

contactor, DC-3/DC-5, 400 A, 1-pole, 110 V DC, auxiliary contacts: 4 NO + 4 NC, connecting bar

product designation	Contactor
product type designation	3TC
General technical data	
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	10.514 kg
Ambient conditions	
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 %
Main circuit	
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

<ul style="list-style-type: none"> ● at DC-3 at DC-5 <ul style="list-style-type: none"> — at 220 V rated value — at 600 V rated value — at 750 V rated value ● at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 750 V rated value 	<p>400 A</p> <p>400 A</p> <p>400 A</p> <p>400 A</p> <p>400 A</p> <p>400 A</p> <p>400 A</p> <p>400 A</p> <p>400 A</p>
operating power	
<ul style="list-style-type: none"> ● at DC-1 <ul style="list-style-type: none"> — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 750 V rated value ● at DC-3 at DC-5 <ul style="list-style-type: none"> — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 750 V rated value 	<p>55 kW</p> <p>110 kW</p> <p>220 kW</p> <p>375 kW</p> <p>35 kW</p> <p>70 kW</p> <p>140 kW</p> <p>200 kW</p> <p>250 kW</p>
operating frequency	
<ul style="list-style-type: none"> ● at DC-1 maximum ● at DC-3 maximum ● at DC-5 maximum 	<p>750 1/h</p> <p>500 1/h</p> <p>500 1/h</p>
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC rated value	110 V
operating range factor control supply voltage rated value of magnet coil at AC	
<ul style="list-style-type: none"> ● at 50 Hz 	0.8 ... 1.2
closing power of magnet coil at DC	46 W
holding power of magnet coil at DC	46 W
closing delay at DC	60 ... 100 ms
opening delay at DC	20 ... 35 ms
arcing time	40 ... 70 ms
Auxiliary circuit	
number of NC contacts for auxiliary contacts	4
<ul style="list-style-type: none"> ● instantaneous contact 	4
number of NO contacts for auxiliary contacts	4
<ul style="list-style-type: none"> ● instantaneous contact 	4
number of CO contacts for auxiliary contacts	0
identification number and letter for switching elements	44
operational current at AC-12 maximum	10 A
operational current at AC-15	
<ul style="list-style-type: none"> ● at 230 V rated value ● at 400 V rated value ● at 500 V rated value 	<p>5.6 A</p> <p>3.6 A</p> <p>2.5 A</p>
operational current at DC-12	
<ul style="list-style-type: none"> ● at 24 V rated value ● at 48 V rated value ● at 60 V rated value ● at 110 V rated value ● at 125 V rated value ● at 220 V rated value ● at 600 V rated value 	<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>
operational current at DC-13	

- 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
- at 125 V rated value 0.98 A
- at 220 V rated value 0.48 A
- at 600 V rated value 0.07 A

Short-circuit protection

design of the fuse link

- for short-circuit protection of the main circuit
 - with type of coordination 1 required 2 x 3NE1330-4D (315 A) parallel (750 V, 12 kA)
 - with type of coordination 2 required 2 x 3NE1330-4D (315 A) parallel (750 V, 12 kA)
- for short-circuit protection of the auxiliary switch required gG: 16 A (500 V, 1 kA)

Installation/ mounting/ dimensions

mounting position +/-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

fastening method screw fixing

height 360 mm

width 78 mm

depth 276 mm

required spacing

- with side-by-side mounting
 - forwards 20 mm
 - backwards 0 mm
 - upwards 25 mm
 - downwards 10 mm
 - at the side 10 mm
- for grounded parts
 - forwards 50 mm
 - backwards 0 mm
 - upwards 25 mm
 - at the side 10 mm
 - downwards 10 mm
- for live parts
 - forwards 50 mm
 - backwards 0 mm
 - upwards 25 mm
 - downwards 10 mm
 - at the side 10 mm

Connections/ Terminals

- type of electrical connection** screw terminal
- for main current circuit screw-type terminals
 - for auxiliary and control circuit screw-type terminals

type of connectable conductor cross-sections

- for auxiliary contacts
 - solid or stranded 2x (1 ... 2.5 mm²)
 - finely stranded with core end processing 2x (0.75 ... 1.5 mm²)

Safety related data

product function mirror contact according to IEC 60947-4-1 Yes

Electrical Safety

protection class IP on the front according to IEC 60529 IP00

Approvals Certificates

General Product Approval

Functional Safety

Test Certificates



[Type Examination Certificate](#)

[Special Test Certificate](#)

Test Certificates	other	Dangerous goods	Environment
Miscellaneous	Type Test Certificates/Test Report	Confirmation	Transport Information
		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=3TC7414-0EF>

