



contactor, DC-3/DC-5, 400 A, 2-pole, 220 V AC, 50 Hz, 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	22.87 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	AC
control supply voltage at AC ● at 50 Hz rated value	220 V
operating range factor control supply voltage rated value of magnet coil at AC ● at 50 Hz	0.8 ... 1.2
apparent pick-up power of magnet coil at AC ● at 50 Hz	160 VA 160 VA
inductive power factor with closing power of the coil ● at 50 Hz	0.95 0.95
apparent holding power of magnet coil at AC ● at 50 Hz	160 VA 160 VA

inductive power factor with the holding power of the coil • at 50 Hz	0.95 0.95
arcing time	40 ... 70 ms
Auxiliary circuit	
number of NC contacts for auxiliary contacts • instantaneous contact	4 4
number of NO contacts for auxiliary contacts • instantaneous contact	4 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 • at 400 V rated value • at 500 V rated value	5.6 A 3.6 A 2.5 A
operational current at DC-12 • 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	10 A 10 A 10 A 3.2 A 2.5 A 0.9 A 0.22 A
operational current at DC-13 • 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	10 A 5 A 5 A 1.14 A 0.98 A 0.48 A 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 — with type of coordination 2 required • for short-circuit protection of the auxiliary switch required	2 x 3NE1330-5E (315 A) parallel (1500 V, 12 kA) 2 x 3NE1330-5E (315 A) parallel (1500 V, 12 kA) 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 — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts	20 mm 0 mm 25 mm 10 mm 10 mm 50 mm 0 mm 25 mm 10 mm 10 mm

— 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 mm²)
— finely stranded with core end processing	2x (0.75 ... 1.5 mm²)

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
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Electrical Safety

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

Environment	General Product Approval	Functional Safety
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[Environmental Con-
firmations](#)



[Type Examination Cer-
tificate](#)

Test Certificates	other	Dangerous goods
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[Special Test Certifi-
cate](#)

[Miscellaneous](#)

[Confirmation](#)



[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=3TC7814-1CM>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TC7814-1CM>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TC7814-1CM&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TC7814-1CM>

Characteristic curves

https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>



