



Contactor, Size 2, 2-pole, DC-3 and 5, 32 A Auxiliary contacts 11 (1NO + 1NC) 2x solid-state compatible auxiliary contact AC operation 120 V AC 50/60 Hz Special-purpose device

<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 protective separation 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 (operating 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 Prohibition (Date)</b>	02/01/2012
<b>SVHC substance name</b>	Lead - 7439-92-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
<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	120 V
● at 60 Hz rated value	120 V
<b>operating range factor control supply voltage rated value of magnet coil at AC</b>	
● at 50 Hz	0.8 ... 1.1
● at 60 Hz	0.85 ... 1.1
<b>apparent pick-up power of magnet coil at AC</b>	
● at 50 Hz	68 VA
● at 60 Hz	95 VA
<b>inductive power factor with closing power of the coil</b>	
● at 50 Hz	0.86
● at 60 Hz	0.79
<b>apparent holding power of magnet coil at AC</b>	
● at 50 Hz	10 VA
● at 60 Hz	12 VA
<b>inductive power factor with the holding power of the coil</b>	
● 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>	1
● instantaneous contact	2
<b>number of NO contacts for auxiliary contacts</b>	1
● instantaneous contact	2
number of CO contacts for auxiliary contacts	2
operational current at AC-12 maximum	10 A
<b>operational current at AC-15</b>	
● at 230 V rated value	5.6 A

<ul style="list-style-type: none"> <li>• at 400 V rated value</li> <li>• at 500 V rated value</li> </ul>	3.6 A 2.5 A
<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>	10 A 10 A 10 A 3.2 A 2.5 A 0.9 A 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 5 A 5 A 1.14 A 0.98 A 0.48 A 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) 2 x 3NA3020 (50 A) in series (750 V, 3 kA) 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; standing, on horizontal mounting surface
<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>	81 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>	15 mm 0 mm 10 mm 10 mm 10 mm 30 mm 0 mm 10 mm 10 mm 10 mm 30 mm 0 mm 10 mm 10 mm 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 screw-type terminals
<b>type of connectable conductor cross-sections for main contacts</b>	
<ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> </ul>	2x (2,5 ... 10 mm <sup>2</sup> ) 2x (1.5 ... 4 mm <sup>2</sup> )
<b>type of connectable conductor cross-sections</b>	

- for auxiliary contacts
  - solid or stranded
  - finely stranded with core end processing

2x (1 ... 2.5 mm<sup>2</sup>)  
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

#### Electrical Safety

protection class IP on the front according to IEC 60529

IP00

#### Approvals Certificates

##### General Product Approval



[Confirmation](#)



##### General Product Approval

##### Functional Safety

##### Test Certificates



[Type Examination Certificate](#)

[Type Examination Certificate](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

##### other

##### Dangerous Good

##### Environment

[Confirmation](#)

[Transport Information](#)

[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=3TC4413-0BK2>

##### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC4413-0BK2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4413-0BK2>

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

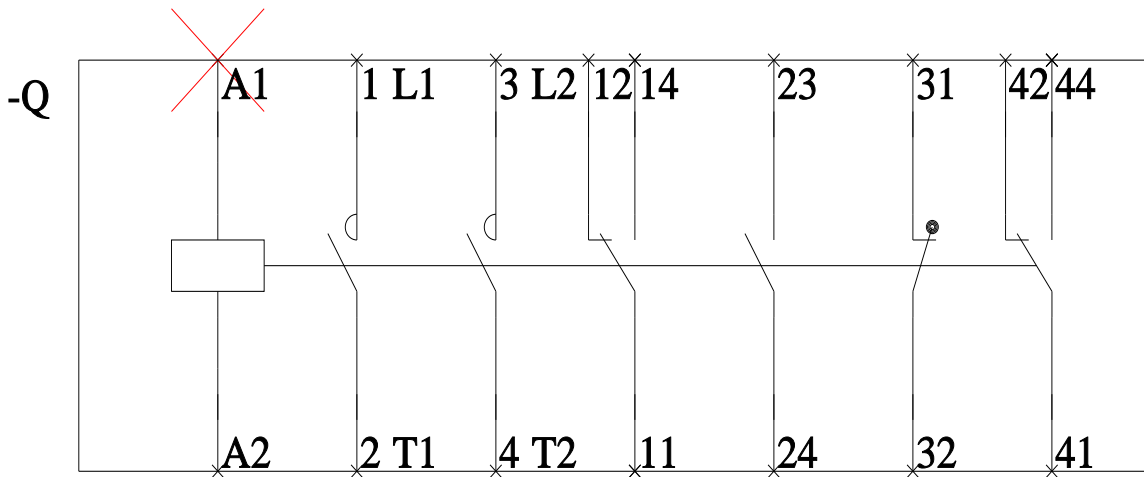
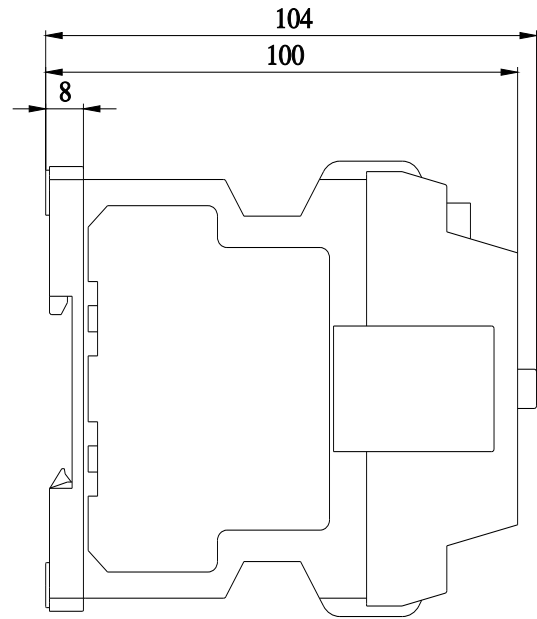
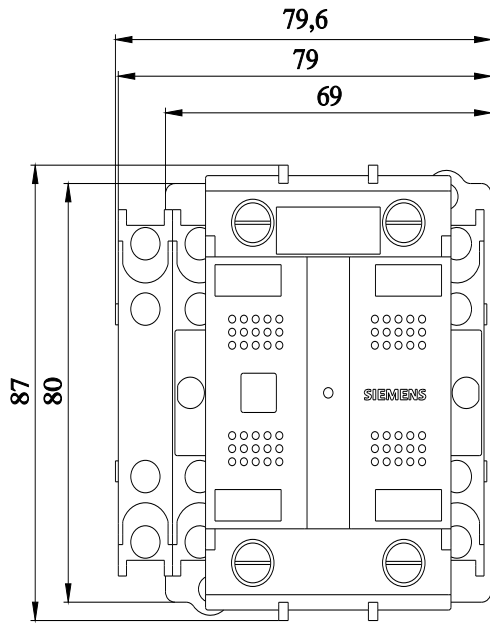
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TC4413-0BK2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4413-0BK2&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4413-0BK2/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC4413-0BK2&objecttype=14&gridview=view1>





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