SIEMENS

Data sheet 3TC4417-0BK2

Contactor, Size 2, 2-pole, DC-3 and 5, 32 A Auxiliary contacts 22 (2 NO + 2 NC) 120 V AC 50/60 Hz AC operation

product designation	Contactor
product type designation	3TC
General technical data	
size of contactor	2
product extension	
● function module for communication	No
● auxiliary switch	Yes
insulation voltage rated value	800 V
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	300 V
shock resistance at rectangular impulse	
● at AC	7,5g / 5 ms, 3,4g / 10 ms
mechanical service life (switching cycles)	
● of contactor typical	10 000 000
● of the contactor with added auxiliary switch block typical	10 000 000
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.02.2012 00:00:00
Ambient conditions	
● ambient temperature during operation	-25 ... +55 °C
● ambient temperature during storage	-50 ... +80 °C
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 with 2 current paths in series at DC-1	
● at 24 V rated value	32 A
● at 110 V rated value	32 A
● at 220 V rated value	32 A
● at 440 V rated value	32 A
● at 600 V rated value	32 A
operational current	
● at DC-3 at DC-5	
— at 220 V rated value	32 A
— at 440 V rated value	29 A
— at 600 V rated value	21 A

— at 750 V rated value	7.5 A
● with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	32 A
— at 110 V rated value	32 A
— at 220 V rated value	32 A
— at 440 V rated value	29 A
— at 600 V rated value	21 A
operating power	
● at DC-1	
— at 110 V rated value	3.5 kW
— at 220 V rated value	7 kW
— at 440 V rated value	14 kW
— at 750 V rated value	24 kW
● at DC-3 at DC-5	
— at 110 V rated value	2.5 kW
— at 220 V rated value	5 kW
— at 440 V rated value	9 kW
— at 600 V rated value	9 kW
— at 750 V rated value	4 kW
operating frequency	
● at DC-1 maximum	1 500 1/h
● at DC-3 maximum	750 1/h
● at DC-5 maximum	750 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
● at 50 Hz rated value	120 V
● at 60 Hz rated value	120 V
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.8 ... 1.1
● at 60 Hz	0.85 ... 1.1
apparent pick-up power of magnet coil at AC	79 V·A
● at 50 Hz	68 V·A
● at 60 Hz	95 V·A
inductive power factor with closing power of the coil	0.83
● at 50 Hz	0.86
● at 60 Hz	0.79
apparent holding power of magnet coil at AC	11 V·A
● at 50 Hz	10 V·A
● at 60 Hz	12 V·A
inductive power factor with the holding power of the coil	0.28
● at 50 Hz	0.29
● at 60 Hz	0.3
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	3.2 A
● at 125 V rated value	2.5 A
● at 220 V rated value	0.9 A
● at 600 V rated value	0.22 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	1.14 A
● at 125 V rated value	0.98 A
● at 220 V rated value	0.48 A
● at 600 V rated value	0.07 A
contact reliability of auxiliary contacts	one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
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	gG: 50 A (690 V, 100 kA)
— with type of assignment 2 required	gG: 35 A (690 V, 100 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 and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
● side-by-side mounting	Yes
height	85 mm
width	70 mm
depth	104 mm
required spacing	
● with side-by-side mounting	
— forwards	15 mm
— backwards	0 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm
● for grounded parts	
— forwards	30 mm
— backwards	0 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
● for live parts	
— forwards	30 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 main contacts	
— solid or stranded	2x (2,5 ... 10 mm²)
— finely stranded with core end processing	2x (1.5 ... 4 mm²)
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 ... 2.5 mm²)
Safety related data	
product function mirror contact acc. to IEC 60947-4-1	Yes; One NC contact each must be connected in series for the right and left auxiliary switch block respectively
protection class IP on the front acc. to IEC 60529	IP00

