

Contactor, size 12, 2-pole, DC-3 and 5, 400 A at 750 V Auxiliary contacts 21 (2NO + 1NC) 24V DC DC operation with varistor and series resistor Operating range 0.7 to 1.25 x US 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	1 000 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 DC	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)	03/01/2017
SVHC substance name	Lead - 7439-92-1
Weight	24.45 kg
<b>Ambient conditions</b>	
ambient temperature	
• during operation	-40 ... +70 °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	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
<b>operating power</b>	
• 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
<b>operating frequency</b>	
• at DC-1 maximum	1 000 1/h
• at DC-3 maximum	600 1/h
• at DC-5 maximum	600 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>	24 V
<b>design of the surge suppressor</b>	with varistor
<b>closing power of magnet coil at DC</b>	86 W
<b>holding power of magnet coil at DC</b>	86 W
closing delay at DC	110 ... 400 ms
opening delay at DC	40 ... 110 ms
<b>arcng time</b>	20 ... 30 ms
<b>Auxiliary circuit</b>	
<b>number of NC contacts for auxiliary contacts</b>	1
• instantaneous contact	1
<b>number of NO contacts for auxiliary contacts</b>	2
• instantaneous contact	2
number of CO contacts for auxiliary contacts	0
<b>identification number and letter for switching elements</b>	21
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	8 A
• at 125 V rated value	6 A

• at 220 V rated value • at 600 V rated value	2 A 0.4 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	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
<b>UL/CSA ratings</b>	
<b>contact rating of auxiliary contacts according to UL</b>	A600 / P600
<b>Short-circuit protection</b>	
<b>design of the fuse link</b>	
• 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 assignment 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)
<b>Installation/ mounting/ dimensions</b>	
<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>	281 mm
<b>width</b>	235 mm
<b>depth</b>	314 mm
<b>required spacing</b>	
• 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
<b>Connections/ Terminals</b>	
<b>type of electrical connection</b>	screw terminal
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
<b>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid or stranded	2x (1 ... 2.5 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.75 ... 1.5 mm <sup>2</sup> )
<b>Safety related data</b>	
product function mirror contact according to IEC 60947-4-1	Yes
<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP00; IP20 with box terminal/cover
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front with cover
<b>Approvals Certificates</b>	
<b>General Product Approval</b>	



[Confirmation](#)



General Product Approval	Functional Safety	Test Certificates
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[Type Examination Certificate](#) [Type Examination Certificate](#) [Type Test Certificates/Test Report](#) [Special Test Certificate](#) [Miscellaneous](#)

other	Dangerous goods	Environment
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[Confirmation](#) [Transport Information](#) [Environmental Confirmations](#)

#### 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=3TC5617-0LB4>

##### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC5617-0LB4>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC5617-0LB4>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TC5617-0LB4&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC5617-0LB4&lang=en)

##### Characteristic: Tripping characteristics, I<sup>t</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3TC5617-0LB4/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC5617-0LB4&objecttype=14&gridview=view1>