Cax online generator

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

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

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

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

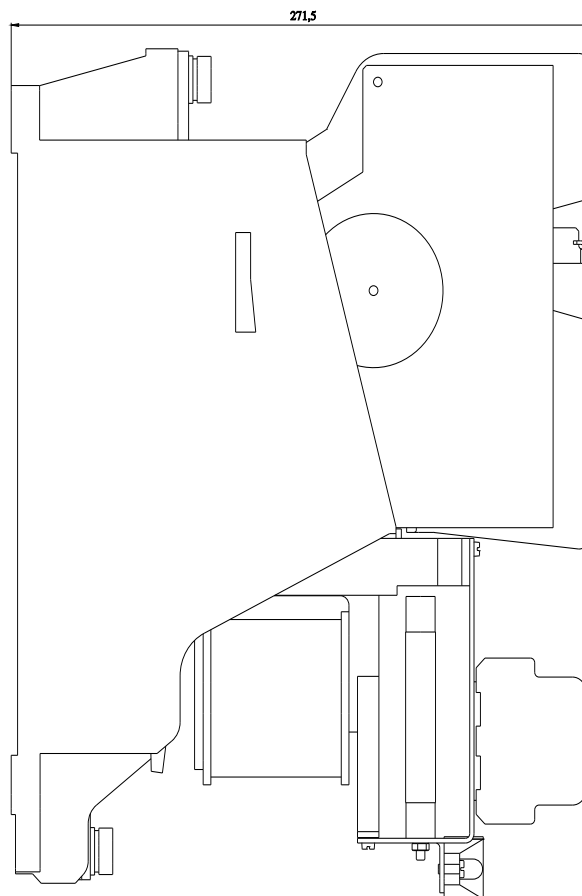
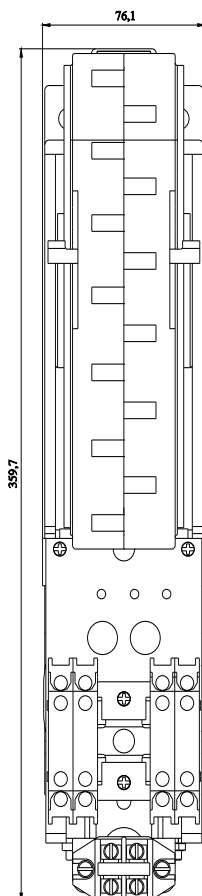
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC7414-0EF&lang=en

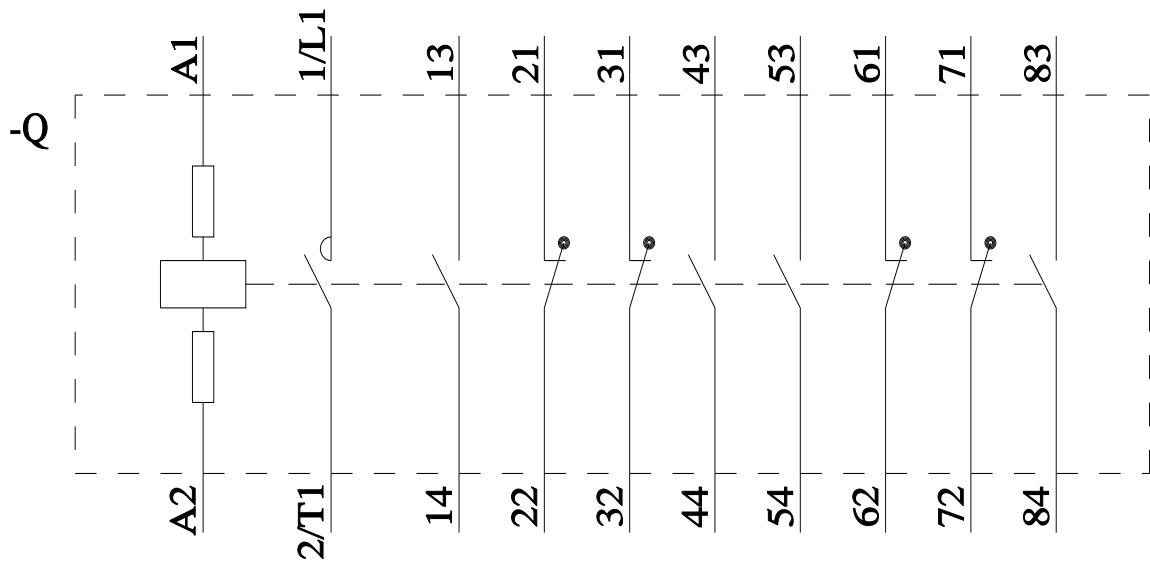
Characteristic: Tripping characteristics, I²t, Let-through current

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

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

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





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