

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
Protection class IP	IP00
• on the front	IP00
• of the terminal	IP00
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

Ambient conditions

Ambient temperature

- during operation -25 ... +55 °C
- 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

Operating 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

Operating 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
Operating current at AC-12 maximum	10 A
Operating 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

Operating current at DC-12	
<ul style="list-style-type: none"> • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value 	<p>10 A</p> <p>10 A</p> <p>10 A</p> <p>3.2 A</p> <p>2.5 A</p> <p>0.9 A</p> <p>0.22 A</p>
Operating current at DC-13	
<ul style="list-style-type: none"> • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value 	<p>10 A</p> <p>5 A</p> <p>5 A</p> <p>1.14 A</p> <p>0.98 A</p> <p>0.48 A</p> <p>0.07 A</p>
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
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Short-circuit protection

Design of the fuse link	
<ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required 	<p>gG: 50 A (690 V, 100 kA)</p> <p>gG: 35 A (690 V, 100 kA)</p> <p>gG: 16 A (500 V, 1 kA)</p>

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
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
<ul style="list-style-type: none"> • Side-by-side mounting 	Yes
Height	85 mm
Width	70 mm
Depth	104 mm
Required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards 	<p>15 mm</p> <p>0 mm</p>

— 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 current circuit	screw-type terminals
Type of connectable conductor cross-sections	
• for main contacts	
— single or multi-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	
— single or multi-stranded	2x (1 ... 2,5 mm ²)
— finely stranded with core end processing	2x (0,75 ... 2,5 mm ²)

Safety related data

Protection against electrical shock	finger-safe only with terminal cover
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Certificates/ approvals

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity
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[Type Examination Certificate](#)



Declaration of Conformity	Test Certificates	Marine / Shipping	other
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[Miscellaneous](#)

[Special Test Certificate](#)

[Miscellaneous](#)



[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, ...)

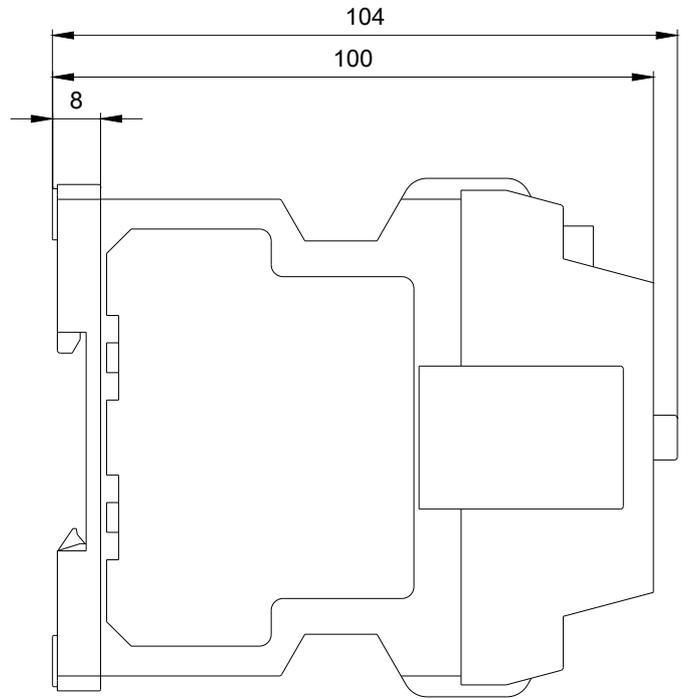
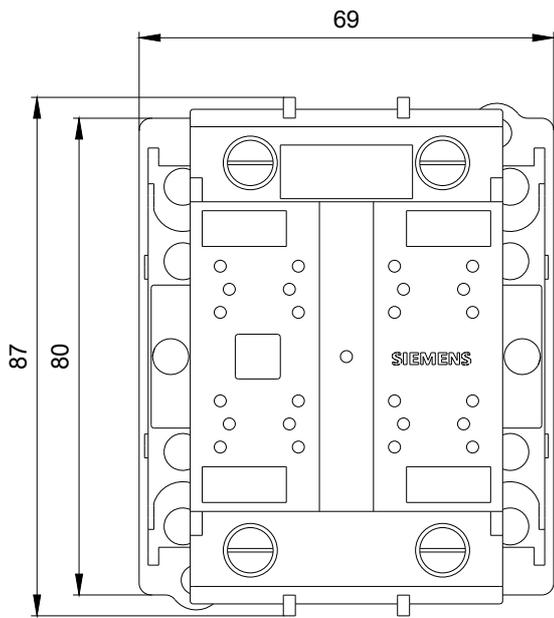
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4417-0BK2&lang=en

