SIEMENS

## Data sheet 3TC5617-0BK1

Contactor size 12, 2-pole DC-3 and 5, 400 A Auxiliary switch 22 (2 NO + 2 NC)
Direct current operation 120 V AC 60 Hz/100 V AC 50 Hz

| | |
|---|---|
| **product designation** | Contactor |
| **product type designation** | 3TC |
| **General technical data** | |
| **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 | 12g / 5 ms, 5,6g / 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 (Date)** | 05/01/2012 |
| **SVHC substance name** | Lead - 7439-92-1 |
| **Weight** | 14.568 kg |
| **Ambient conditions** | |
| **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 % |
| **Main circuit** | |
| **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 |

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| — 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 |
| **operating power** | |
| ● 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 |
| **operating frequency** | |
| ● at DC-1 maximum | 1 000 1/h |
| ● at DC-3 maximum | 600 1/h |
| ● at DC-5 maximum | 600 1/h |
| **Control circuit/ Control** | |
| **type of voltage of the control supply voltage** | AC |
| **control supply voltage at AC** | |
| ● at 50 Hz rated value | 100 V |
| ● at 60 Hz rated value | 120 V |
| **operating range factor control supply voltage rated value of magnet coil at AC** | |
| ● at 60 Hz | 0.8 ... 1.1 |
| **apparent pick-up power of magnet coil at AC** | 1 780 VA |
| ● at 50 Hz | 1 780 VA |
| ● at 60 Hz | 2 140 VA |
| **inductive power factor with closing power of the coil** | 0.3 |
| ● at 50 Hz | 0.3 |
| ● at 60 Hz | 0.3 |
| **apparent holding power of magnet coil at AC** | 121 VA |
| ● at 50 Hz | 121 VA |
| ● at 60 Hz | 140 VA |
| **inductive power factor with the holding power of the coil** | 0.22 |
| ● at 50 Hz | 0.22 |
| ● at 60 Hz | 0.29 |
| **arcing time** | 20 ... 30 ms |
| **Auxiliary circuit** | |
| **number of NC contacts for auxiliary contacts** | 2 |
| ● instantaneous contact | 2 |
| **number of NO contacts for auxiliary contacts** | 2 |
| ● instantaneous contact | 2 |
| number of CO contacts for auxiliary contacts | 0 |

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| **identification number and letter for switching elements** | 22 |
| operational current at AC-12 maximum | 10 A |
| **operational current at AC-15** | |
| ● at 230 V rated value | 5.6 A |
| ● at 400 V rated value | 3.6 A |
| ● at 500 V rated value | 2.5 A |
| **operational current at DC-12** | |
| ● 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 |
| **operational current at DC-13** | |
| ● 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 |
| **UL/CSA ratings** | |
| **contact rating of auxiliary contacts according to UL** | A600 / P600 |
| **Short-circuit protection** | |
| **design of the fuse link** | |
| ● 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 assignment 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) |
| **Installation/ mounting/ dimensions** | |
| **mounting position** | +/-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 |
| **fastening method** | screw fixing |
| **height** | 281 mm |
| **width** | 160 mm |
| **depth** | 255 mm |
| **required spacing** | |
| ● 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** | screw terminal |
| ● for main current circuit | screw-type terminals |
| ● for auxiliary and control circuit | screw-type terminals |

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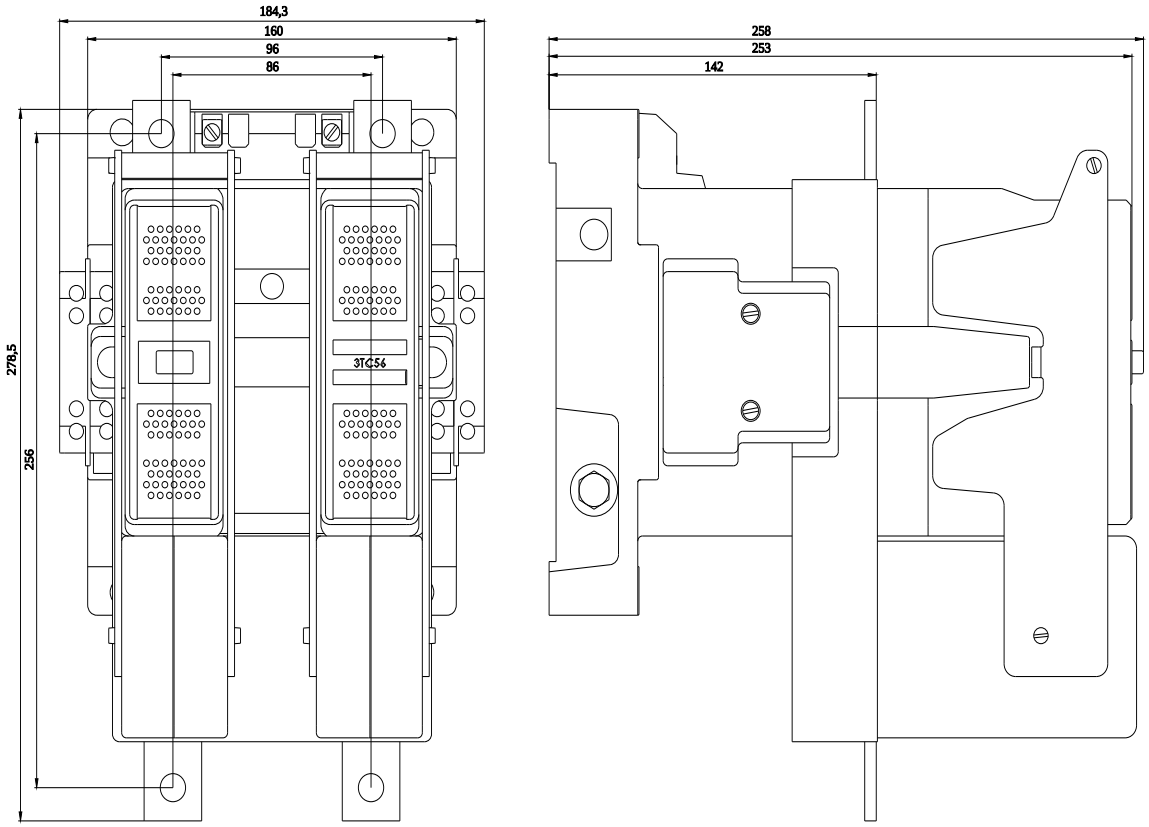
| **type of connectable conductor cross-sections** | |
| ● for auxiliary contacts | |
| — solid or stranded | 2x (1 ... 2.5 mm²) |
| — finely stranded with core end processing | 2x (0.75 ... 1.5 mm²) |
| **Safety related data** | |
| product function mirror contact according to IEC 60947-4-1 | Yes |
| 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** | |
| **General Product Approval** | |

