

Contactor, Size 2, 2-pole, for railway applications DC-3 and 5, 7.5 A at 750 V 110V DC Auxiliary contacts 21 (2NO+1NC) with varistor and series resistor Operating range 0.7...1.25xUS



Product designation	Contactor
Product type designation	3TC
General technical data	
Size of contactor	2
Product extension	
• function module for communication	No
• Auxiliary switch	No
Insulation voltage rated value	800 V
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	300 kV
Protection class IP	IP00
• on the front	IP00
• of the terminal	IP00
Shock resistance at rectangular impulse	
• at DC	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 DIN 40719 extended according to IEC 204-2 acc. to IEC 750	K
Reference code acc. to DIN EN 81346-2	Q
Reference code acc. to DIN EN 61346-2	Q

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 <ul style="list-style-type: none"> with 2 current paths in series at DC-1 <ul style="list-style-type: none"> at 24 V rated value at 110 V rated value at 220 V rated value at 440 V rated value at 600 V rated value 	32 A 32 A 32 A 32 A 32 A
Operating current with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> at 24 V rated value at 110 V rated value at 220 V rated value at 440 V rated value at 600 V rated value 	32 A 32 A 32 A 29 A 21 A
Operating power at DC-1 <ul style="list-style-type: none"> at 110 V rated value at 220 V rated value at 440 V rated value at 750 V rated value 	3.5 kW 7 kW 14 kW 24 kW
Operating frequency <ul style="list-style-type: none"> at DC-1 maximum at DC-3 maximum at DC-5 maximum 	1 500 1/s 750 1/s 750 1/s

Control circuit/ Control

Type of voltage of the control supply voltage	DC
Control supply voltage at DC <ul style="list-style-type: none"> rated value 	110 V
Design of the surge suppressor	with varistor
Closing power of magnet coil at DC	48 W
Holding power of magnet coil at DC	13 W
Closing delay at DC	35 ... 190 ms
Opening delay at DC	10 ... 25 ms

Arcing time	20 ... 30 ms
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Auxiliary circuit

Number of NC contacts for auxiliary contacts	2
• instantaneous contact	1
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	21
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	
• 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
Operating 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
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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
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	115 mm
Width	82 mm
Depth	145 mm
Required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side 	15 mm 0 mm 10 mm 10 mm 10 mm 30 mm 0 mm 10 mm 10 mm 10 mm 30 mm 0 mm 10 mm 10 mm 10 mm







Connections/ Terminals

Type of electrical connection	screw-type terminals
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit 	screw-type terminals screw-type terminals
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing 	2x (2,5 ... 10 mm ²) 2x (1,5 ... 4 mm ²)
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — single or multi-stranded 	2x (1 ... 2,5 mm ²)

— finely stranded with core end processing

2x (0,75 ... 2,5 mm²)

Certificates/ approvals

General Product Approval				Functional Safety/Safety of Machinery	Declaration of Conformity
 CCC	 CSA	 UL		Type Examination Certificate	 EG-Konf.
Declaration of Conformity	Test Certificates			Marine / Ship-ping	other
Miscellaneous	Special Test Certificate	Miscellaneous	Type Test Certificates/Test Report	 RMRS	Confirmation

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3TC4417-0LF4>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC4417-0LF4>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0LF4>

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

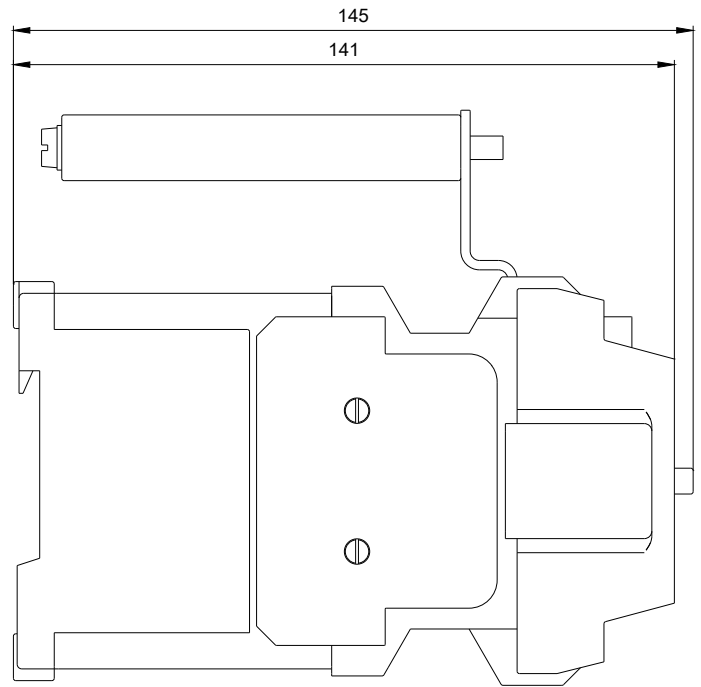
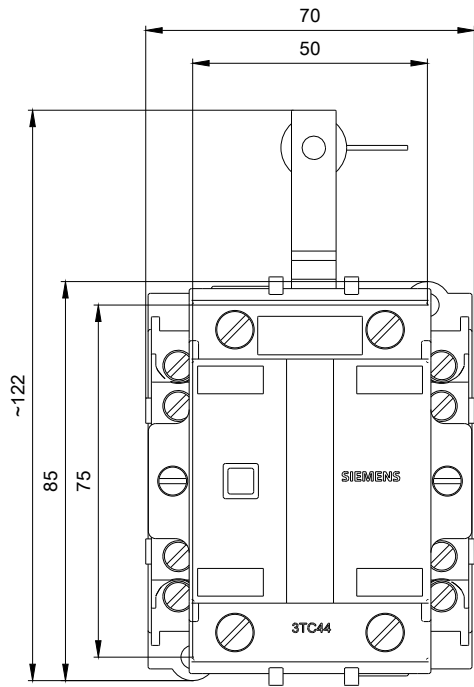
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC4417-0LF4&lang=en

