



contactor, DC-3/DC-5, 400 A, 2-pole, 100 V AC, 50 Hz / 120 V AC, 60 Hz, auxiliary contacts: 2 NO + 2 NC, connecting bar, frame size 12

|                                                                                                              |                            |
|--------------------------------------------------------------------------------------------------------------|----------------------------|
| product designation                                                                                          | Contactor                  |
| product type designation                                                                                     | 3TC                        |
| <b>General technical data</b>                                                                                |                            |
| size of contactor                                                                                            | 12                         |
| product extension                                                                                            |                            |
| • function module for communication                                                                          | No                         |
| • auxiliary switch                                                                                           | Yes                        |
| insulation voltage rated value                                                                               | 1 000 V                    |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 660 V                      |
| shock resistance at rectangular impulse                                                                      |                            |
| • at AC                                                                                                      | 12 g / 5 ms, 5,6 g / 10 ms |
| mechanical service life (operating cycles)                                                                   |                            |
| • of contactor typical                                                                                       | 10 000 000                 |
| • of the contactor with added auxiliary switch block typical                                                 | 10 000 000                 |
| reference code according to IEC 81346-2                                                                      | Q                          |
| Substance Prohibitance (day/month/year)                                                                      | 05/01/2012                 |
| SVHC substance name                                                                                          | Lead CAS-No. 7439-92-1     |
| Net Weight                                                                                                   | 14.568 kg                  |
| <b>Ambient conditions</b>                                                                                    |                            |
| ambient temperature                                                                                          |                            |
| • during operation                                                                                           | -25 ... +55 °C             |
| • during storage                                                                                             | -50 ... +80 °C             |
| relative humidity minimum                                                                                    | 10 %                       |
| relative humidity at 55 °C according to IEC 60068-2-30 maximum                                               | 95 %                       |
| <b>Main circuit</b>                                                                                          |                            |
| number of poles                                                                                              | 2                          |
| number of poles for main current circuit                                                                     | 2                          |
| number of NO contacts for main contacts                                                                      | 2                          |
| number of NC contacts for main contacts                                                                      | 0                          |
| type of voltage                                                                                              | DC                         |
| operational current                                                                                          |                            |
| • at 1 current path at DC-1                                                                                  |                            |
| — at 24 V rated value                                                                                        | 400 A                      |
| — at 110 V rated value                                                                                       | 400 A                      |
| — at 220 V rated value                                                                                       | 400 A                      |
| • with 2 current paths in series at DC-1                                                                     |                            |
| — at 24 V rated value                                                                                        | 400 A                      |

