

Contactor, Size 2, 2-pole, DC-3 and 5, 32 A Auxiliary contacts 22 (2 NO + 2 NC) 220 V AC 60 Hz/183 V AC 50 Hz AC 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 safe isolation between coil and main contacts acc. to EN 60947-1	300 V
• <b>Protection class IP</b>	IP00
• protection class IP on the front	IP00
• Protection class IP of the terminal	IP00
<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

Reference code acc. to DIN EN 81346-2	Q
<b>Ambient conditions</b>	
<b>Ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul>	<p>-25 ... +55 °C</p> <p>-50 ... +80 °C</p>
<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
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• with 2 current paths in series at DC-1 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul>	<p>32 A</p> <p>32 A</p> <p>32 A</p> <p>32 A</p> <p>32 A</p>
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> <li>— at 750 V rated value</li> </ul> </li> <li>• with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul>	<p>32 A</p> <p>29 A</p> <p>21 A</p> <p>7.5 A</p> <p>32 A</p> <p>32 A</p> <p>32 A</p> <p>29 A</p> <p>21 A</p>
<b>Operating power</b>	
<ul style="list-style-type: none"> <li>• at DC-1 <ul style="list-style-type: none"> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 750 V rated value</li> </ul> </li> <li>• at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul>	<p>3.5 kW</p> <p>7 kW</p> <p>14 kW</p> <p>24 kW</p> <p>2.5 kW</p> <p>5 kW</p> <p>9 kW</p> <p>9 kW</p>

— 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	183 V
• at 60 Hz rated value	220 V
<b>Operating range factor control supply voltage rated value of magnet coil at AC</b>	
• at 60 Hz	0.8 ... 1.1
<b>Apparent pick-up power of magnet coil at AC</b>	95 V·A
• at 50 Hz	68 V·A
• at 60 Hz	95 V·A
<b>Inductive power factor with closing power of the coil</b>	0.79
• at 50 Hz	0.86
• at 60 Hz	0.79
<b>Apparent holding power of magnet coil at AC</b>	12 V·A
• at 50 Hz	10 V·A
• at 60 Hz	12 V·A
<b>Inductive power factor with the holding power of the coil</b>	0.3
• 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
<b>Number of CO contacts</b>	
• for auxiliary contacts	0
<b>Identification number and letter for switching elements</b>	22
Operating current at AC-12 maximum	10 A
<b>Operating 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>Operating 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>Operating 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>contact reliability of auxiliary contacts</b>	one incorrect switching operation of 100 million switching operations (17 V, 5 mA)

#### UL/CSA ratings

<b>Contact rating of auxiliary contacts according to UL</b>	A600 / P600
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#### Short-circuit protection

##### Design of the fuse link

<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>gG: 50 A (690 V, 100 kA)</p> <p>gG: 35 A (690 V, 100 kA)</p> <p>gG: 16 A (500 V, 1 kA)</p>
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#### Installation/ mounting/ dimensions

<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>Mounting type</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> </ul> </li> </ul>	<p>15 mm</p> <p>0 mm</p> <p>10 mm</p>

— 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

• <b>type of electrical connection</b>	screw-type terminals
• Type of electrical connection for main current circuit	screw-type terminals
• Type of electrical connection for auxiliary and control current circuit	screw-type terminals
<b>Type of connectable conductor cross-sections</b>	
• for main contacts	
— single or multi-stranded	2x (2,5 ... 10 mm <sup>2</sup> )
— finely stranded with core end processing	2x (1.5 ... 4 mm <sup>2</sup> )
<b>Type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— single or multi-stranded	2x (1 ... 2,5 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.75 ... 2.5 mm <sup>2</sup> )

### Safety related data

<b>Protection against electrical shock</b>	finger-safe only with terminal cover
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### Certificates/ approvals

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity
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[Type Examination Certificate](#)



Declaration of Conformity	Test Certificates	Marine / Shipping	other
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[Miscellaneous](#)

[Special Test Certificate](#)

[Miscellaneous](#)



[Confirmation](#)

### 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=3TC4417-0BN1>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC4417-0BN1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0BN1>

