SIEMENS

Data sheet 3TC5617-0BK1

Contactor size 12, 2-pole DC-3 and 5, 400 A Auxiliary switch 22 (2 NO + 2 NC)
Direct current operation 120 V AC 60 Hz/100 V AC 50 Hz

product designation	Contactor
product type designation	3TC
General technical data	
size of contactor	12
product extension	
● function module for communication	No
● auxiliary switch	Yes
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
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 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	2
● instantaneous contact	2
number of NO contacts for auxiliary contacts	2
● instantaneous contact	2
number of CO contacts for auxiliary contacts	0
identification number and letter for switching elements	22
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 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)
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; standing, on horizontal mounting surface
fastening method	screw fixing
● side-by-side mounting	Yes
height	281 mm
width	160 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-type terminals
● 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 mm²)
— finely stranded with core end processing	2x (0.75 ... 1.5 mm²)
Safety related data	

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

Certificates/ approvals

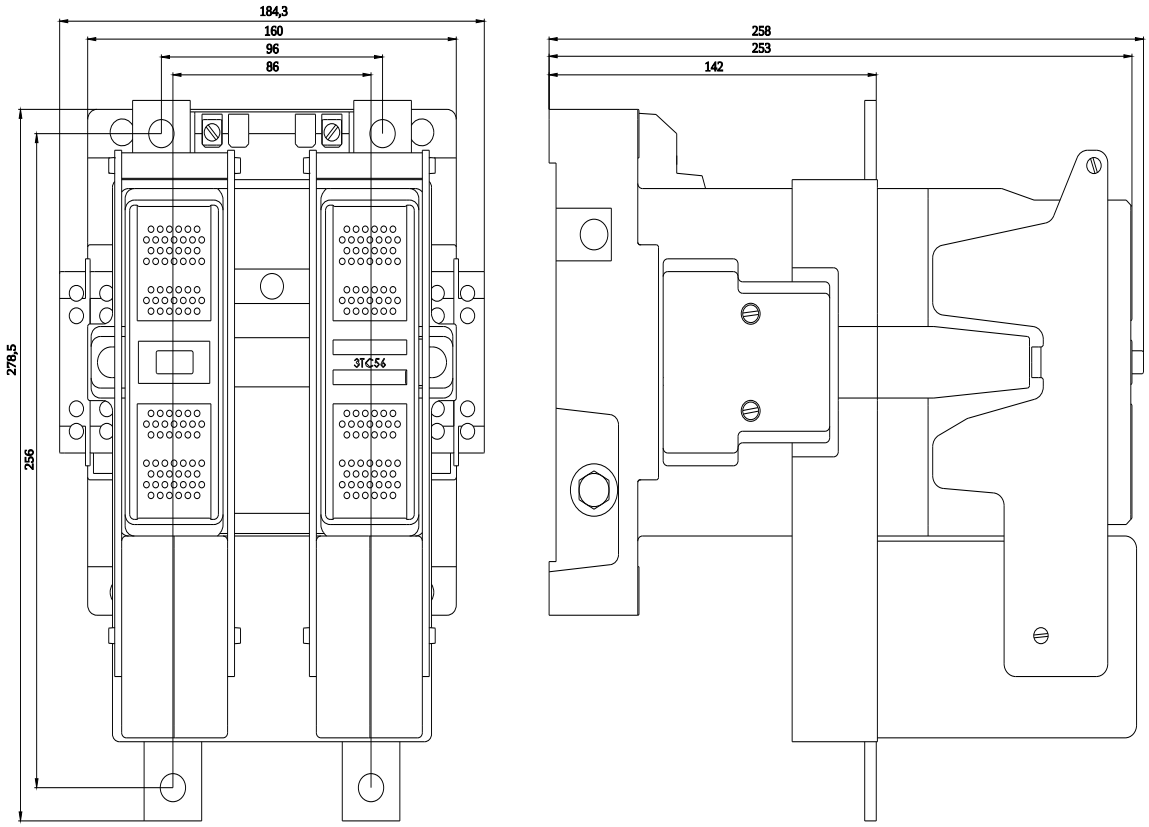
General Product Approval					Functional Safety/Safety of Machinery
CSA	Confirmation	CCC	UL	EAC	Type Examination Certificate

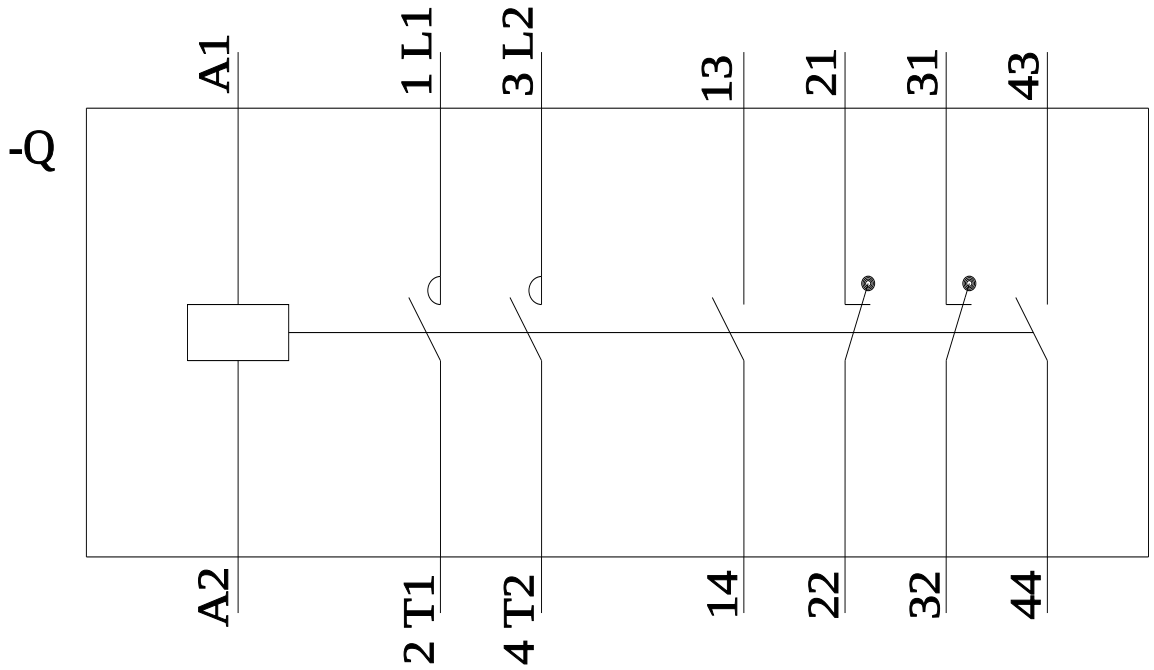
Functional Safety/Safety of Machinery	Declaration of Conformity		Test Certificates		
Type Examination Certificate	UKCA	CE EG-Konf.	Special Test Certificate	Type Test Certificates/Test Report	Miscellaneous

other	Dangerous Good
Confirmation	Transport Information

Further information

Siemens has decided to exit the Russian market (see here).
https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business
Siemens is working on the renewal of the current EAC certificates.
Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).
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=3TC5617-0BK1
Cax online generator
http://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, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC5617-0BK1&lang=en
Characteristic: Tripping characteristics, I^2t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3TC5617-0BK1/char
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC5617-0BK1&objecttype=14&gridview=view1





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