



contactor, frame size 2, 2-pole, DC-3 and 5, 32 A auxiliary contacts 22 (2 NO + 2 NC) 36 V DC DC operation

|                                                                                                              |                                                                             |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| product designation                                                                                          | Contactor                                                                   |
| product type designation                                                                                     | 3TC                                                                         |
| <b>General technical data</b>                                                                                |                                                                             |
| 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 DC                                                                                                      | 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 Prohibittance (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                                                                                                       | 1.089 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                                                                                        | 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                                                                        |

|                                                                |               |
|----------------------------------------------------------------|---------------|
| — 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 DC-3 at DC-5</b>                                       |               |
| — at 220 V rated value                                         | 32 A          |
| — at 600 V rated value                                         | 21 A          |
| — at 750 V rated value                                         | 7.5 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>                                         |               |
| ● <b>at DC-1</b>                                               |               |
| — 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         |
| ● <b>at DC-3 at DC-5</b>                                       |               |
| — 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>                                     |               |
| ● <b>at DC-1 maximum</b>                                       | 1 500 1/h     |
| ● <b>at DC-3 maximum</b>                                       | 750 1/h       |
| ● <b>at DC-5 maximum</b>                                       | 750 1/h       |
| <b>Control circuit/ Control</b>                                |               |
| <b>type of voltage of the control supply voltage</b>           | DC            |
| <b>control supply voltage at DC rated value</b>                | 36 V          |
| <b>closing power of magnet coil at DC</b>                      | 10 W          |
| <b>holding power of magnet coil at DC</b>                      | 10 W          |
| closing delay at DC                                            | 35 ... 190 ms |
| opening delay at DC                                            | 10 ... 25 ms  |
| <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                                         | 3.2 A         |
| ● at 125 V rated value                                         | 2.5 A         |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.9 A<br>0.22 A                                                                                                                          |
| <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>                                                                                                                                                                                                                                                                                                                        | 10 A<br>5 A<br>5 A<br>1.14 A<br>0.98 A<br>0.48 A<br>0.07 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                          |
| <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>                                                                                                                                                                                                                                                                        | 2 x 3NA3020 (50 A) in series (750 V, 3 kA)<br>2 x 3NA3020 (50 A) in series (750 V, 3 kA)<br>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 and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022                                                                 |
| <b>height</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 85 mm                                                                                                                                    |
| <b>width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 70 mm                                                                                                                                    |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 145 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> | 15 mm<br>0 mm<br>10 mm<br>10 mm<br>10 mm<br><br>30 mm<br>0 mm<br>10 mm<br>10 mm<br>10 mm<br><br>30 mm<br>0 mm<br>10 mm<br>10 mm<br>10 mm |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                          |
| <b>type of electrical connection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | screw terminal                                                                                                                           |
| <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                                                                                             |
| type of connectable conductor cross-sections for main contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2x (2,5 ... 10 mm²)<br>2x (1.5 ... 4 mm²)                                                                                                |
| <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 mm²)<br>2x (0.75 ... 1.5 mm²)                                                                                              |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                          |
| 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                          |
| <b>Electrical Safety</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                          |
| <b>protection class IP on the front according to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | IP00                                                                                                                                     |

## Approvals Certificates

| General Product Approval                                                          |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Functional Safety                            |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------|
|  |  |  |  |  | <a href="#">Type Examination Certificate</a> |

| Functional Safety                            | Test Certificates             |                                                    | other                                    | Dangerous goods              |                                       |
|----------------------------------------------|-------------------------------|----------------------------------------------------|------------------------------------------|------------------------------|---------------------------------------|
| <a href="#">Type Examination Certificate</a> | <a href="#">Miscellaneous</a> | <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Special Test Certificate</a> | <a href="#">Confirmation</a> | <a href="#">Transport Information</a> |

## Environment

[Environmental Conformations](#)

## 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=3TC4417-0AV4>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC4417-0AV4>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0AV4>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TC4417-0AV4&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4417-0AV4&lang=en)

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0AV4/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC4417-0AV4&objecttype=14&gridview=view1>



