



Contactor size 12, 2-pole DC-4, Rated operating current 400 A Auxiliary switch 4 NO + 4 NC DC operation 24 V DC with integrated varistor

product designation	Contactor
product type designation	3TC
General technical data	
size of contactor	12
product extension	
• function module for communication	No
• auxiliary switch	No
insulation voltage rated value	1 500 V
surge voltage resistance rated value	8 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	630 V
mechanical service life (operating cycles)	
• of contactor typical	30 000 000
• of the contactor with added auxiliary switch block typical	30 000 000
reference code according to IEC 81346-2	Q
Substance Prohibittance (Date)	03/01/2017
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	500 A
— at 110 V rated value	500 A
— at 220 V rated value	500 A
— at 440 V rated value	500 A
— at 600 V rated value	500 A
— at 750 V rated value	500 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	500 A
— at 110 V rated value	500 A
— at 220 V rated value	500 A

— at 440 V rated value	500 A
— at 600 V rated value	500 A
— at 750 V rated value	500 A
— at 1500 V rated value	500 A
● at 1 current path 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
● 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
— at 1500 V rated value	400 A
operating power	
● at DC-1	
— at 110 V rated value	55 kW
— at 220 V rated value	110 kW
— at 440 V rated value	220 kW
— at 750 V rated value	375 kW
— at 1500 V rated value	750 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
— at 1200 V rated value	400 kW
— at 1500 V rated value	500 kW
operating frequency	
● at DC-1 maximum	1 000 1/h
● at DC-3 maximum	500 1/h
● at DC-5 maximum	500 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	
● rated value	24 V
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.8 ... 1.2
design of the surge suppressor	with varistor
closing power of magnet coil at DC	92 W
holding power of magnet coil at DC	92 W
closing delay at DC	60 ... 100 ms
opening delay at DC	20 ... 35 ms
arcing time	40 ... 70 ms
Auxiliary circuit	
number of NC contacts for auxiliary contacts	4
● instantaneous contact	4
number of NO contacts for auxiliary contacts	4
● instantaneous contact	4
number of CO contacts for auxiliary contacts	0
identification number and letter for switching elements	44
operational current at AC-12 maximum	10 A
operational current at AC-15	
● at 230 V rated value	5.6 A

<ul style="list-style-type: none"> • at 400 V rated value • at 500 V rated value 	<p>3.6 A</p> <p>2.5 A</p>
operational 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>
operational 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>
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>2 x 3NE1330-5E (315 A) parallel (1500 V, 12 kA)</p> <p>2 x 3NE1330-5E (315 A) parallel (1500 V, 12 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
fastening method <ul style="list-style-type: none"> • side-by-side mounting 	<p>screw fixing</p> <p>Yes</p>
height	375 mm
width	160 mm
depth	290 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 	<p>20 mm</p> <p>0 mm</p> <p>25 mm</p> <p>10 mm</p> <p>10 mm</p> <p>50 mm</p> <p>0 mm</p> <p>25 mm</p> <p>10 mm</p> <p>10 mm</p> <p>50 mm</p> <p>0 mm</p> <p>25 mm</p> <p>10 mm</p> <p>10 mm</p>
Connections/ Terminals	
type of electrical connection <ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit 	<p>screw-type terminals</p> <p>screw-type terminals</p> <p>screw-type terminals</p>
type of connectable conductor cross-sections <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid or stranded — finely stranded with core end processing 	<p>2x (1 ... 2.5 mm²)</p> <p>2x (0.75 ... 1.5 mm²)</p>
Safety related data	

product function mirror contact according to IEC 60947-4-1	Yes; 1 auxiliary NC contact each of the right and left current path must be connected in series
protection class IP on the front according to IEC 60529	IP00

Certificates/ approvals

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity
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[Confirmation](#)



[Type Examination Certificate](#)

[Type Examination Certificate](#)



Declaration of Conformity	Test Certificates	other	Dangerous Good
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[Special Test Certificate](#)