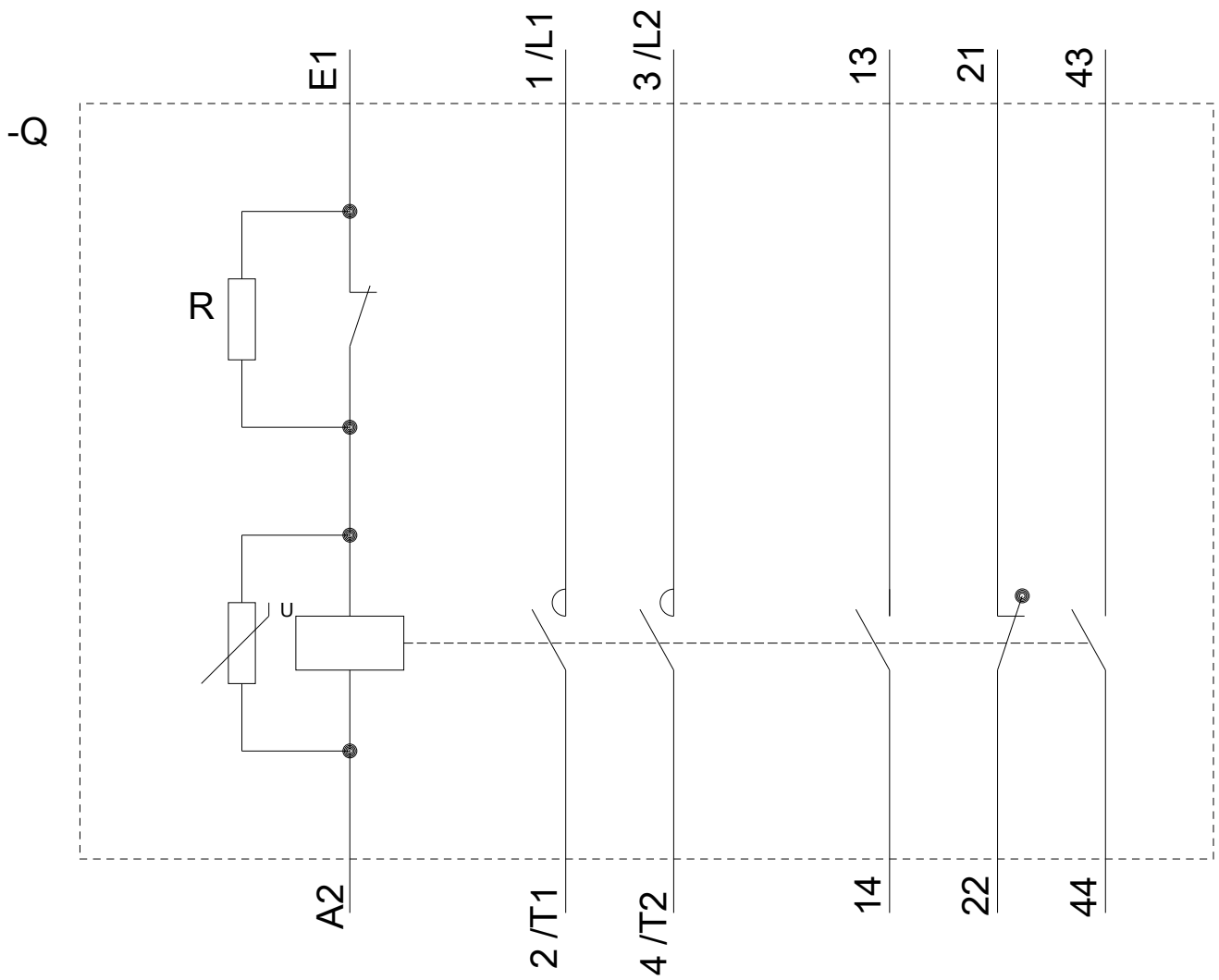
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3TC4417-0LF4/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC4417-0LF4&objecttype=14&gridview=view1>





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