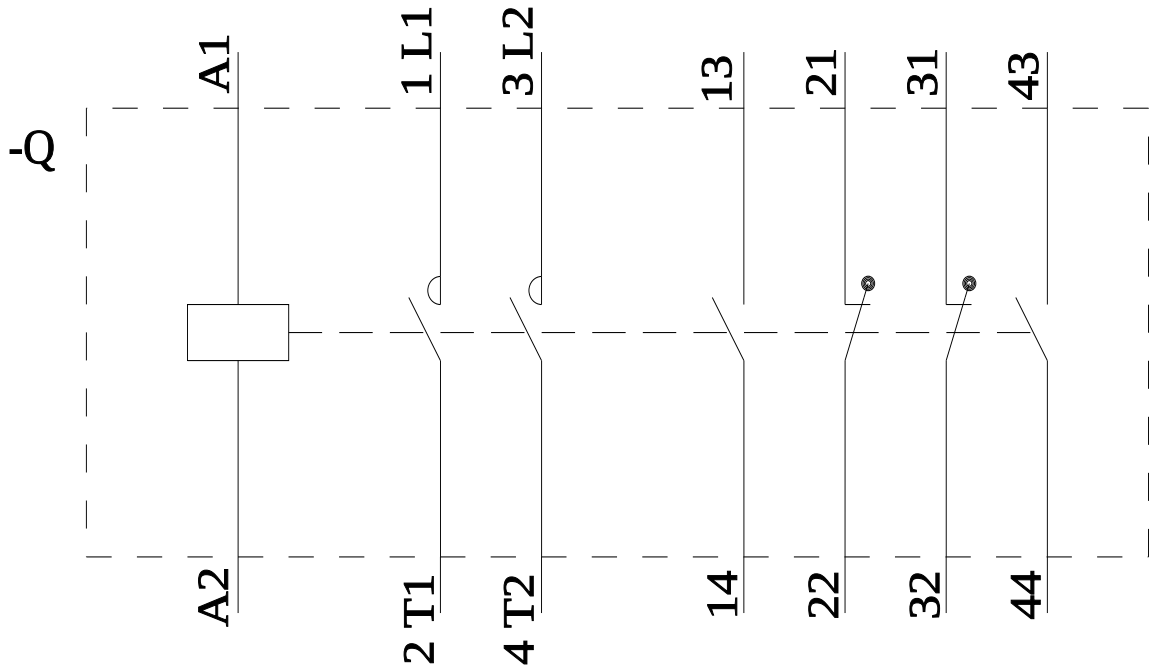
| Functional Saftey | | Test Certificates | | | other |
|---|---|---|---|---|---|
| Type Examination Certificate | Type Examination Certificate | Special Test Certificate | Type Test Certificates/Test Report | Miscellaneous | Confirmation |

| Dangerous goods | Environment |
|---|---|
| Transport Information | Environmental Confirmations |

**Further information**

**Information on the packaging**
https://support.industry.siemens.com/cs/ww/en/view/109813875
**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
**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&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, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC5617-0BK1&lang=en
**Characteristic: Tripping characteristics, I²t, Let-through current**
https://support.industry.siemens.com/cs/ww/en/ps/3TC5617-0BK1/char
**Further characteristics (e.g. electrical endurance, switching frequency)**
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC5617-0BK1&objecttype=14&gridview=view1

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