## **SIEMENS**

Data sheet 3TC4417-0AF4



Contactor, Size 2, 2-pole, DC-3 and 5, 32 A Auxiliary contacts 22 (2 NO + 2 NC) 110V DC DC operation

| product designation   | Contactor                 |
|---|---------------------------|
| product type designation  | 3TC                       |
| General technical data  |                           |
| size of contactor   | 2                         |
| product extension   |                           |
| <ul> <li>function module for communication</li> </ul>   | No                        |
| <ul><li>auxiliary switch</li></ul>  | Yes                       |
| insulation voltage rated value  | 800 V                     |
| maximum permissible voltage for safe isolation 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 (switching cycles)  |                           |
| <ul> <li>of contactor typical</li> </ul>  | 10 000 000                |
| <ul> <li>of the contactor with added auxiliary switch block<br/>typical</li> </ul>                    | 10 000 000                |
| reference code according to IEC 81346-2   | Q                         |
| Substance Prohibitance (Date)   | 02/01/2012                |
| Ambient conditions  |                           |
| ambient temperature   |                           |
| <ul><li>during operation</li></ul>  | -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                      |
| <ul><li>with 2 current paths in series at DC-1</li></ul>  |                           |
| — 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   |
|---|--|
| 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  | 00.4   |
| — 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<br>21 A   |
| — at 600 V rated value  | 7.5 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   | 24 (0)   |
| — 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  |
| <ul> <li>at DC-5 maximum</li> </ul>   | 750 1/h  |
| Control circuit/ Control  |  |
| type of voltage of the control supply voltage   | DC   |
| control supply voltage at DC  |  |
| rated value   | 110 V  |
| closing power of magnet coil at DC  | 10 W   |
| holding power of magnet coil at DC  | 10 W   |
| closing delay at DC   | 35 190 ms  |
| opening delay at DC   | 10 25 ms   |
| arcing time   | 20 30 ms   |
| Auxiliary circuit   |  |
| number of NC contacts for auxiliary contacts  | 2  |
| <ul> <li>instantaneous contact</li> </ul>   | 2  |
| number of NO contacts for auxiliary contacts  | 2  |
| <ul> <li>instantaneous contact</li> </ul>   | 2  |
| number of CO contacts for auxiliary contacts  | 0  |
|   |  |
| identification number and letter for switching  | 22   |
| elements  | 22   |
| elements operational current at AC-12 maximum   |  |
| elements operational current at AC-12 maximum operational current at AC-15  | 22<br>10 A   |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value  | 22<br>10 A<br>5.6 A  |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value   | 22<br>10 A<br>5.6 A<br>3.6 A   |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value  | 22<br>10 A<br>5.6 A  |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12   | 22<br>10 A<br>5.6 A<br>3.6 A<br>2.5 A  |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12 • at 24 V rated value   | 22<br>10 A<br>5.6 A<br>3.6 A<br>2.5 A  |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12   | 22<br>10 A<br>5.6 A<br>3.6 A<br>2.5 A  |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value   | 22<br>10 A<br>5.6 A<br>3.6 A<br>2.5 A<br>10 A<br>10 A  |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value   | 22<br>10 A<br>5.6 A<br>3.6 A<br>2.5 A<br>10 A<br>10 A<br>10 A  |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value  | 22<br>10 A<br>5.6 A<br>3.6 A<br>2.5 A<br>10 A<br>10 A<br>10 A<br>3.2 A                                     |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value   | 22<br>10 A<br>5.6 A<br>3.6 A<br>2.5 A<br>10 A<br>10 A<br>10 A<br>3.2 A<br>2.5 A                            |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12  • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value   | 22<br>10 A<br>5.6 A<br>3.6 A<br>2.5 A<br>10 A<br>10 A<br>10 A<br>10 A<br>3.2 A<br>2.5 A<br>0.9 A           |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12  • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value  | 22<br>10 A<br>5.6 A<br>3.6 A<br>2.5 A<br>10 A<br>10 A<br>10 A<br>10 A<br>3.2 A<br>2.5 A<br>0.9 A           |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12  • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value  | 22<br>10 A<br>5.6 A<br>3.6 A<br>2.5 A<br>10 A<br>10 A<br>10 A<br>10 A<br>3.2 A<br>2.5 A<br>0.9 A<br>0.22 A |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 220 V rated value • at 600 V rated value • at 220 V rated value • at 600 V rated value • at 24 V rated value • at 24 V rated value   | 22<br>10 A<br>5.6 A<br>3.6 A<br>2.5 A<br>10 A<br>10 A<br>10 A<br>3.2 A<br>2.5 A<br>0.9 A<br>0.22 A         |
| elements operational current at AC-12 maximum operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 48 V rated value • at 48 V rated value | 22 10 A 5.6 A 3.6 A 2.5 A 10 A 10 A 10 A 3.2 A 2.5 A 0.9 A 0.22 A 10 A                                     |