|                                                                                       |              |
|---------------------------------------------------------------------------------------|--------------|
| — at 110 V rated value                                                                | 400 A        |
| — at 220 V rated value                                                                | 400 A        |
| — at 440 V rated value                                                                | 400 A        |
| — at 600 V rated value                                                                | 400 A        |
| — at 750 V rated value                                                                | 400 A        |
| ● at DC-3 at DC-5                                                                     |              |
| — at 220 V rated value                                                                | 400 A        |
| — at 600 V rated value                                                                | 400 A        |
| — at 750 V rated value                                                                | 400 A        |
| ● at 1 current path at DC-3 at DC-5                                                   |              |
| — at 24 V rated value                                                                 | 220 A        |
| — at 110 V rated value                                                                | 220 A        |
| — at 220 V rated value                                                                | 400 A        |
| ● with 2 current paths in series at DC-3 at DC-5                                      |              |
| — at 24 V rated value                                                                 | 400 A        |
| — at 110 V rated value                                                                | 400 A        |
| — at 220 V rated value                                                                | 400 A        |
| — at 440 V rated value                                                                | 400 A        |
| — at 600 V rated value                                                                | 400 A        |
| — at 750 V rated value                                                                | 400 A        |
| <b>operating power</b>                                                                |              |
| ● at DC-1                                                                             |              |
| — at 110 V rated value                                                                | 44 kW        |
| — at 220 V rated value                                                                | 88 kW        |
| — at 440 V rated value                                                                | 176 kW       |
| — at 750 V rated value                                                                | 300 kW       |
| ● at DC-3 at DC-5                                                                     |              |
| — at 110 V rated value                                                                | 35 kW        |
| — at 220 V rated value                                                                | 70 kW        |
| — at 440 V rated value                                                                | 140 kW       |
| — at 600 V rated value                                                                | 200 kW       |
| — at 750 V rated value                                                                | 250 kW       |
| <b>operating frequency</b>                                                            |              |
| ● at DC-1 maximum                                                                     | 1 000 1/h    |
| ● at DC-3 maximum                                                                     | 600 1/h      |
| ● at DC-5 maximum                                                                     | 600 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                                                                | 100 V        |
| ● at 60 Hz rated value                                                                | 120 V        |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b> |              |
| ● at 60 Hz                                                                            | 0.8 ... 1.1  |
| <b>apparent pick-up power of magnet coil at AC</b>                                    | 1 780 VA     |
| ● at 50 Hz                                                                            | 1 780 VA     |
| ● at 60 Hz                                                                            | 2 140 VA     |
| <b>inductive power factor with closing power of the coil</b>                          | 0.3          |
| ● at 50 Hz                                                                            | 0.3          |
| ● at 60 Hz                                                                            | 0.3          |
| <b>apparent holding power of magnet coil at AC</b>                                    | 121 VA       |
| ● at 50 Hz                                                                            | 121 VA       |
| ● at 60 Hz                                                                            | 140 VA       |
| <b>inductive power factor with the holding power of the coil</b>                      | 0.22         |
| ● at 50 Hz                                                                            | 0.22         |
| ● at 60 Hz                                                                            | 0.29         |
| <b>arcing time</b>                                                                    | 20 ... 30 ms |
| <b>Auxiliary circuit</b>                                                              |              |
| <b>number of NC contacts for auxiliary contacts</b>                                   | 2            |

