



Contactor, Size 2, 2-pole, DC-3 and 5, 32 A Auxiliary contacts 22 (2 NO + 2 NC) 42 V AC 50 Hz/50 V AC 60 Hz AC operation

|   |                           |
|---|---------------------------|
| <b>product designation</b>  | Contactor                 |
| <b>product type designation</b>   | 3TC                       |
| <b>General technical data</b>   |                           |
| <b>size of contactor</b>  | 2                         |
| <b>product extension</b>  |                           |
| • function module for communication   | No                        |
| • auxiliary switch  | Yes                       |
| <b>insulation voltage rated value</b>   | 800 V                     |
| maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1 | 300 V                     |
| <b>shock resistance at rectangular impulse</b>  |                           |
| • at AC   | 7,5g / 5 ms, 3,4g / 10 ms |
| <b>mechanical service life (switching cycles)</b>   |                           |
| • of contactor typical  | 10 000 000                |
| • 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>  | 02/01/2012                |
| <b>Ambient conditions</b>   |                           |
| <b>ambient temperature</b>  |                           |
| • during operation  | -25 ... +55 °C            |
| • during storage  | -50 ... +80 °C            |
| <b>relative humidity minimum</b>  | 10 %                      |
| <b>relative humidity at 55 °C according to IEC 60068-2-30 maximum</b>                                 | 95 %                      |
| <b>Main circuit</b>   |                           |
| <b>number of poles</b>  | 2                         |
| <b>number of poles for main current circuit</b>   | 2                         |
| <b>number of NO contacts for main contacts</b>  | 2                         |
| <b>number of NC contacts for main contacts</b>  | 0                         |
| <b>type of voltage</b>  | DC                        |
| <b>operational current</b>  |                           |
| • <b>at 1 current path at DC-1</b>  |                           |
| — at 24 V rated value   | 32 A                      |
| — at 110 V rated value  | 32 A                      |
| — at 220 V rated value  | 32 A                      |
| • <b>with 2 current paths in series at DC-1</b>   |                           |
| — 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  | 32 A         |
| — at 600 V rated value  | 32 A         |
| — at 750 V rated value  | 32 A         |
| ● <b>at 1 current path at DC-3 at DC-5</b>  |              |
| — at 24 V rated value   | 32 A         |
| — at 110 V rated value  | 32 A         |
| — at 220 V rated value  | 32 A         |
| ● <b>with 2 current paths in series at DC-3 at DC-5</b>                               |              |
| — 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        |
| <b>operating power</b>  |              |
| ● 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         |
| <b>operating frequency</b>  |              |
| ● at DC-1 maximum   | 1 500 1/h    |
| ● at DC-3 maximum   | 750 1/h      |
| ● at DC-5 maximum   | 750 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  | 42 V         |
| ● at 60 Hz rated value  | 50 V         |
| <b>operating range factor control supply voltage rated 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>                                    | 68 VA        |
| ● at 50 Hz  | 68 VA        |
| ● at 60 Hz  | 95 VA        |
| <b>inductive power factor with closing power of the coil</b>                          | 0.86         |
| ● at 50 Hz  | 0.86         |
| ● at 60 Hz  | 0.79         |
| <b>apparent holding power of magnet coil at AC</b>                                    | 10 VA        |
| ● at 50 Hz  | 10 VA        |
| ● at 60 Hz  | 12 VA        |
| <b>inductive power factor with the holding power of the coil</b>                      | 0.29         |
| ● at 50 Hz  | 0.29         |
| ● at 60 Hz  | 0.3          |
| <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           |
| <b>operational current at AC-12 maximum</b>   | 10 A         |