| • at 220 V rated value   | 0.48 A   |   |
|--|--|---|
| at 600 V rated value   | 0.07 A   |   |
| UL/CSA ratings   | 0.01 A   |   |
|  | A600 / D600  |   |
| contact rating of auxiliary contacts according to UL                 | A600 / P600  |   |
| Short-circuit protection   |  |   |
| design of the fuse link  |  |   |
| <ul> <li>for short-circuit protection of the main circuit</li> </ul> |  |   |
| <ul> <li>— with type of coordination 1 required</li> </ul>           | 2 x 3NA3020 (50 A) in series (750 V, 3 kA)   |   |
| <ul> <li>— with type of assignment 2 required</li> </ul>             | 2 x 3NA3020 (50 A) in series (750 V, 3 kA)   |   |
| for short-circuit protection of the auxiliary switch                 | gG: 16 A (500 V, 1 kA)   |   |
| required   |  |   |
| Installation/ mounting/ dimensions                                   |  |   |
| mounting position  | +/-22,5° rotation possible on vertical mounting surfated forward and backward by +/- 22.5° on vertical mour standing, on horizontal mounting surface |   |
| fastening method   | screw and snap-on mounting onto 35 mm DIN rail a 50022   | according to DIN EN                         |
| <ul> <li>side-by-side mounting</li> </ul>                            | Yes  |   |
| height   | 85 mm  |   |
| width  | 70 mm  |   |
| depth  | 145 mm   |   |
| required spacing   |  |   |
| <ul> <li>with side-by-side mounting</li> </ul>                       |  |   |
| — forwards   | 15 mm  |   |
| — backwards  | 0 mm   |   |
| — upwards  | 10 mm  |   |
| — downwards  | 10 mm  |   |
| — at the side  | 10 mm  |   |
| <ul> <li>for grounded parts</li> </ul>                               |  |   |
| — 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-type terminals   |   |
| <ul> <li>for main current circuit</li> </ul>                         | screw-type terminals   |   |
| <ul> <li>for auxiliary and control circuit</li> </ul>                | screw-type terminals   |   |
| type of connectable conductor cross-sections                         |  |   |
| <ul> <li>for main contacts</li> </ul>                                |  |   |
| <ul><li>— solid or stranded</li></ul>                                | 2x (2,5 10 mm²)  |   |
| <ul> <li>finely stranded with core end processing</li> </ul>         | 2x (1.5 4 mm²)   |   |
| type of connectable conductor cross-sections                         |  |   |
| <ul> <li>for auxiliary contacts</li> </ul>                           |  |   |
| <ul><li>— solid or stranded</li></ul>                                | 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           | left auxiliary switch block respectively   |   |
| protection class IP on the front according to IEC 60529              | IP00   |   |
| Certificates/ approvals  |  |   |
| General Product Approval   |  | Functional<br>Safety/Safety of<br>Machinery |
|  |  |   |





Confirmation





Type Examination Certificate

Functional Safety/Safety of Machinery

**Declaration of Conformity** 

**Test Certificates** 

Type Examination Certificate





**Miscellaneous** 

Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping

other

**Dangerous Good** 



Confirmation

<u>Transport Information</u>

## **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=3TC4417-0AF4

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC4417-0AF4

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

https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0AF4

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

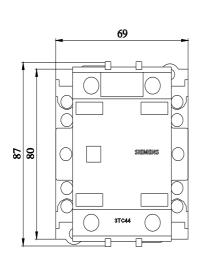
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3TC4417-0AF4&lang=en

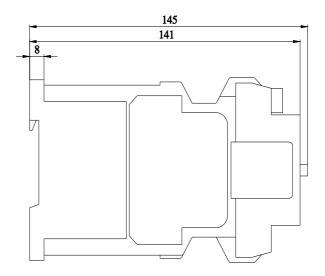
Characteristic: Tripping characteristics, I²t, Let-through current

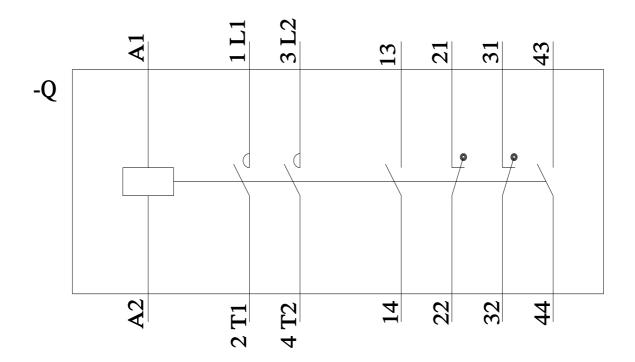
 $\underline{https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0AF4/char}$ 

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC4417-0AF4&objecttype=14&gridview=view1







last modified: 11/21/2022 🖸