|                                                                 |                                                                                                                                       |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| • instantaneous contact                                         | 2                                                                                                                                     |
| <b>number of NO contacts for auxiliary contacts</b>             | 2                                                                                                                                     |
| • instantaneous contact                                         | 2                                                                                                                                     |
| number of CO contacts for auxiliary contacts                    | 0                                                                                                                                     |
| <b>identification number and letter for switching elements</b>  | 22                                                                                                                                    |
| operational current at AC-12 maximum                            | 10 A                                                                                                                                  |
| <b>operational current at AC-15</b>                             |                                                                                                                                       |
| • at 230 V rated value                                          | 5.6 A                                                                                                                                 |
| • at 400 V rated value                                          | 3.6 A                                                                                                                                 |
| • at 500 V rated value                                          | 2.5 A                                                                                                                                 |
| <b>operational current at DC-12</b>                             |                                                                                                                                       |
| • at 24 V rated value                                           | 10 A                                                                                                                                  |
| • at 48 V rated value                                           | 10 A                                                                                                                                  |
| • at 60 V rated value                                           | 10 A                                                                                                                                  |
| • at 110 V rated value                                          | 8 A                                                                                                                                   |
| • at 125 V rated value                                          | 6 A                                                                                                                                   |
| • at 220 V rated value                                          | 2 A                                                                                                                                   |
| • at 600 V rated value                                          | 0.4 A                                                                                                                                 |
| <b>operational current at DC-13</b>                             |                                                                                                                                       |
| • at 24 V rated value                                           | 10 A                                                                                                                                  |
| • at 48 V rated value                                           | 5 A                                                                                                                                   |
| • at 60 V rated value                                           | 5 A                                                                                                                                   |
| • at 110 V rated value                                          | 2.4 A                                                                                                                                 |
| • at 125 V rated value                                          | 2.1 A                                                                                                                                 |
| • at 220 V rated value                                          | 1.1 A                                                                                                                                 |
| • at 600 V rated value                                          | 0.21 A                                                                                                                                |
| <b>UL/CSA ratings</b>                                           |                                                                                                                                       |
| <b>contact rating of auxiliary contacts according to UL</b>     | A600 / P600                                                                                                                           |
| <b>Short-circuit protection</b>                                 |                                                                                                                                       |
| <b>design of the fuse link</b>                                  |                                                                                                                                       |
| • for short-circuit protection of the main circuit              |                                                                                                                                       |
| — with type of coordination 1 required                          | 2 x 3NE1330-4D (315 A) parallel (750 V, 12 kA)                                                                                        |
| — with type of coordination 2 required                          | 2 x 3NE1330-4D (315 A) parallel (750 V, 12 kA)                                                                                        |
| • for short-circuit protection of the auxiliary switch required | gG: 16 A (500 V, 1 kA)                                                                                                                |
| <b>Installation/ mounting/ dimensions</b>                       |                                                                                                                                       |
| <b>mounting position</b>                                        | +/-22,5° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| fastening method side-by-side mounting                          | Yes                                                                                                                                   |
| <b>fastening method</b>                                         | screw fixing                                                                                                                          |
| <b>height</b>                                                   | 281 mm                                                                                                                                |
| <b>width</b>                                                    | 160 mm                                                                                                                                |
| <b>depth</b>                                                    | 255 mm                                                                                                                                |
| <b>required spacing</b>                                         |                                                                                                                                       |
| • with side-by-side mounting                                    |                                                                                                                                       |
| — forwards                                                      | 25 mm                                                                                                                                 |
| — backwards                                                     | 0 mm                                                                                                                                  |
| — upwards                                                       | 10 mm                                                                                                                                 |
| — downwards                                                     | 10 mm                                                                                                                                 |
| — at the side                                                   | 10 mm                                                                                                                                 |
| • for grounded parts                                            |                                                                                                                                       |
| — forwards                                                      | 100 mm                                                                                                                                |
| — backwards                                                     | 0 mm                                                                                                                                  |
| — upwards                                                       | 10 mm                                                                                                                                 |
| — at the side                                                   | 10 mm                                                                                                                                 |
| — downwards                                                     | 10 mm                                                                                                                                 |
| • for live parts                                                |                                                                                                                                       |
| — forwards                                                      | 100 mm                                                                                                                                |
| — backwards                                                     | 0 mm                                                                                                                                  |
| — upwards                                                       | 10 mm                                                                                                                                 |

— downwards

10 mm

— at the side

10 mm

#### Connections/ Terminals

##### type of electrical connection

- for main current circuit
- for auxiliary and control circuit

screw terminal  
screw-type terminals  
screw-type terminals

##### type of connectable conductor cross-sections

- for auxiliary contacts
  - solid or stranded
  - finely stranded with core end processing

2x (1 ... 2.5 mm<sup>2</sup>)  
2x (0.75 ... 1.5 mm<sup>2</sup>)

#### Safety related data

product function mirror contact according to IEC 60947-4-1

Yes

##### Electrical Safety

protection class IP on the front according to IEC 60529

IP00; IP20 with box terminal/cover

touch protection on the front according to IEC 60529

finger-safe, for vertical contact from the front with cover

#### Approvals Certificates

##### Environment

##### General Product Approval

[Environmental Confirmations](#)



##### General Product Approval

##### Functional Safety

##### Test Certificates

##### other



[Type Examination Certificate](#)

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Confirmation](#)

##### other

##### Dangerous goods



[Transport Information](#)

#### Further information

##### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

##### Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

##### 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=3TC5617-0BK1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC5617-0BK1>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TC5617-0BK1&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC5617-0BK1&lang=en)

##### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC5617-0BK1>

##### Characteristic curves

[https://curves.simarisiemens.com/curves/<mmp\\_prod\\_noCOMP='HAUPT'></mmp\\_prod\\_no>](https://curves.simarisiemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>)