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

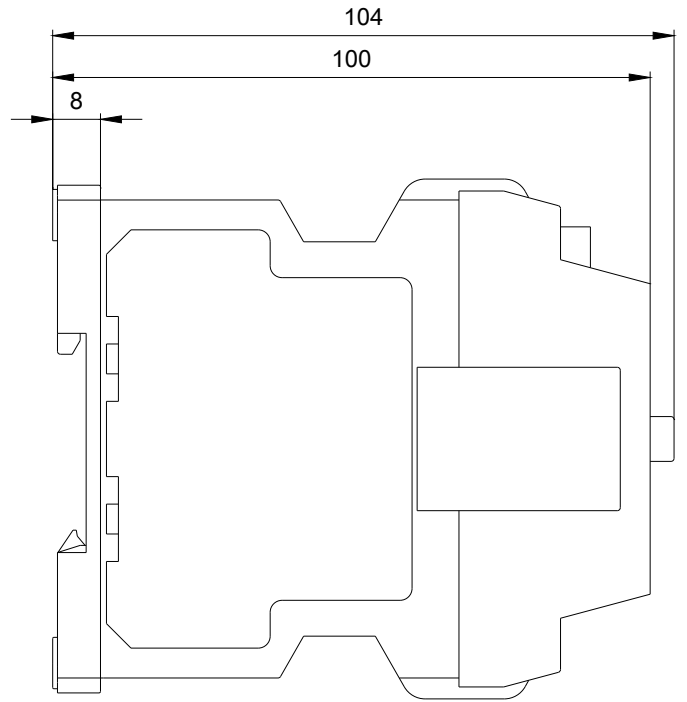
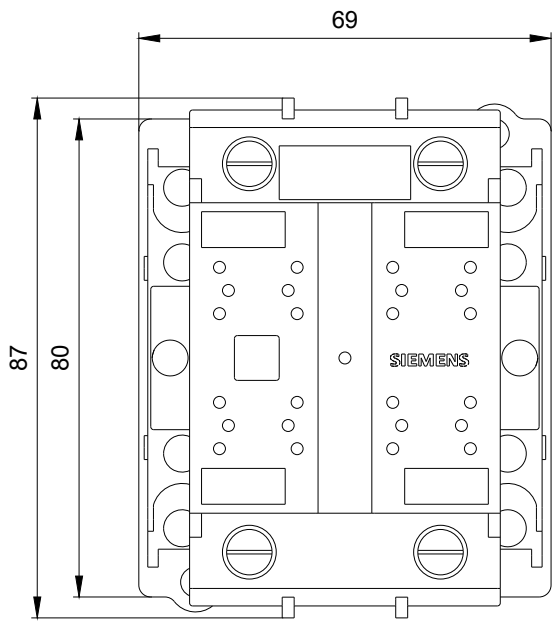
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TC4417-0BN1&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4417-0BN1&lang=en)

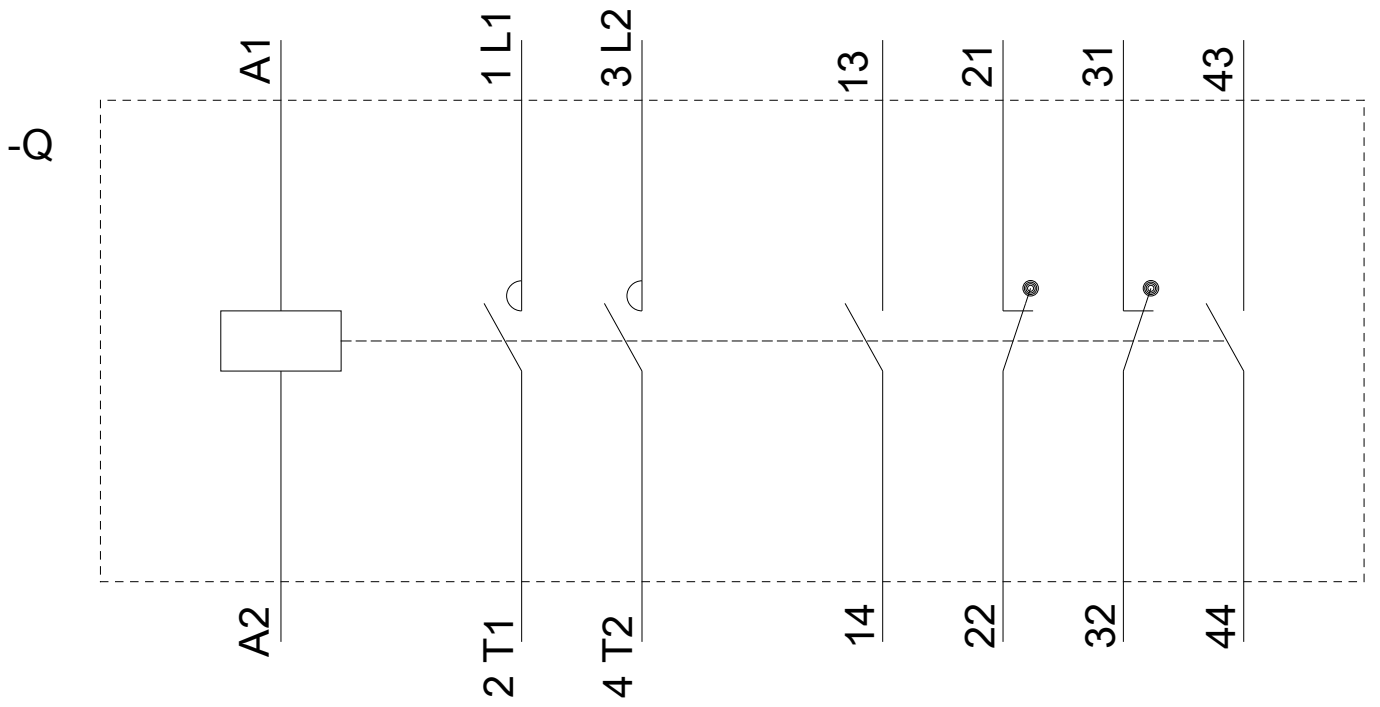
**Characteristic: Tripping characteristics, I<sup>t</sup>, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0BN1/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC4417-0BN1&objecttype=14&gridview=view1>





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