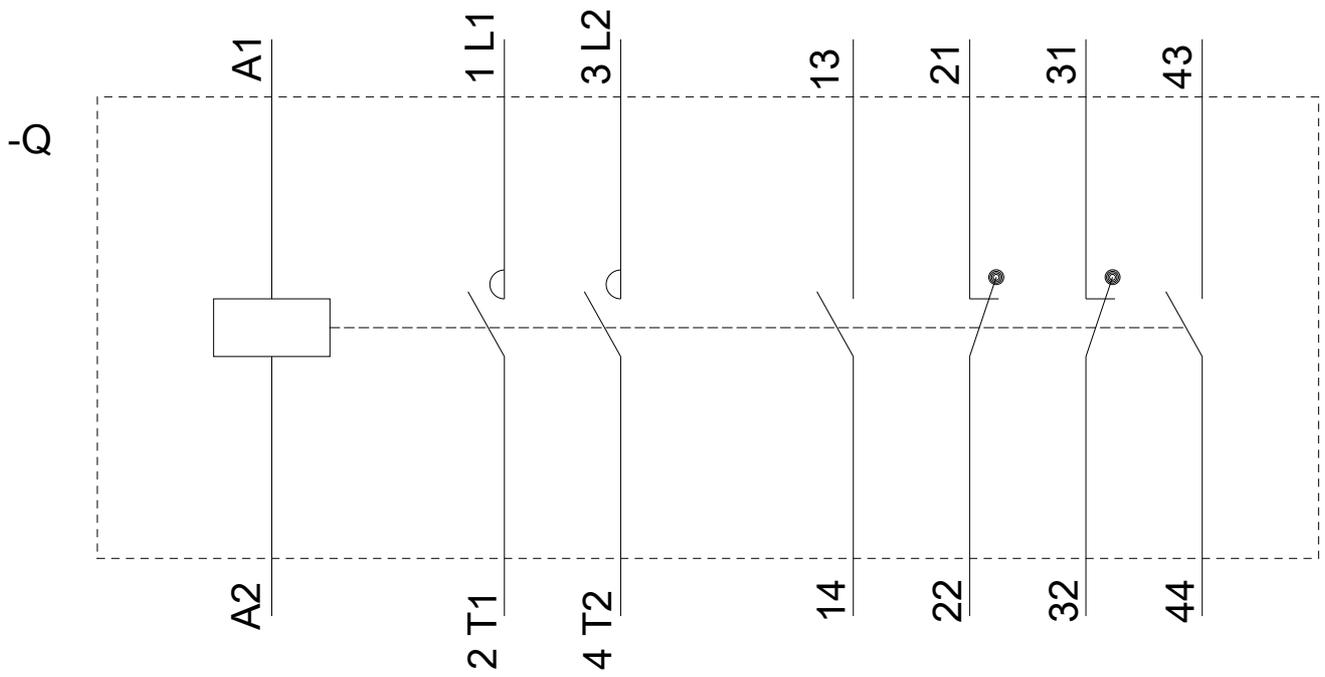
Characteristic: Tripping characteristics, I^t, Let-through current

<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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