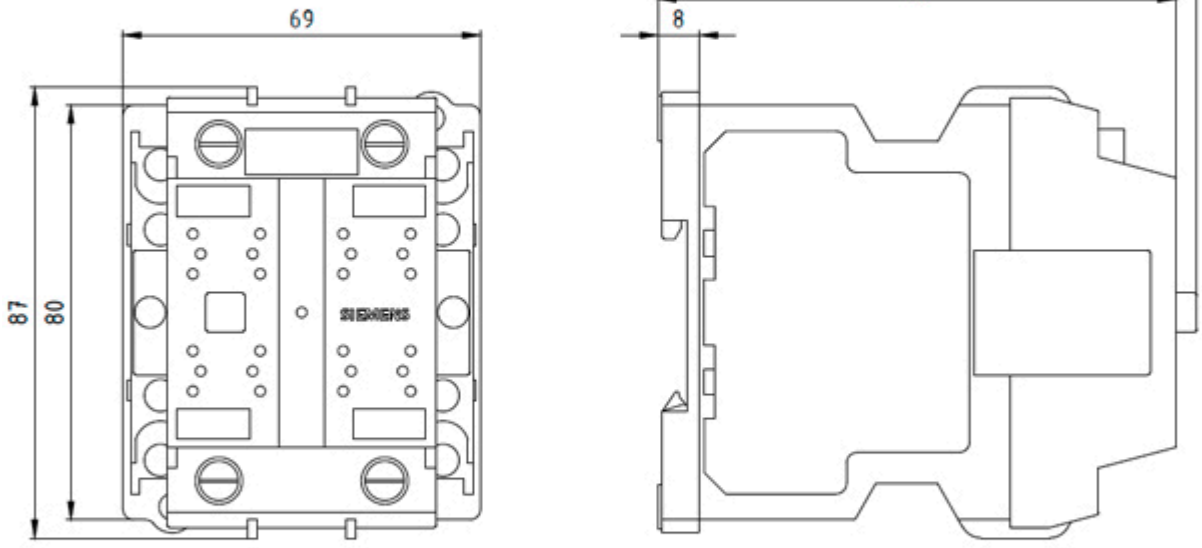
Certificates/ approvals

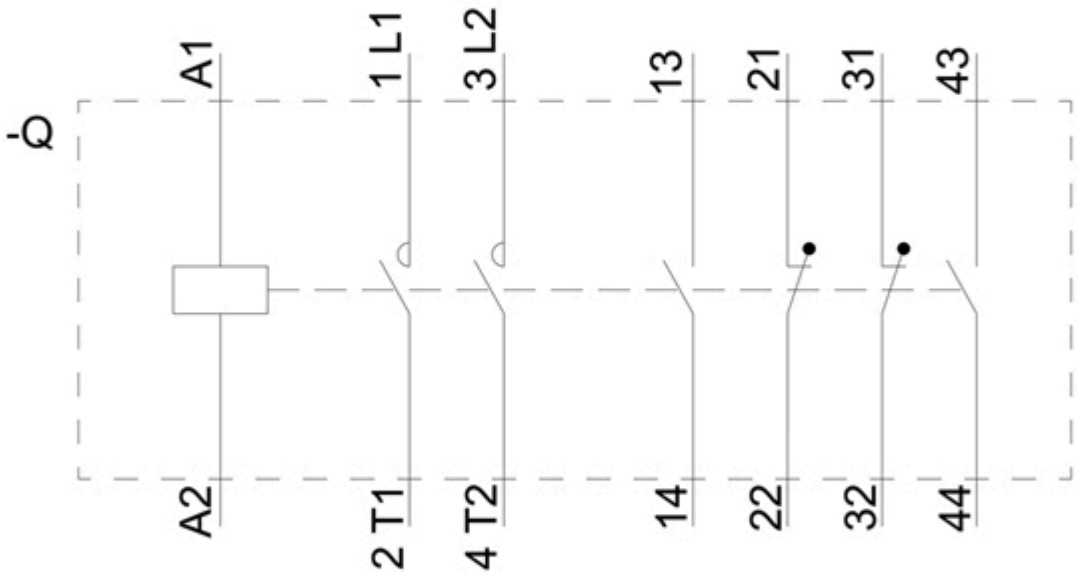
General Product Approval				Functional Safety/Safety of Machinery	Declaration of Conformity
CSA	CCC	UL	EAC	Type Examination Certificate	EG-Konf.

Declaration of Conformity	Test Certificates		Marine / Shipping	other
Miscellaneous	Special Test Certificate	Miscellaneous	RMRS	Confirmation

Further information

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=3TC4417-0BK2
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC4417-0BK2
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0BK2
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4417-0BK2&lang=en
Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0BK2/char
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC4417-0BK2&objecttype=14&gridview=view1





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