

contactor, DC-3/DC-5, 400 A, 1-pole, 220 V AC, 50 Hz, 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	10.633 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	AC
control supply voltage at AC	
<ul style="list-style-type: none"> ● at 50 Hz rated value 	220 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
apparent pick-up power of magnet coil at AC	80 VA
<ul style="list-style-type: none"> ● at 50 Hz 	80 VA
inductive power factor with closing power of the coil	0.95
<ul style="list-style-type: none"> ● at 50 Hz 	0.95
apparent holding power of magnet coil at AC	80 VA
<ul style="list-style-type: none"> ● at 50 Hz 	80 VA
inductive power factor with the holding power of the coil	0.95
<ul style="list-style-type: none"> ● at 50 Hz 	0.95
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 	<p>10 A</p> <p>10 A</p> <p>10 A</p>

<ul style="list-style-type: none"> • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value 	3.2 A 2.5 A 0.9 A 0.22 A	
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 	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 	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	368 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 	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 <ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit 	screw terminal 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 	2x (1 ... 2.5 mm ²) 2x (0.75 ... 1.5 mm ²)	
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](#)

[Type Test Certificates/Test Report](#)

Test Certificates	other	Dangerous goods	Environment
Special Test Certificate	Miscellaneous		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=3TC7414-1CM>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC7414-1CM>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC7414-1CM>

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

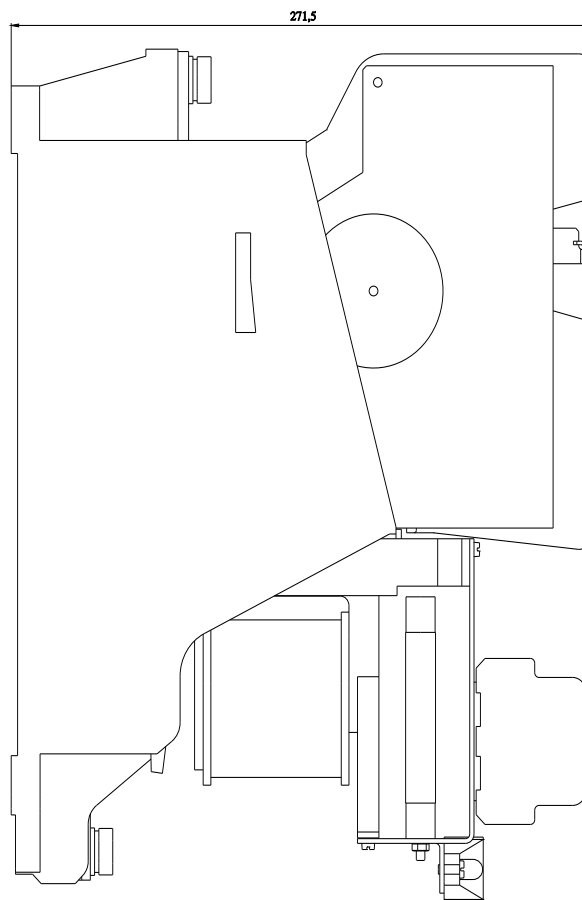
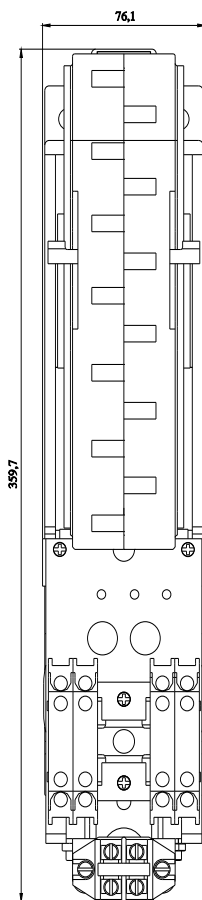
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC7414-1CM&lang=en

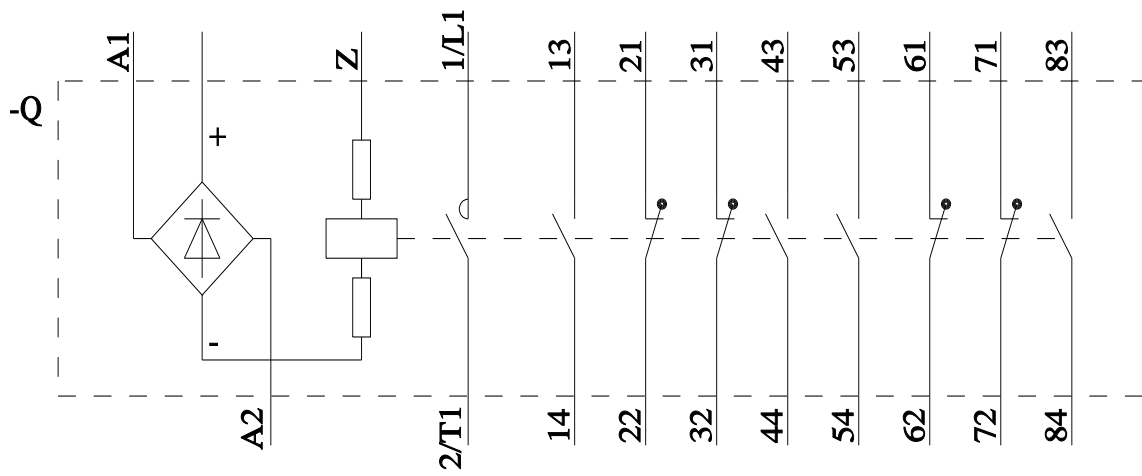
Characteristic: Tripping characteristics, I^t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3TC7414-1CM/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC7414-1CM&objecttype=14&gridview=view1>





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