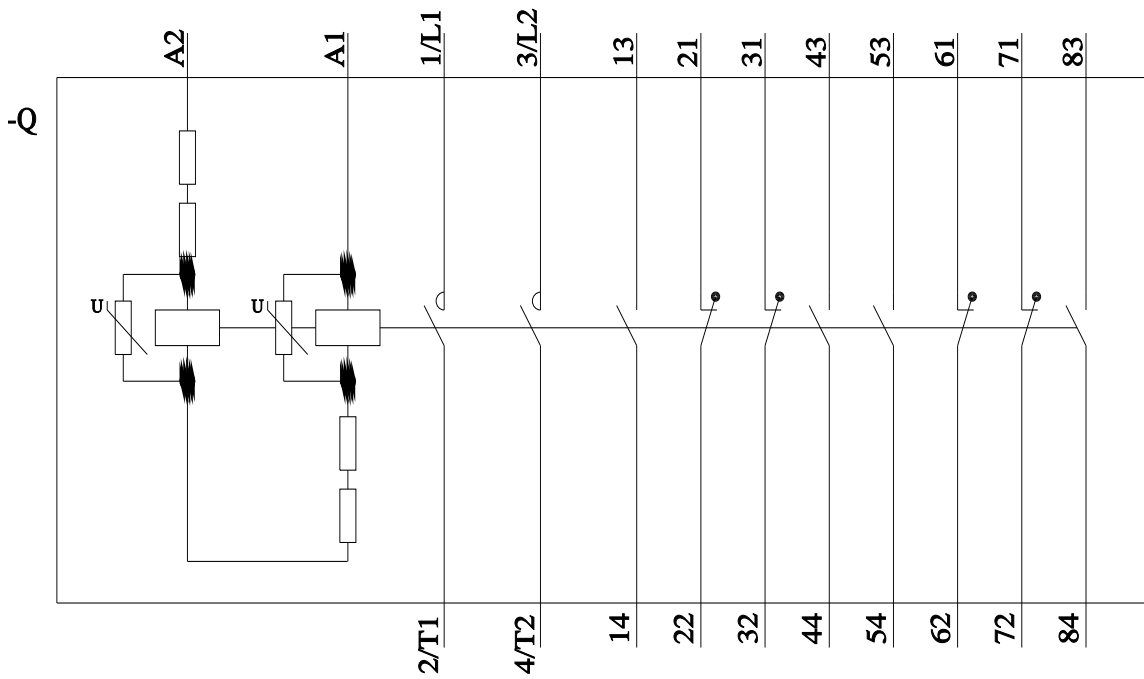
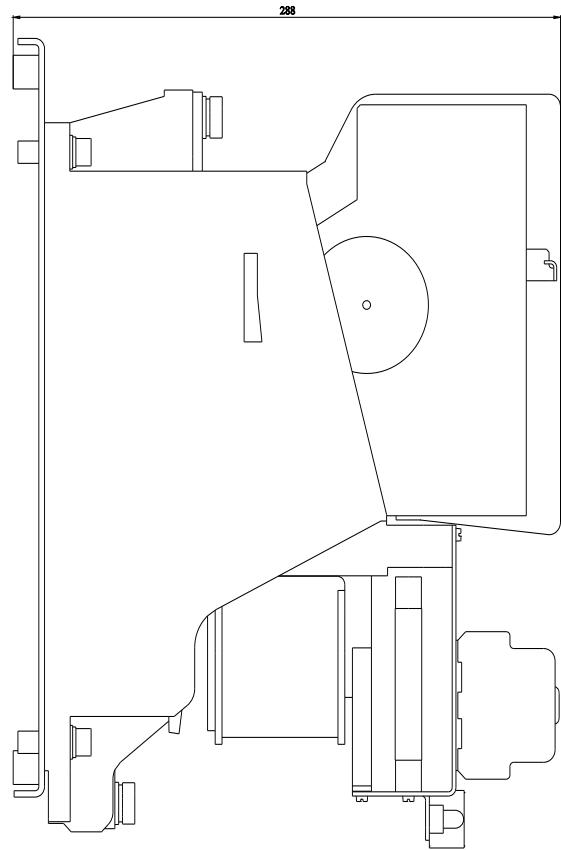
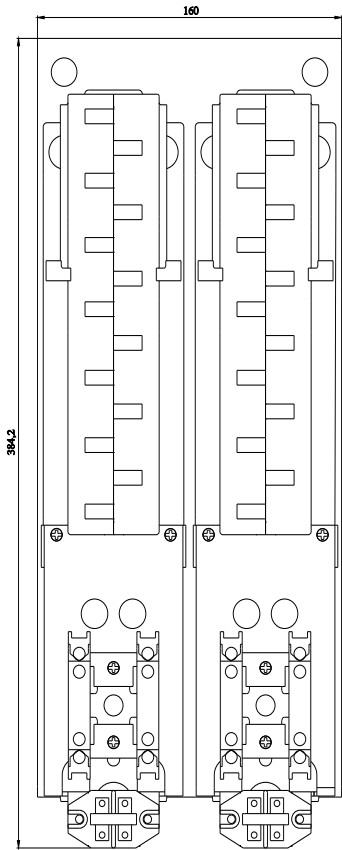
[Miscellaneous](#)

[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=3TC7814-5KB>
 Cax online generator
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC7814-5KB>
 Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3TC7814-5KB>
 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC7814-5KB&lang=en
 Characteristic: Tripping characteristics, I²t, Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3TC7814-5KB/char>
 Further characteristics (e.g. electrical endurance, switching frequency)
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3TC7814-5KB&objecttype=14&gridview=view1>



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2/13/2023

