







Contactor, size 12, 1-pole, DC-3 and 5, 400 A Auxiliary switch 4 NO+4 NC 220V  
DC DC operation DC operation

product designation	Contactor
product type designation	3TC
<b>General technical data</b>	
size of contactor	12
product extension	
• function module for communication	No
• auxiliary switch	No
insulation voltage rated value	1 500 V
surge voltage resistance rated value	8 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	630 V
mechanical service life (operating cycles)	
• of contactor typical	30 000 000
• of the contactor with added auxiliary switch block typical	30 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	03/01/2017
SVHC substance name	Lead - 7439-92-1
Weight	9.818 kg
<b>Ambient conditions</b>	
ambient temperature	
• during operation	-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 %
<b>Main circuit</b>	
number of poles	1
number of poles for main current circuit	1
number of NO contacts for main contacts	1
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	500 A
— at 110 V rated value	500 A
— at 220 V rated value	500 A
— at 440 V rated value	500 A
— at 600 V rated value	500 A
— at 750 V rated value	500 A
• at DC-3 at DC-5	
— at 220 V rated value	400 A

— at 600 V rated value	400 A
— at 750 V rated value	400 A
● <b>at 1 current path at DC-3 at DC-5</b>	
— at 24 V rated value	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 A
— at 440 V rated value	400 A
— at 600 V rated value	400 A
— at 750 V rated value	400 A
<b>operating power</b>	
● at DC-1	
— at 110 V rated value	55 kW
— at 220 V rated value	110 kW
— at 440 V rated value	220 kW
— at 750 V rated value	375 kW
● at DC-3 at DC-5	
— at 110 V rated value	35 kW
— at 220 V rated value	70 kW
— at 440 V rated value	140 kW
— at 600 V rated value	200 kW
— at 750 V rated value	250 kW
<b>operating frequency</b>	
● at DC-1 maximum	750 1/h
● at DC-3 maximum	500 1/h
● at DC-5 maximum	500 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>	220 V
<b>operating range factor control supply voltage rated value of magnet coil at AC</b>	
● at 50 Hz	0.8 ... 1.2
<b>closing power of magnet coil at DC</b>	46 W
<b>holding power of magnet coil at DC</b>	46 W
closing delay at DC	60 ... 100 ms
opening delay at DC	20 ... 35 ms
<b>arcing time</b>	40 ... 70 ms
<b>Auxiliary circuit</b>	
<b>number of NC contacts for auxiliary contacts</b>	4
● instantaneous contact	4
<b>number of NO contacts for auxiliary contacts</b>	4
● instantaneous contact	4
number of CO contacts for auxiliary contacts	0
<b>identification number and letter for switching elements</b>	44
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
● at 125 V rated value	2.5 A
● at 220 V rated value	0.9 A
● at 600 V rated value	0.22 A
<b>operational current at DC-13</b>	
● at 24 V rated value	10 A
● at 48 V rated value	5 A
● at 60 V rated value	5 A
● at 110 V rated value	1.14 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>	0.98 A 0.48 A 0.07 A				
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>	2 x 3NE1330-4D (315 A) parallel (750 V, 12 kA) 2 x 3NE1330-4D (315 A) parallel (750 V, 12 kA) gG: 16 A (500 V, 1 kA)				
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				
fastening method side-by-side mounting	Yes				
<b>fastening method</b>	screw fixing				
<b>height</b>	360 mm				
<b>width</b>	78 mm				
<b>depth</b>	276 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>	20 mm 0 mm 25 mm 10 mm 10 mm  50 mm 0 mm 25 mm 10 mm 10 mm  50 mm 0 mm 25 mm 10 mm 10 mm				
Connections/ Terminals					
<b>type of electrical connection</b> <ul style="list-style-type: none"><li>• for main current circuit</li><li>• for auxiliary and control circuit</li></ul>	screw terminal screw-type terminals screw-type terminals				
<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 mm²) 2x (0.75 ... 1.5 mm²)				
Safety related data					
product function mirror contact according to IEC 60947-4-1	Yes				
Electrical Safety					
<b>protection class IP on the front according to IEC 60529</b>	IP00				
Approvals Certificates					
General Product Approval					
Functional Safety					
<div><div> CCC</div><div></div><div> EG-Konf.</div><div><a href="#">Confirmation</a></div><div></div><div><a href="#">Type Examination Certificate</a></div></div>					
Functional Safety	Test Certificates	other	Dangerous goods		
<a href="#">Type Examination Certificate</a>	<a href="#">Special Test Certificate</a>	<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Miscellaneous</a>	<a href="#">Confirmation</a>	<a href="#">Transport Information</a>

## Environment

[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=3TC7414-0EM>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC7414-0EM>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC7414-0EM>

