



contactor, DC-3/DC-5, 400 A, 2-pole, 100 V AC, 50 Hz / 120 V AC, 60 Hz, auxiliary contacts: 4 NO + 4 NC, connecting bar, frame size 12

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	1 000 V
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	660 V
shock resistance at rectangular impulse	
• at AC	12g / 5 ms, 5,6g / 10 ms
mechanical service life (operating cycles)	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Lead - 7439-92-1
Weight	14.672 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	2
number of poles for main current circuit	2
number of NO contacts for main contacts	2
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	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 A
• with 2 current paths in series at DC-1	
— 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
● 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
● at 1 current path at DC-3 at DC-5	
— at 24 V rated value	220 A
— at 110 V rated value	220 A
— at 220 V rated value	400 A
● with 2 current paths in series at DC-3 at DC-5	
— 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
operating power	
● at DC-1	
— at 110 V rated value	44 kW
— at 220 V rated value	88 kW
— at 440 V rated value	176 kW
— at 750 V rated value	300 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
operating frequency	
● at DC-1 maximum	1 000 1/h
● at DC-3 maximum	600 1/h
● at DC-5 maximum	600 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
● at 50 Hz rated value	100 V
● at 60 Hz rated value	120 V
operating range factor control supply voltage rated value of magnet coil at AC	
● at 60 Hz	0.8 ... 1.1
apparent pick-up power of magnet coil at AC	1 780 VA
● at 50 Hz	1 780 VA
● at 60 Hz	2 140 VA
inductive power factor with closing power of the coil	0.3
● at 50 Hz	0.3
● at 60 Hz	0.3
apparent holding power of magnet coil at AC	121 VA
● at 50 Hz	121 VA
● at 60 Hz	140 VA
inductive power factor with the holding power of the coil	0.22
● at 50 Hz	0.22
● at 60 Hz	0.29
arcing time	20 ... 30 ms
Auxiliary circuit	
number of NC contacts for auxiliary contacts	4

• instantaneous contact	4
number of NO contacts for auxiliary contacts	4
• 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	
• at 230 V rated value	5.6 A
• at 400 V rated value	3.6 A
• at 500 V rated value	2.5 A
operational current at DC-12	
• 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	8 A
• at 125 V rated value	6 A
• at 220 V rated value	2 A
• at 600 V rated value	0.4 A
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	2.4 A
• at 125 V rated value	2.1 A
• at 220 V rated value	1.1 A
• at 600 V rated value	0.21 A
UL/CSA ratings	
contact rating of auxiliary contacts according to UL	A600 / P600
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	281 mm
width	185 mm
depth	255 mm
required spacing	
• with side-by-side mounting	
— forwards	25 mm
— backwards	0 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm
• for grounded parts	
— forwards	100 mm
— backwards	0 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
• for live parts	
— forwards	100 mm
— backwards	0 mm
— upwards	10 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 mm ²)
— finely stranded with core end processing	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; IP20 with box terminal/cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with cover

Approvals Certificates

General Product Approval



Functional Safety	Test Certificates	other		
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[Type Examination Certificate](#)

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Confirmation](#)



Dangerous goods	Environment
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[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=3TC5614-0BK1>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC5614-0BK1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC5614-0BK1>

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

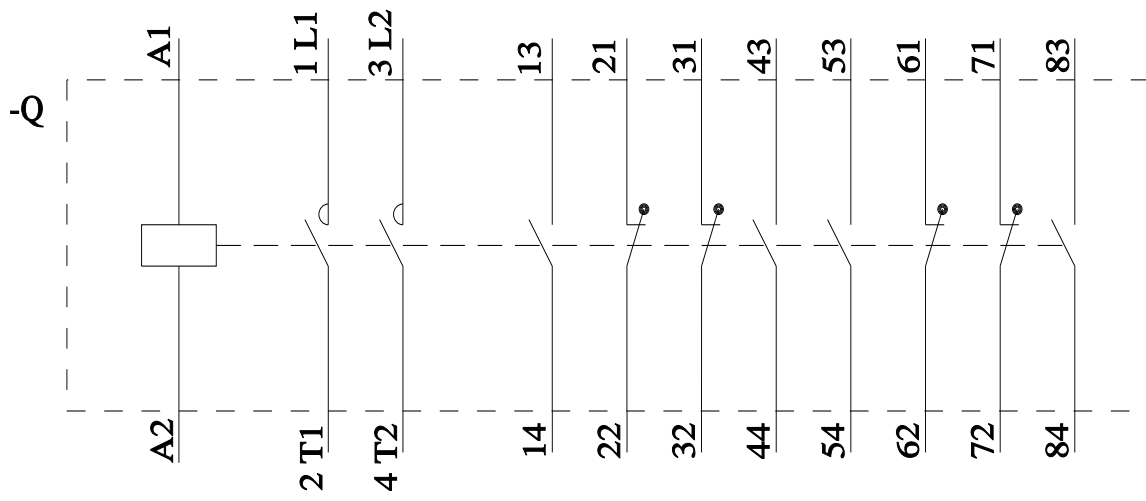
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC5614-0BK1&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3TC5614-0BK1/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC5614-0BK1&objecttype=14&gridview=view1>



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