



contactor, DC-3/DC-5, 400 A, 1-pole, 110 V DC, with varistor, 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 Prohibition (Date)	03/01/2017
SVHC substance name	Lead - 7439-92-1
Net Weight	10.59 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
design of the surge suppressor	with varistor
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		
<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 	<ul style="list-style-type: none"> 10 A 5 A 5 A 1.14 A 0.98 A 0.48 A 0.07 A 	
Short-circuit protection		
design of the fuse link		
<ul style="list-style-type: none"> ● for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of coordination 2 required ● for short-circuit protection of the auxiliary switch required 	<ul style="list-style-type: none"> 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		
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		
<ul style="list-style-type: none"> ● with side-by-side mounting <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side ● for grounded parts <ul style="list-style-type: none"> — forwards — backwards — upwards — at the side — downwards ● for live parts <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side 	<ul style="list-style-type: none"> 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		
type of electrical connection	screw terminal	
<ul style="list-style-type: none"> ● for main current circuit ● for auxiliary and control circuit 	<ul style="list-style-type: none"> screw-type terminals screw-type terminals 	
type of connectable conductor cross-sections		
<ul style="list-style-type: none"> ● for auxiliary contacts <ul style="list-style-type: none"> — solid or stranded — finely stranded with core end processing 	<ul style="list-style-type: none"> 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		
protection class IP on the front according to IEC 60529	IP00	
Approvals Certificates		
General Product Approval	Functional Safety	Test Certificates



[Type Examination Certificate](#)

[Miscellaneous](#)

Test Certificates	other	Dangerous goods	Environment
Type Test Certificates/Test Report	Special Test Certificate		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=3TC7414-5KF>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC7414-5KF>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC7414-5KF>

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

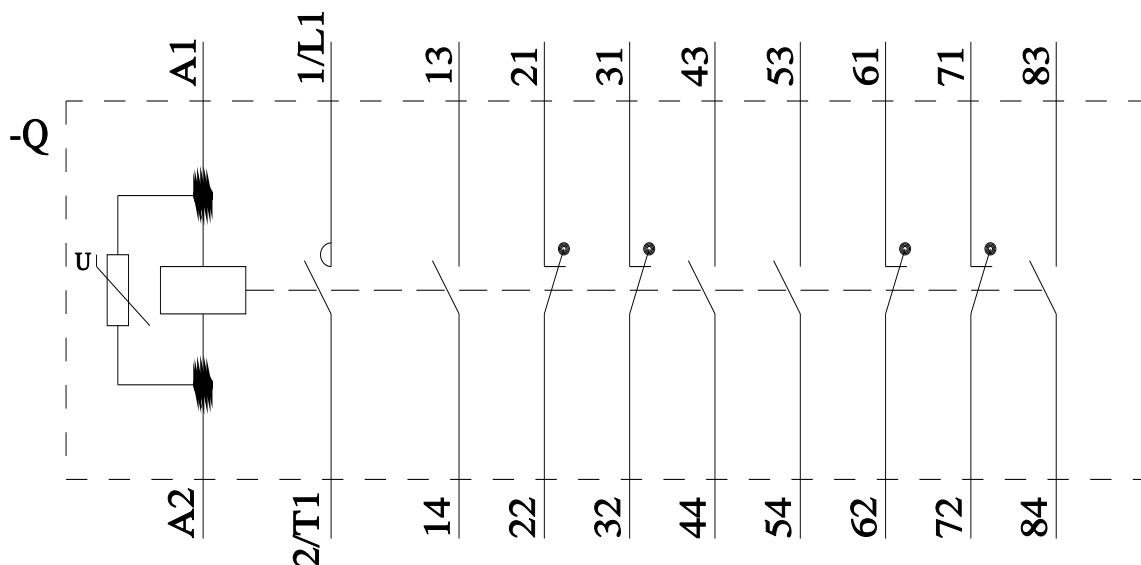
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC7414-5KF&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3TC7414-5KF/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC7414-5KF&objecttype=14&gridview=view1>



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