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Data sheet 3RT2646-1AF03

Capacitor contactor, AC-6b 100 kVAr, / 400 V 1 NO + 1 NC, 110 V AC, 50 Hz 3-pole, Size S3 screw terminal

product brand name	SIRIUS
product designation	capacitor contactors
product type designation	3RT26
General technical data	
size of contactor	S3
product extension auxiliary switch	Yes
insulation voltage	
● of main circuit with degree of pollution 3 rated value	1 000 V
● of auxiliary circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
● of main circuit rated value	8 kV
● of auxiliary circuit rated value	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	400 V
shock resistance at rectangular impulse	
● at AC	6.8g / 5 ms, 4g / 10 ms
shock resistance with sine pulse	
● at AC	10.6g / 5 ms, 6.2g / 10 ms
mechanical service life (switching cycles)	
● of the contactor with added auxiliary switch block typical	3 000 000
electrical endurance (switching cycles)	120 000
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	26.06.2017
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
● during operation	-25 ... +60 °C
● during storage	-55 ... +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C acc. to IEC 60068-2-30 maximum	95 %
Main circuit	
number of NO contacts for main contacts	3
number of NC contacts for main contacts	0
operational current at AC-6b at 690 V at ambient temperature 60 °C rated value	144 A
operating reactive power at AC-6b	
● at 230 V at 50/60 Hz at ambient temperature 60 °C rated value	19 ... 57 kvar

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● at 400 V at 50/60 Hz at ambient temperature 60 °C rated value	33 ... 100 kvar
● at 500 V at 50/60 Hz at ambient temperature 60 °C rated value	41 ... 125 kvar
● at 690 V at 50/60 Hz at ambient temperature 60 °C rated value	57 ... 172 kvar
no-load switching frequency	
● at AC	500 1/h
operating frequency at AC-6b	
● at 230 V maximum	150 1/h
● at 240 V maximum	150 1/h
● at 400 V maximum	80 1/h
● at 480 V maximum	53 1/h
● at 500 V maximum	53 1/h
● at 600 V maximum	32 1/h
● at 690 V maximum	30 1/h
Control circuit/ Control	
type of voltage	AC
type of voltage of the control supply voltage	AC
control supply voltage at AC	
● at 50 Hz rated value	110 V
control supply voltage frequency	
● 1 rated value	50 Hz
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.8 ... 1.1
apparent pick-up power of magnet coil at AC	296 V·A
inductive power factor with closing power of the coil	0.61
apparent holding power of magnet coil at AC	19 V·A
inductive power factor with the holding power of the coil	0.38
closing delay	
● at AC	13 ... 50 ms
opening delay	
● at AC	11 ... 20 ms
arcing time	10 ... 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
● attachable	1
● instantaneous contact	1
number of NO contacts for auxiliary contacts	1
● attachable	1
● instantaneous contact	1
operational current of auxiliary contacts at AC-12 maximum	10 A
operational current of auxiliary contacts at AC-15	
● at 230 V	6 A
● at 400 V	3 A
operational current of auxiliary contacts at DC-13	
● at 24 V	6 A
● at 60 V	2 A
● at 110 V	1 A
● at 125 V	0.9 A
● at 220 V	0.3 A
contact reliability of auxiliary contacts	0.00000001
UL/CSA ratings	
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
design of the fuse link	
● for short-circuit protection of the main circuit with	gG: 250 A (690 V, 50 kA)

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type of coordination 1 required	
● for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
height	140 mm
width	80 mm
depth	152 mm
required spacing	
● with side-by-side mounting at the side	10 mm
● for grounded parts at the side	10 mm
Connections/ Terminals	
type of electrical connection	
● for main current circuit	screw-type terminals
● for auxiliary and control circuit	screw-type terminals
● at contactor for auxiliary contacts	Screw-type terminals
● of magnet coil	Screw-type terminals
type of connectable conductor cross-sections	
● for main contacts	
— solid	2x (10 ... 16 mm²)
— stranded	2x (10 ... 70 mm²), 1x (10 ... 70 mm²)
— solid or stranded	2x (10 ... 70 mm²), 1x (10 ... 70 mm²)
— finely stranded with core end processing	2x (10 ... 50 mm²)
● at AWG cables for main contacts	2x (8 ... 3/0), 1x (6 ... 3/0)
type of connectable conductor cross-sections	
● for auxiliary contacts	
— solid	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²
— solid or stranded	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²
— finely stranded with core end processing	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
● at AWG cables for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
type of minimum connectable cross-section for main contacts at AC-6b	
● at 40 °C	1x 70 mm²
● at 60 °C	2x 50 mm²
AWG number as coded connectable conductor cross section for main contacts	8
Safety related data	
product function	
● mirror contact acc. to IEC 60947-4-1	No
● positively driven operation acc. to IEC 60947-5-1	No
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front

Certificates/ approvals

General Product Approval				EMC
Confirmation	CCC	UL	KC	RCM

Declaration of Conformity	Test Certificates	Marine / Shipping	other	Dangerous Good
UK Declaration of Conformity	Type Test Certificates/Test Report	PRS	Confirmation	Transport Information

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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=3RT2646-1AF03

