



Contactor size 2, 2-pole for railway applications DC-3 and 5, 7.5 A at 750 V  
 Auxiliary contacts 21 (2 NO + 1 NC) Operating range 0.7 to 1.25 x US connected to varistor DC magnet system 36 V DC Upright mounting position

<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	No
<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 DC	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 Prohibittance (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>Weight</b>	1.342 kg
<b>Ambient conditions</b>	
<b>ambient temperature</b>	
• during operation	-40 ... +70 °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 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>design of the surge suppressor</b>	with varistor
<b>closing power of magnet coil at DC</b>	48 W
<b>holding power of magnet coil at DC</b>	13 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	1
<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>	21
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

<ul style="list-style-type: none"> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>	<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>

**UL/CSA ratings**

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

<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>

**Installation/ mounting/ dimensions**

<b>mounting position</b>	standing, on horizontal 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>	115 mm
<b>width</b>	82 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>	<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>

**Connections/ Terminals**

<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>	<p>screw-type terminals</p> <p>screw-type terminals</p>
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>	<p>2x (2,5 ... 10 mm<sup>2</sup>)</p> <p>2x (1.5 ... 4 mm<sup>2</sup>)</p>
<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>	<p>2x (1 ... 2.5 mm<sup>2</sup>)</p> <p>2x (0.75 ... 1.5 mm<sup>2</sup>)</p>

**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
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**Electrical Safety**

<b>protection class IP on the front according to IEC 60529</b>	IP00
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## Approvals Certificates

### General Product Approval



[Confirmation](#)



EG-Konf.



UL



### Functional Safety

### Test Certificates

### other

[Type Examination Certificate](#)

[Type Examination Certificate](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Confirmation](#)

### Dangerous goods

### Environment

[Transport Information](#)

[Environmental Confirmations](#)

## 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=3TC4417-0LV4-Z B01>

### Cax online generator

<http://support.automation.siemens.com/WWW/CAXorder/default.aspx?lang=en&mlfb=3TC4417-0LV4-Z B01>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0LV4-Z B01>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TC4417-0LV4-Z B01&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4417-0LV4-Z B01&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0LV4-Z B01/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC4417-0LV4-Z B01&objecttype=14&gridview=view1>



