



contactor, DC-3/DC-5, 400 A, 2-pole, 24 V DC, with varistor, auxiliary contacts: 4 NO + 4 NC, connecting bar

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 Prohibition (day/month/year)	03/01/2017
SVHC substance name	Lead CAS-No. 7439-92-1
Net Weight	22.8 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	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 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 750 V rated value — at 1500 V rated value • at DC-3 at DC-5 — at 220 V rated value — at 600 V rated value — at 750 V rated value • at 1 current path at DC-3 at DC-5 — 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 — at 750 V rated value • with 2 current paths in series at DC-3 at DC-5 — 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 — at 750 V rated value — at 1500 V rated value	500 A 500 A 500 A 500 A 500 A 500 A 500 A 400 A 400 A 400 A 400 A 400 A 400 A 400 A 400 A 400 A 400 A 400 A 400 A 400 A 400 A 400 A 400 A
operating power • at DC-1 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 750 V rated value — at 1500 V rated value • at DC-3 at DC-5 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 750 V rated value — at 1200 V rated value — at 1500 V rated value	55 kW 110 kW 220 kW 375 kW 750 kW 35 kW 70 kW 140 kW 200 kW 250 kW 400 kW 500 kW
operating frequency • at DC-1 maximum • at DC-3 maximum • at DC-5 maximum	1 000 1/h 500 1/h 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
• 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
Short-circuit protection	
design of the fuse link	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	2 x 3NE1330-5E (315 A) parallel (1500 V, 12 kA)
— with type of coordination 2 required	2 x 3NE1330-5E (315 A) parallel (1500 V, 12 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 fixing
height	375 mm
width	160 mm
depth	290 mm
required spacing	
• with side-by-side mounting	
— forwards	20 mm
— backwards	0 mm
— upwards	25 mm
— downwards	10 mm
— at the side	10 mm
• for grounded parts	
— forwards	50 mm
— backwards	0 mm
— upwards	25 mm
— at the side	10 mm
— downwards	10 mm
• for live parts	
— forwards	50 mm
— backwards	0 mm
— upwards	25 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 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; 1 auxiliary NC contact each of the right and left current path must be connected in series
Electrical Safety		
protection class IP on the front according to IEC 60529		IP00
Approvals Certificates		
Environment	General Product Approval	Functional Safety
Environmental Conformations	   	Type Examination Certificate
Test Certificates	other	Dangerous goods
Special Test Certificate	Miscellaneous 	Transport Information
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=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, ...) https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC7814-5KB&lang=en Cax online generator https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC7814-5KB Kennlinien https://curves.simaris.siemens.com/curves/3TC7814-5KB		



