SIEMENS

## Data sheet 3TC4417-0BK6




Contactor size 2, 2-pole DC-3 and 5, 32 A Auxiliary switch 22 (2 NO + 2 NC)
Alternating current operation 120 V AC 60 Hz/110 V AC 50 Hz

| | |
|---|---|
| **product designation** | Contactor |
| **product type designation** | 3TC |
| **General technical data** | |
| **size of contactor** | 2 |
| **product extension** | |
| ● function module for communication | No |
| ● auxiliary switch | Yes |
| **insulation voltage rated value** | 800 V |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 300 V |
| **shock resistance at rectangular impulse** | |
| ● at AC | 7,5g / 5 ms, 3,4g / 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)** | 02/01/2012 |
| **SVHC substance name** | Lead - 7439-92-1<br>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1 |
| **Weight** | 0.692 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 | 32 A |
| — at 110 V rated value | 32 A |
| — at 220 V rated value | 32 A |
| **● with 2 current paths in series at DC-1** | |
| — at 24 V rated value | 32 A |
| — at 110 V rated value | 32 A |


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| | |
|---|---|
| — at 220 V rated value | 32 A |
| — at 440 V rated value | 32 A |
| — at 600 V rated value | 32 A |
| — at 750 V rated value | 32 A |
| **● at DC-3 at DC-5** | |
| — at 220 V rated value | 32 A |
| — at 600 V rated value | 21 A |
| — at 750 V rated value | 7.5 A |
| **● at 1 current path at DC-3 at DC-5** | |
| — at 24 V rated value | 32 A |
| — at 110 V rated value | 32 A |
| — at 220 V rated value | 32 A |
| **● with 2 current paths in series at DC-3 at DC-5** | |
| — at 24 V rated value | 32 A |
| — at 110 V rated value | 32 A |
| — at 220 V rated value | 32 A |
| — at 440 V rated value | 29 A |
| — at 600 V rated value | 21 A |
| — at 750 V rated value | 7.5 A |
| **operating power** | |
| ● at DC-1 | |
| — at 110 V rated value | 3.5 kW |
| — at 220 V rated value | 7 kW |
| — at 440 V rated value | 14 kW |
| — at 750 V rated value | 24 kW |
| ● at DC-3 at DC-5 | |
| — at 110 V rated value | 2.5 kW |
| — at 220 V rated value | 5 kW |
| — at 440 V rated value | 9 kW |
| — at 600 V rated value | 9 kW |
| — at 750 V rated value | 4 kW |
| **operating frequency** | |
| ● at DC-1 maximum | 1 500 1/h |
| ● at DC-3 maximum | 750 1/h |
| ● at DC-5 maximum | 750 1/h |
| **Control circuit/ Control** | |
| **type of voltage of the control supply voltage** | AC |
| **control supply voltage at AC** | |
| ● at 50 Hz rated value | 110 V |
| ● at 60 Hz rated value | 120 V |
| **operating range factor control supply voltage rated value of magnet coil at AC** | |
| ● at 50 Hz | 0.8 ... 1.1 |
| ● at 60 Hz | 0.85 ... 1.1 |
| **apparent pick-up power of magnet coil at AC** | 79 VA |
| ● at 50 Hz | 68 VA |
| ● at 60 Hz | 95 VA |
| **inductive power factor with closing power of the coil** | 0.83 |
| ● at 50 Hz | 0.86 |
| ● at 60 Hz | 0.79 |
| **apparent holding power of magnet coil at AC** | 11 VA |
| ● at 50 Hz | 10 VA |
| ● at 60 Hz | 12 VA |
| **inductive power factor with the holding power of the coil** | 0.28 |
| ● at 50 Hz | 0.29 |
| ● at 60 Hz | 0.3 |
| **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 |


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| | |
|---|---|
| ● instantaneous contact | 2 |
| number of CO contacts for auxiliary contacts | 0 |
| **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 | 3.2 A |
| ● at 125 V rated value | 2.5 A |
| ● at 220 V rated value | 0.9 A |
| ● at 600 V rated value | 0.22 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 | 1.14 A |
| ● at 125 V rated value | 0.98 A |
| ● at 220 V rated value | 0.48 A |
| ● at 600 V rated value | 0.07 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 3NA3020 (50 A) in series (750 V, 3 kA) |
| — with type of assignment 2 required | 2 x 3NA3020 (50 A) in series (750 V, 3 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 and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022 |
| **height** | 85 mm |
| **width** | 70 mm |
| **depth** | 104 mm |
| **required spacing** | |
| ● with side-by-side mounting | |
| — forwards | 15 mm |
| — backwards | 0 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 10 mm |
| ● for grounded parts | |
| — forwards | 30 mm |
| — backwards | 0 mm |
| — upwards | 10 mm |
| — at the side | 10 mm |
| — downwards | 10 mm |
| ● for live parts | |
| — forwards | 30 mm |
| — backwards | 0 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 10 mm |
| **Connections/ Terminals** | |
| **type of electrical connection** | screw terminal |


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| | |
|---|---|
| ● for main current circuit | screw-type terminals |
| ● for auxiliary and control circuit | screw-type terminals |
| type of connectable conductor cross-sections for main contacts | |
| ● solid or stranded | 2x (2,5 ... 10 mm²) |
| ● finely stranded with core end processing | 2x (1.5 ... 4 mm²) |
| **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; One NC contact each must be connected in series for the right and left auxiliary switch block respectively |

### Electrical Safety

| | |
|---|---|
| **protection class IP on the front according to IEC 60529** | IP00 |