|  |   |
|--|---|
| <b>operational current at AC-15</b>  |   |
| <ul style="list-style-type: none"> <li>● at 230 V rated value</li> <li>● at 400 V rated value</li> <li>● at 500 V rated value</li> </ul>   | <p>5.6 A</p> <p>3.6 A</p> <p>2.5 A</p>  |
| <b>operational current at DC-12</b>  |   |
| <ul style="list-style-type: none"> <li>● at 24 V rated value</li> <li>● at 48 V rated value</li> <li>● at 60 V rated value</li> <li>● at 110 V rated value</li> <li>● at 125 V rated value</li> <li>● at 220 V rated value</li> <li>● at 600 V rated value</li> </ul>  | <p>10 A</p> <p>10 A</p> <p>10 A</p> <p>3.2 A</p> <p>2.5 A</p> <p>0.9 A</p> <p>0.22 A</p>  |
| <b>operational current at DC-13</b>  |   |
| <ul style="list-style-type: none"> <li>● at 24 V rated value</li> <li>● at 48 V rated value</li> <li>● at 60 V rated value</li> <li>● at 110 V rated value</li> <li>● at 125 V rated value</li> <li>● at 220 V rated value</li> <li>● at 600 V rated value</li> </ul>  | <p>10 A</p> <p>5 A</p> <p>5 A</p> <p>1.14 A</p> <p>0.98 A</p> <p>0.48 A</p> <p>0.07 A</p>   |
| <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>   |   |
| <ul style="list-style-type: none"> <li>● for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>— with type of coordination 1 required</li> <li>— with type of assignment 2 required</li> </ul> </li> <li>● for short-circuit protection of the auxiliary switch required</li> </ul>  | <p>2 x 3NA3020 (50 A) in series (750 V, 3 kA)</p> <p>2 x 3NA3020 (50 A) in series (750 V, 3 kA)</p> <p>gG: 16 A (500 V, 1 kA)</p>   |
| <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; standing, on horizontal mounting surface                 |
| <b>fastening method</b>  | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022  |
| <ul style="list-style-type: none"> <li>● side-by-side mounting</li> </ul>  | Yes   |
| <b>height</b>  | 85 mm   |
| <b>width</b>   | 70 mm   |
| <b>depth</b>   | 104 mm  |
| <b>required spacing</b>  |   |
| <ul style="list-style-type: none"> <li>● with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>● for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>● for live parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul> | <p>15 mm</p> <p>0 mm</p> <p>10 mm</p> <p>10 mm</p> <p>10 mm</p> <p>30 mm</p> <p>0 mm</p> <p>10 mm</p> <p>10 mm</p> <p>10 mm</p> <p>30 mm</p> <p>0 mm</p> <p>10 mm</p> <p>10 mm</p> <p>10 mm</p> |
| <b>Connections/ Terminals</b>  |   |
| <b>type of electrical connection</b>   | screw-type terminals  |

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> </ul>   | screw-type terminals<br>screw-type terminals                          |
| <b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for main contacts               <ul style="list-style-type: none"> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> </ul>      | 2x (2,5 ... 10 mm <sup>2</sup> )<br>2x (1.5 ... 4 mm <sup>2</sup> )   |
| <b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts               <ul style="list-style-type: none"> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> </ul> | 2x (1 ... 2,5 mm <sup>2</sup> )<br>2x (0.75 ... 1.5 mm <sup>2</sup> ) |

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

| Certificates/ approvals  |                                       |
|--------------------------|---------------------------------------|
| General Product Approval | Functional Safety/Safety of Machinery |



[Confirmation](#)



[Type Examination Certificate](#)

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

[Type Examination Certificate](#)



[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)

|                   |       |                |
|-------------------|-------|----------------|
| Marine / Shipping | other | Dangerous Good |
|-------------------|-------|----------------|



[Confirmation](#)

[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=3TC4417-0BD0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC4417-0BD0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0BD0>

