



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

<b>product designation</b>	Contactor
<b>product type designation</b>	3TC
<b>General technical data</b>	
<b>size of contactor</b>	12
<b>product extension</b>	
• function module for communication	No
• auxiliary switch	Yes
<b>insulation voltage rated value</b>	1 000 V
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	660 V
<b>shock resistance at rectangular impulse</b>	
• at AC	12g / 5 ms, 5,6g / 10 ms
<b>mechanical service life (operating cycles)</b>	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (Date)</b>	05/01/2012
<b>SVHC substance name</b>	Lead - 7439-92-1
<b>Weight</b>	14.568 kg
<b>Ambient conditions</b>	
<b>ambient temperature</b>	
• during operation	-25 ... +55 °C
• during storage	-50 ... +80 °C
<b>relative humidity minimum</b>	10 %
<b>relative humidity at 55 °C according to IEC 60068-2-30 maximum</b>	95 %
<b>Main circuit</b>	
<b>number of poles</b>	2
<b>number of poles for main current circuit</b>	2
<b>number of NO contacts for main contacts</b>	2
<b>number of NC contacts for main contacts</b>	0
<b>type of voltage</b>	DC
<b>operational current</b>	
• 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
● <b>at DC-3 at DC-5</b>	
— at 220 V rated value	400 A
— at 600 V rated value	400 A
— at 750 V rated value	400 A
● <b>at 1 current path at DC-3 at DC-5</b>	
— at 24 V rated value	220 A
— at 110 V rated value	220 A
— at 220 V rated value	400 A
● <b>with 2 current paths in series at DC-3 at DC-5</b>	
— 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>	
● <b>at DC-1</b>	
— 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
● <b>at DC-3 at DC-5</b>	
— 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>	
● <b>at DC-1 maximum</b>	1 000 1/h
● <b>at DC-3 maximum</b>	600 1/h
● <b>at DC-5 maximum</b>	600 1/h
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	AC
<b>control supply voltage at AC</b>	
● <b>at 50 Hz rated value</b>	100 V
● <b>at 60 Hz rated value</b>	120 V
<b>operating range factor control supply voltage rated value of magnet coil at AC</b>	
● <b>at 60 Hz</b>	0.8 ... 1.1
<b>apparent pick-up power of magnet coil at AC</b>	1 780 VA
● <b>at 50 Hz</b>	1 780 VA
● <b>at 60 Hz</b>	2 140 VA
<b>inductive power factor with closing power of the coil</b>	0.3
● <b>at 50 Hz</b>	0.3
● <b>at 60 Hz</b>	0.3
<b>apparent holding power of magnet coil at AC</b>	121 VA
● <b>at 50 Hz</b>	121 VA
● <b>at 60 Hz</b>	140 VA
<b>inductive power factor with the holding power of the coil</b>	0.22
● <b>at 50 Hz</b>	0.22
● <b>at 60 Hz</b>	0.29
<b>arcing time</b>	20 ... 30 ms
<b>Auxiliary circuit</b>	
<b>number of NC contacts for auxiliary contacts</b>	2

• instantaneous contact	2
<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>	22
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	2 A
• at 600 V rated value	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 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)
<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>	160 mm
<b>depth</b>	255 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

### Connections/ Terminals

<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> )

### Safety related data

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

### Approvals Certificates

#### General Product Approval



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

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)



[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=3TC5617-0BK1>

#### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC5617-0BK1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC5617-0BK1>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TC5617-0BK1&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC5617-0BK1&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC5617-0BK1/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC5617-0BK1&objecttype=14&gridview=view1>