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

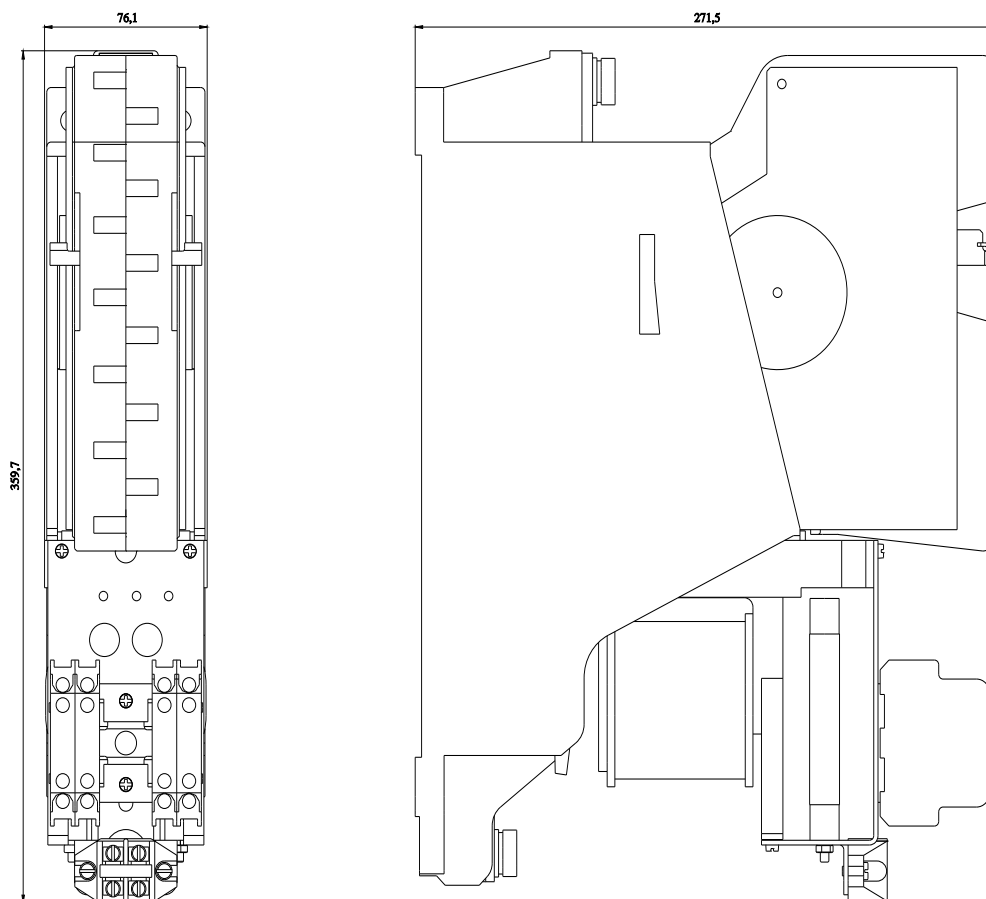
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TC7414-0EM&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC7414-0EM&lang=en)

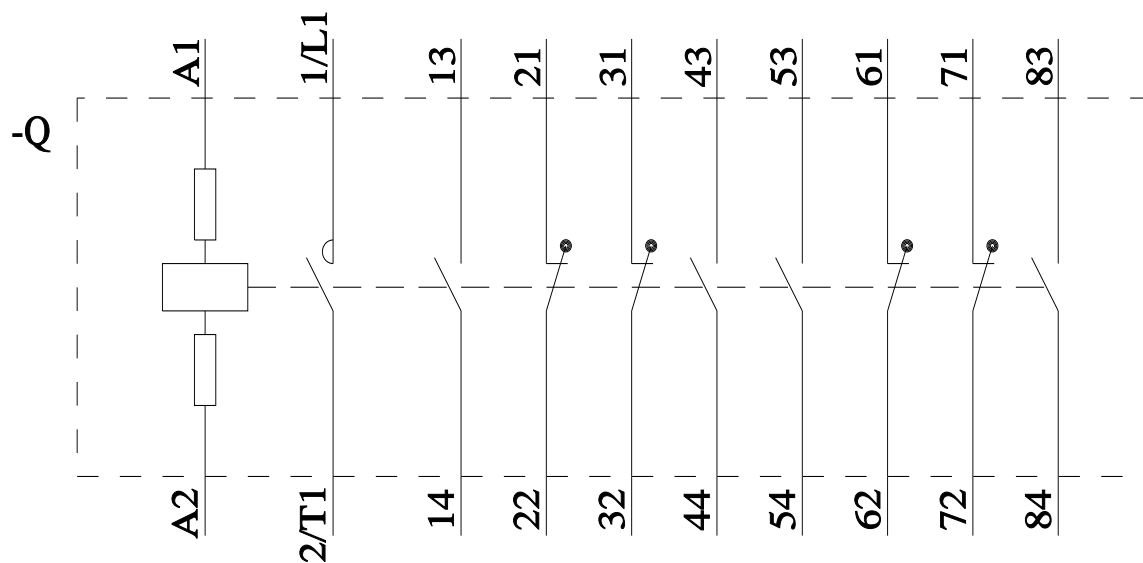
### Characteristic: Tripping characteristics, $I^2t$ , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3TC7414-0EM/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC7414-0EM&objecttype=14&gridview=view1>





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