

contactor, DC-3/DC-5, 32 A, 2-pole, 52 V DC, with series resistor, auxiliary contacts: 2 NO + 2 NC, screw terminal, frame size 2, for subway England, replacement for factory serial number Z=G51618

<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 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 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>Weight</b>	1.064 kg
<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 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

<ul style="list-style-type: none"> <li>● <b>at 1 current path at DC-3 at DC-5</b> <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> </ul> </li> <li>● <b>with 2 current paths in series at DC-3 at DC-5</b> <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> <li>— at 750 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> <p>32 A</p> <p>29 A</p> <p>21 A</p> <p>7.5 A</p>
<p><b>operating power</b></p> <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> <li>— at 750 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> <p>4 kW</p>
<p><b>operating frequency</b></p> <ul style="list-style-type: none"> <li>● at DC-1 maximum</li> <li>● at DC-3 maximum</li> <li>● at DC-5 maximum</li> </ul>	<p>1 500 1/h</p> <p>750 1/h</p> <p>750 1/h</p>
<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>	52 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
<ul style="list-style-type: none"> <li>● instantaneous contact</li> </ul>	2
<b>number of NO contacts for auxiliary contacts</b>	2
<ul style="list-style-type: none"> <li>● instantaneous contact</li> </ul>	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>	
<ul style="list-style-type: none"> <li>● at 230 V rated value</li> <li>● at 400 V rated value</li> <li>● at 500 V rated value</li> </ul>	<p>5.6 A</p> <p>3.6 A</p> <p>2.5 A</p>
<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>	<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>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> </ul>	<p>10 A</p> <p>5 A</p> <p>5 A</p>

<ul style="list-style-type: none"> <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>	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 coordination 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
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 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
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 mm <sup>2</sup> ) 2x (1.5 ... 4 mm <sup>2</sup> )
<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 mm <sup>2</sup> ) 2x (0.75 ... 1.5 mm <sup>2</sup> )
<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
<b>Approvals Certificates</b>	
<b>General Product Approval</b>	



[Confirmation](#)



[Miscellaneous](#)

General Product Approval

EMV

Test Certificates



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

Maritime application



[CCS \(China Classification Society\)](#)

other

Environment

[Confirmation](#)



[Miscellaneous](#)

[Environmental Confirmations](#)

[Environmental Confirmations](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3TC4417-0AY80-0AD8>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC4417-0AY80-0AD8>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0AY80-0AD8>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TC4417-0AY80-0AD8&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4417-0AY80-0AD8&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0AY80-0AD8/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC4417-0AY80-0AD8&objecttype=14&gridview=view1>



