



contactor, DC-3/DC-5, 32 A, 2-pole, 24 V AC 50/60 Hz, auxiliary contacts: 2 NO + 2 NC, screw terminal, frame size 2

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| 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 | 7,5 g / 5 ms, 3,4 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 Prohibition (Date) | 02/01/2012 |
| SVHC substance name | Lead CAS-No. 7439-92-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1 |
| Net Weight | 0.66 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 |

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| — at 110 V rated value | 32 A |
| — 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 | 24 V |
| ● at 60 Hz rated value | 24 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 | |

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| 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 |
| 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 coordination 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 |

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|---------------|-------|
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 10 mm |

Connections/ Terminals

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| type of electrical connection | screw terminal |
| • 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 mm ²) |
| • finely stranded with core end processing | 2x (1.5 ... 4 mm ²) |
| type of connectable conductor cross-sections | |
| • for auxiliary contacts | |
| — solid or stranded | 2x (1 ... 2.5 mm ²) |
| — finely stranded with core end processing | 2x (0.75 ... 1.5 mm ²) |

Safety related data

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| 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 |
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Electrical Safety

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| protection class IP on the front according to IEC 60529 | IP00 |
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Approvals Certificates

| Environment | General Product Approval | Functional Safety | other |
|-------------|--------------------------|-------------------|-------|
|-------------|--------------------------|-------------------|-------|

[Environmental Con-
firmations](#)



[Type Examination Cer-
tificate](#)

[Confirmation](#)

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=3TC4417-0BC2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0BC2>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4417-0BC2&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC4417-0BC2>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)