## Approvals Certificates

### General Product Approval

Confirmation

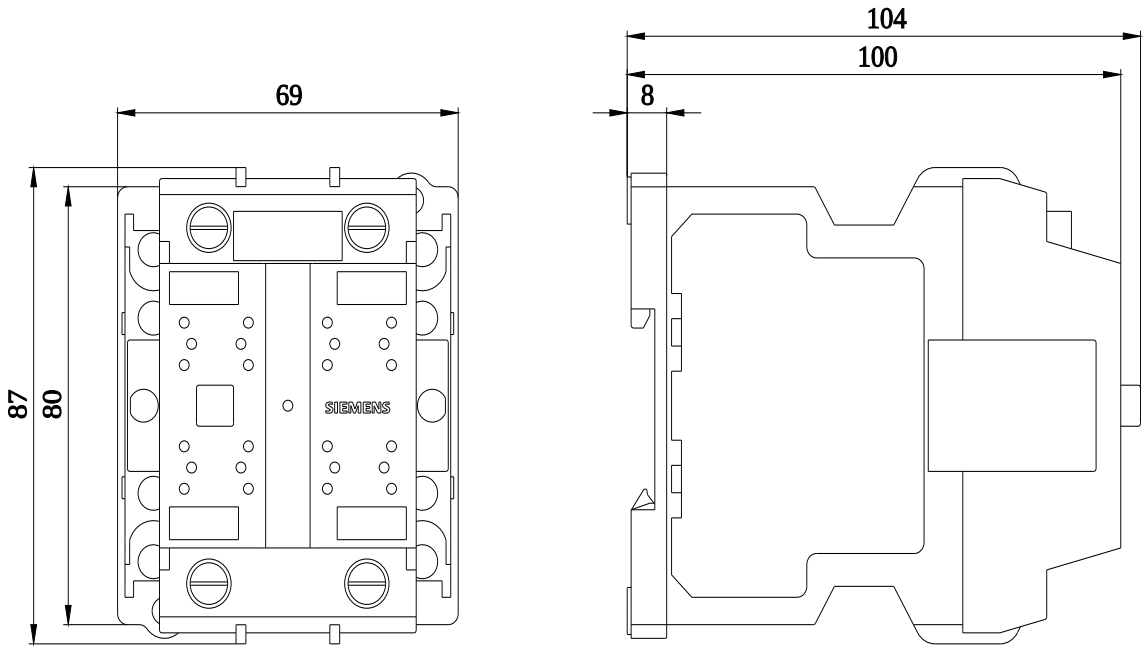
| General Product Approval | Functional Saftey | | Test Certificates | | |
|---|---|---|---|---|---|
| | Type Examination Certificate | Type Examination Certificate | Miscellaneous | Type Test Certificates/Test Report | Special Test Certificate |

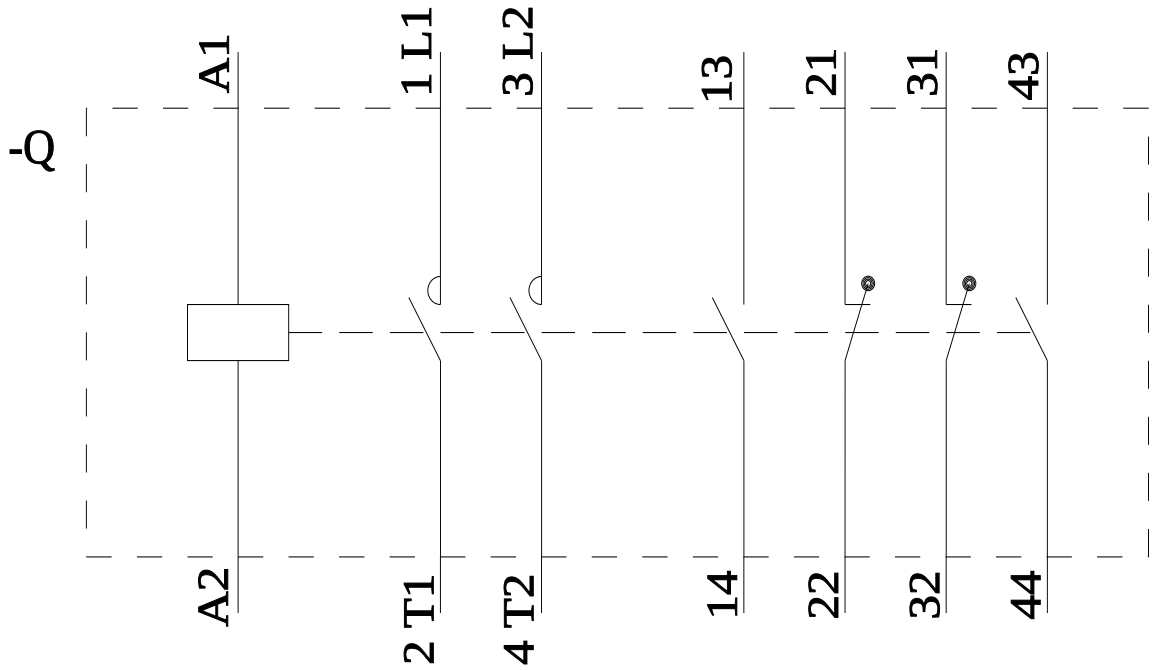
| other | Dangerous goods | Environment |
|---|---|---|
| Confirmation | Transport Information | Environmental Confirmations |

## 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=3TC4417-0BK6
**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC4417-0BK6
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0BK6
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4417-0BK6&lang=en
**Characteristic: Tripping characteristics, I²t, Let-through current**
https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0BK6/char
**Further characteristics (e.g. electrical endurance, switching frequency)**
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC4417-0BK6&objecttype=14&gridview=view1


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