



contactor, DC-3/DC-5, 32 A, 2-pole, 100 V AC, 50 Hz / 120 V AC, 60 Hz, auxiliary contacts: 2 NO + 2 NC, screw terminal, frame size 2

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 protective separation between coil and main contacts according to EN 60947-1	300 V
shock resistance at rectangular impulse	
• at AC	7,5g / 5 ms, 3,4g / 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 Prohibition (Date)	02/01/2012
SVHC substance name	Lead - 7439-92-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
Weight	0.692 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	32 A
— at 110 V rated value	32 A
— at 220 V rated value	32 A
• 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
— at 750 V rated value	32 A
● at DC-3 at DC-5	
— at 220 V rated value	32 A
— at 600 V rated value	21 A
— at 750 V rated value	7.5 A
● at 1 current path 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
● 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
— at 750 V rated value	7.5 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	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	95 VA
● at 50 Hz	68 VA
● at 60 Hz	95 VA
inductive power factor with closing power of the coil	0.79
● at 50 Hz	0.86
● at 60 Hz	0.79
apparent holding power of magnet coil at AC	12 VA
● at 50 Hz	10 VA
● at 60 Hz	12 VA
inductive power factor with the holding power of the coil	0.3
● 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
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 3NA3020 (50 A) in series (750 V, 3 kA)
— with type of coordination 2 required	2 x 3NA3020 (50 A) in series (750 V, 3 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 and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022
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 terminal
• 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 mm ²)
• finely stranded with core end processing	2x (1,5 ... 4 mm ²)
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; One NC contact each must be connected in series for the right and left auxiliary switch block respectively
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Electrical Safety

protection class IP on the front according to IEC 60529	IP00
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Approvals Certificates

General Product Approval	Functional Safety
    	Type Examination Certificate

Test Certificates	other	Dangerous goods
Miscellaneous	Special Test Certificate	Transport Information
Type Test Certificates/Test Report		Confirmation

Environment

[Environmental Conformations](#)

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=3TC4417-0BK1>

Cax online generator
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC4417-0BK1>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0BK1>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4417-0BK1&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0BK1/char>

Further characteristics (e.g. electrical endurance, switching frequency)
<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC4417-0BK1&objecttype=14&gridview=view1>



