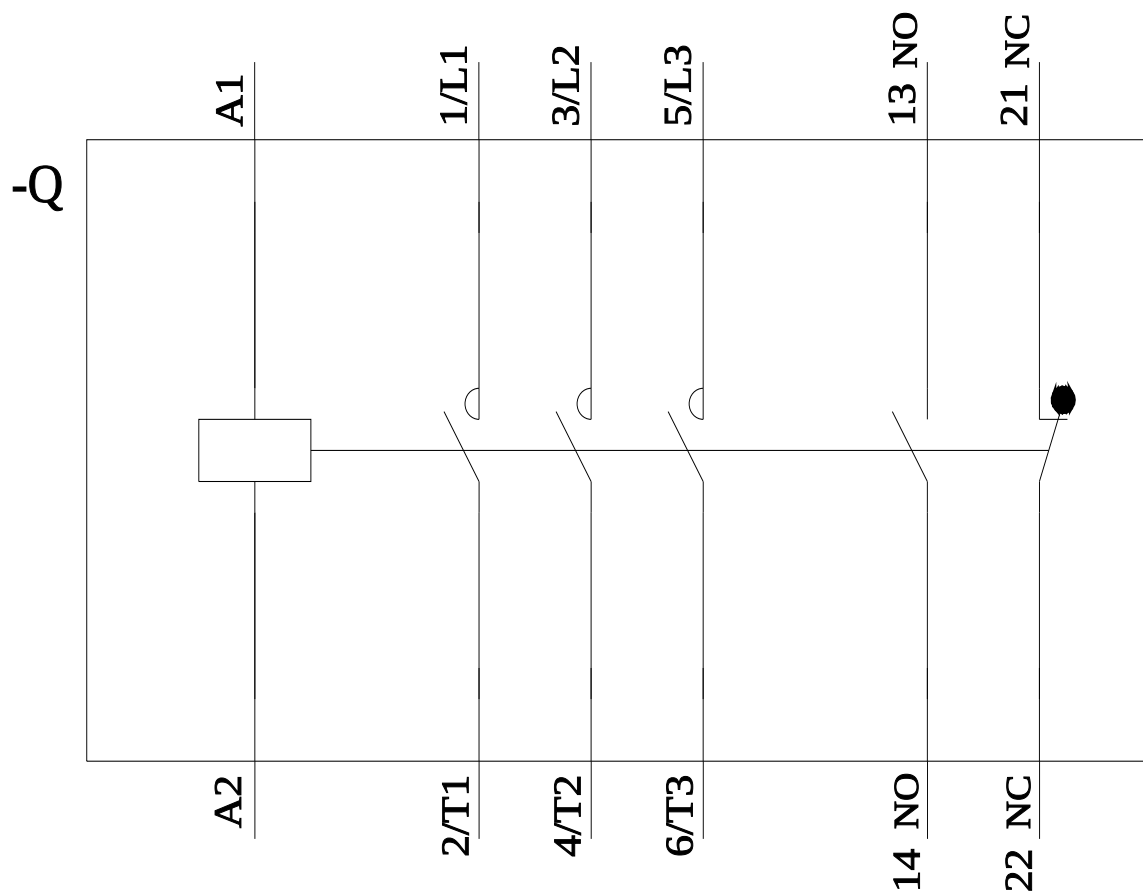
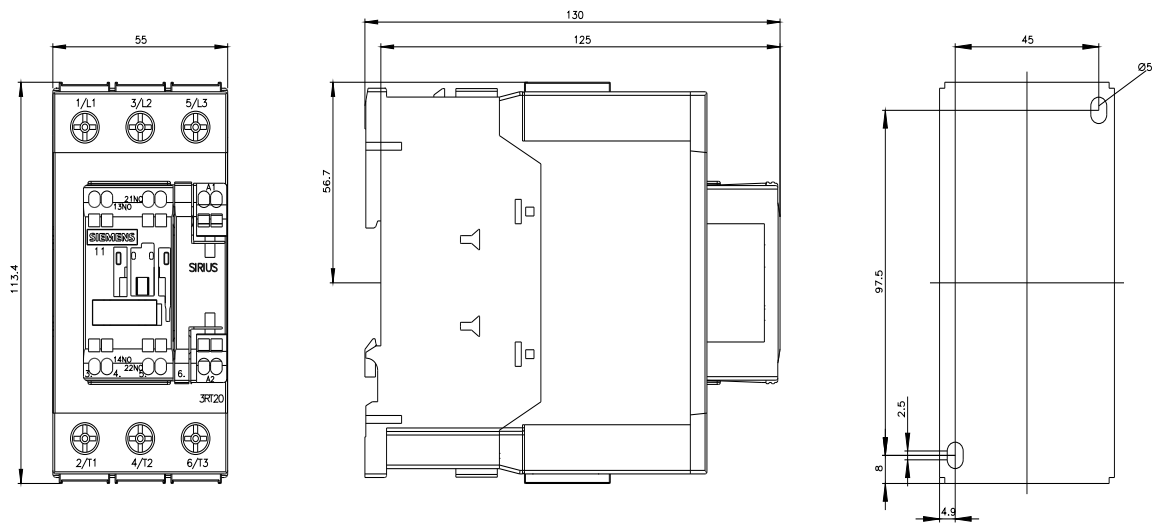
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2037-3AP00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2037-3AP00&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-3AP00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2037-3AP00&objecttype=14&gridview=view1>



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