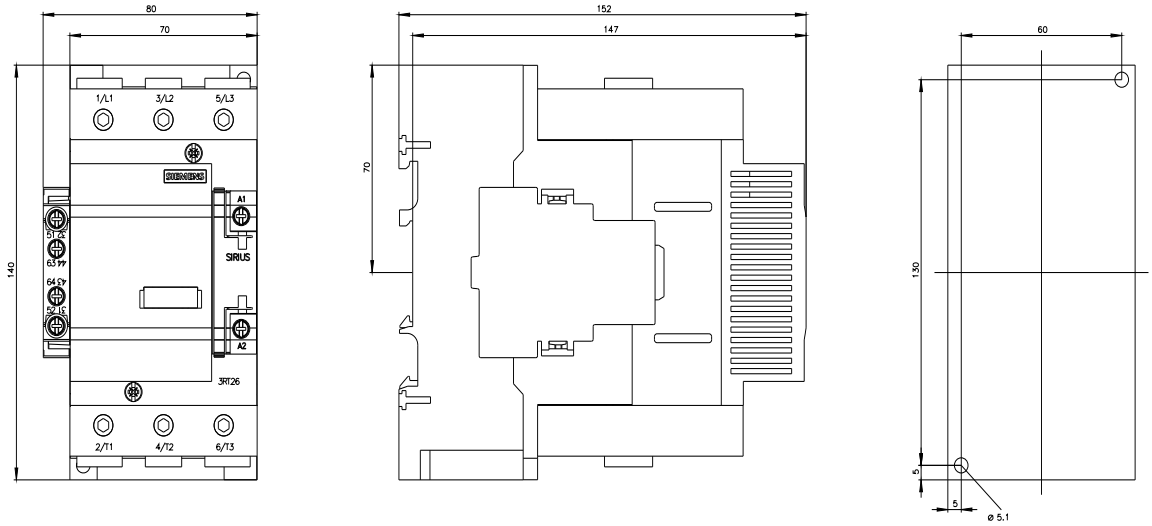
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2646-1AF03

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT2646-1AF03

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2646-1AF03&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RT2646-1AF03/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2646-1AF03&objecttype=14&gridview=view1



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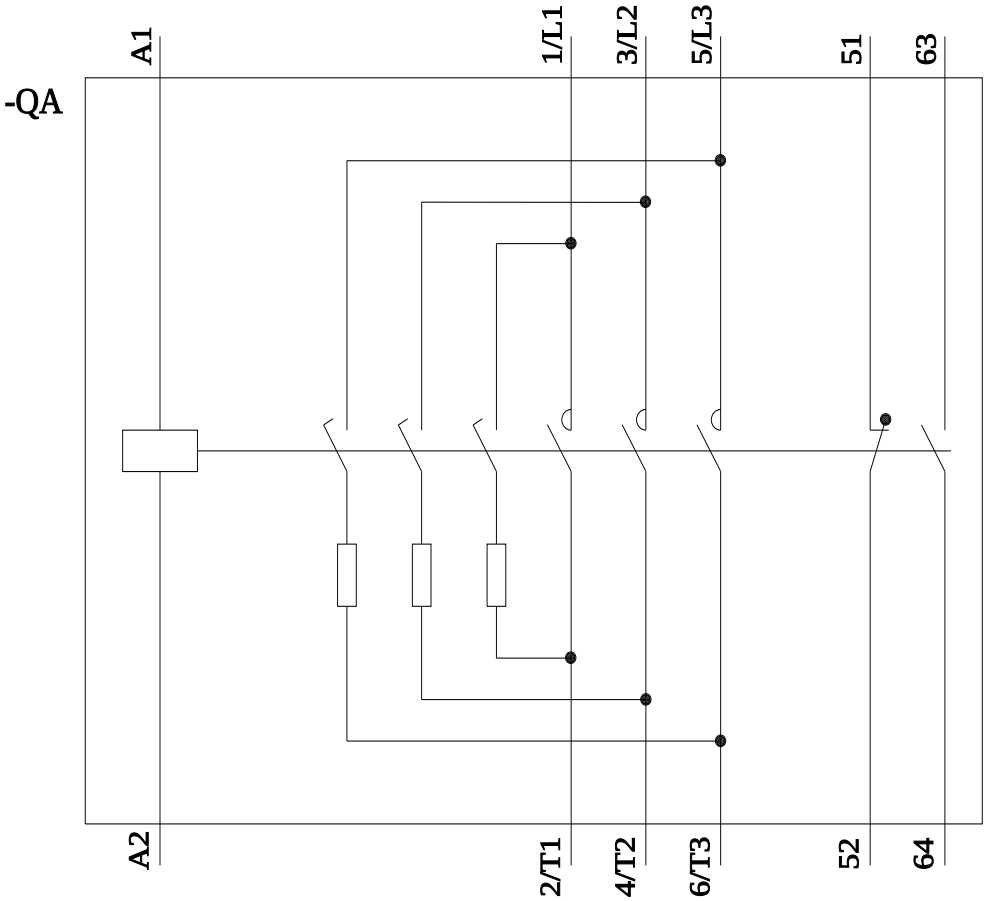

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