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

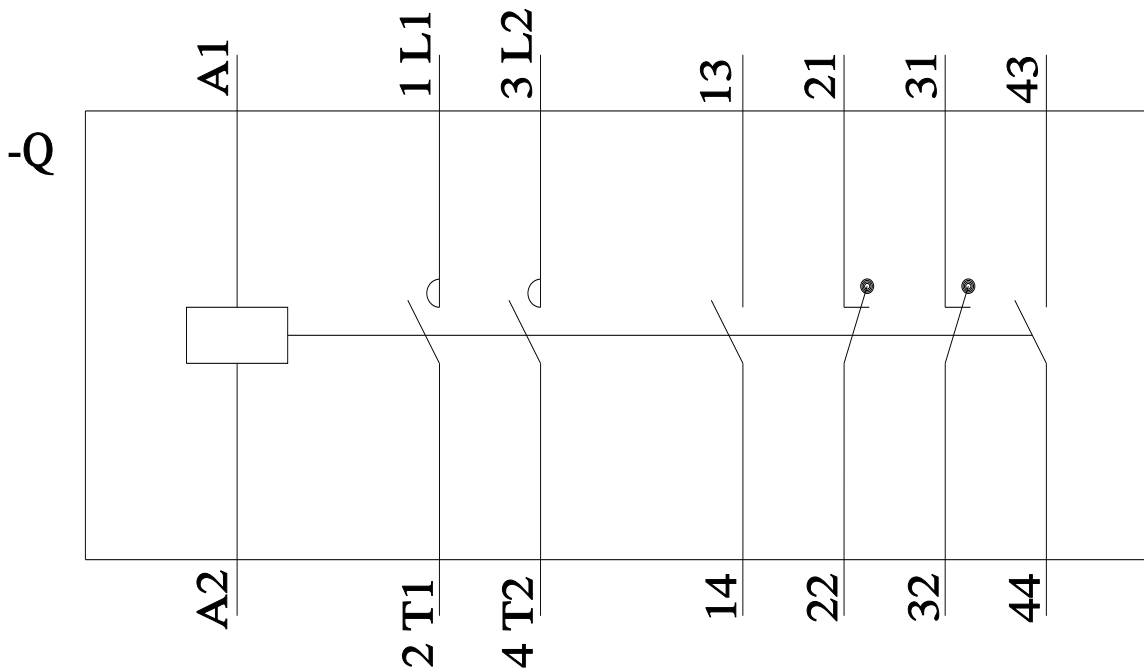
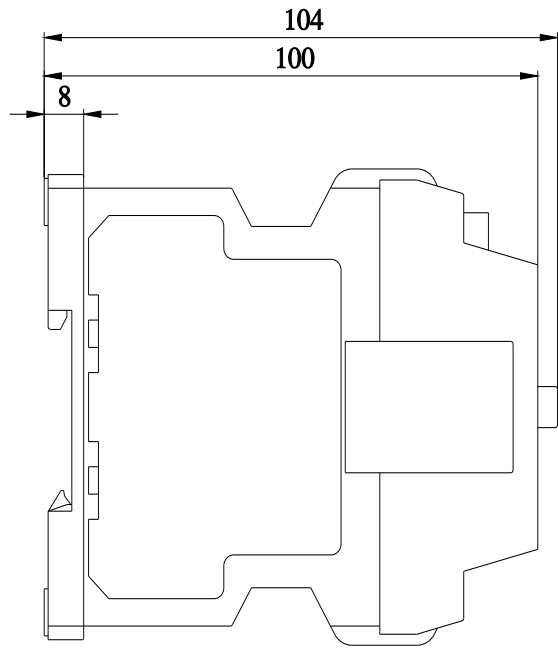
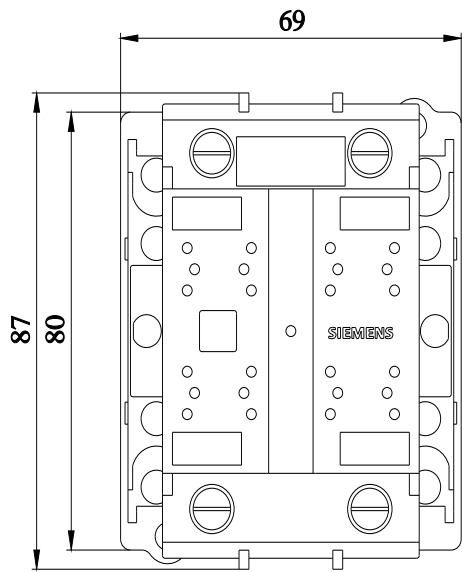
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TC4417-0BD0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4417-0BD0&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0BD0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC4417-0BD0&objecttype=14&gridview=view1>



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