SIEMENS

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
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
Protection class IP	
• on the front	IP00
• of the terminal	IP00
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 DIN EN 81346-2	Q

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

Main circuit

Number of NO contacts for main contacts	3
Number of NC contacts for main contacts	0
Operating current	
• at AC-6b at 690 V at ambient temperature 60 °C rated value	144 A
Operational reactive power at AC-6b	
• at 230 V at 50/60 Hz at ambient temperature 60 °C rated value	19 ... 57 kvar
• 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	15 ... 25 ms
Arcing time	10 ... 15 ms

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
Operating current of auxiliary contacts at AC-12 maximum	10 A
Operating current of auxiliary contacts at AC-15	
• at 230 V	6 A
• at 400 V	3 A
Operating 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 type of coordination 1 required	gG: 250 A (690 V, 50 kA)
• 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
Mounting type	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 current circuit	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)
— single or multi-stranded	2x (10 ... 70 mm²), 1x (10 ... 70 mm²)
— finely stranded with core end processing	2x (10 ... 50 mm²)
• at AWG conductors 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
— single or multi-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 conductors 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 against electrical shock	Not finger-safe

Certificates/ approvals

General Product Approval			EMC	Declaration of Conformity	
CCC	UL	EAC	RCM	EG-Konf.	Miscellaneous

Test Certificates	Marine / Shipping	other
Type Test Certificates/Test Report	PRS	Confirmation

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

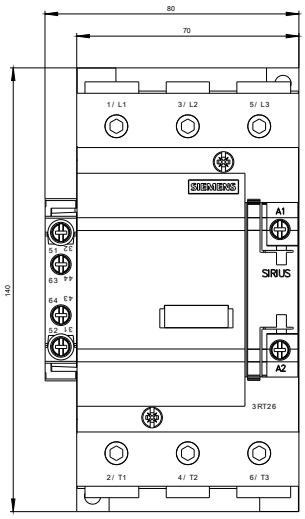
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2646-1AF03

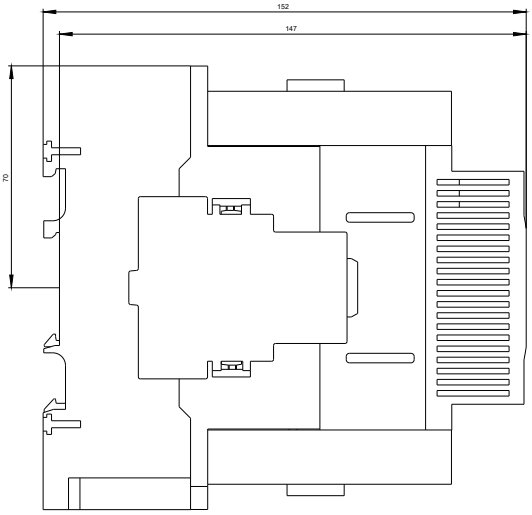
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT2646-1AF03

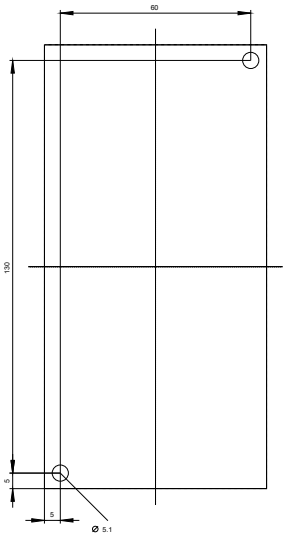
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2646-1AF03&lang=en

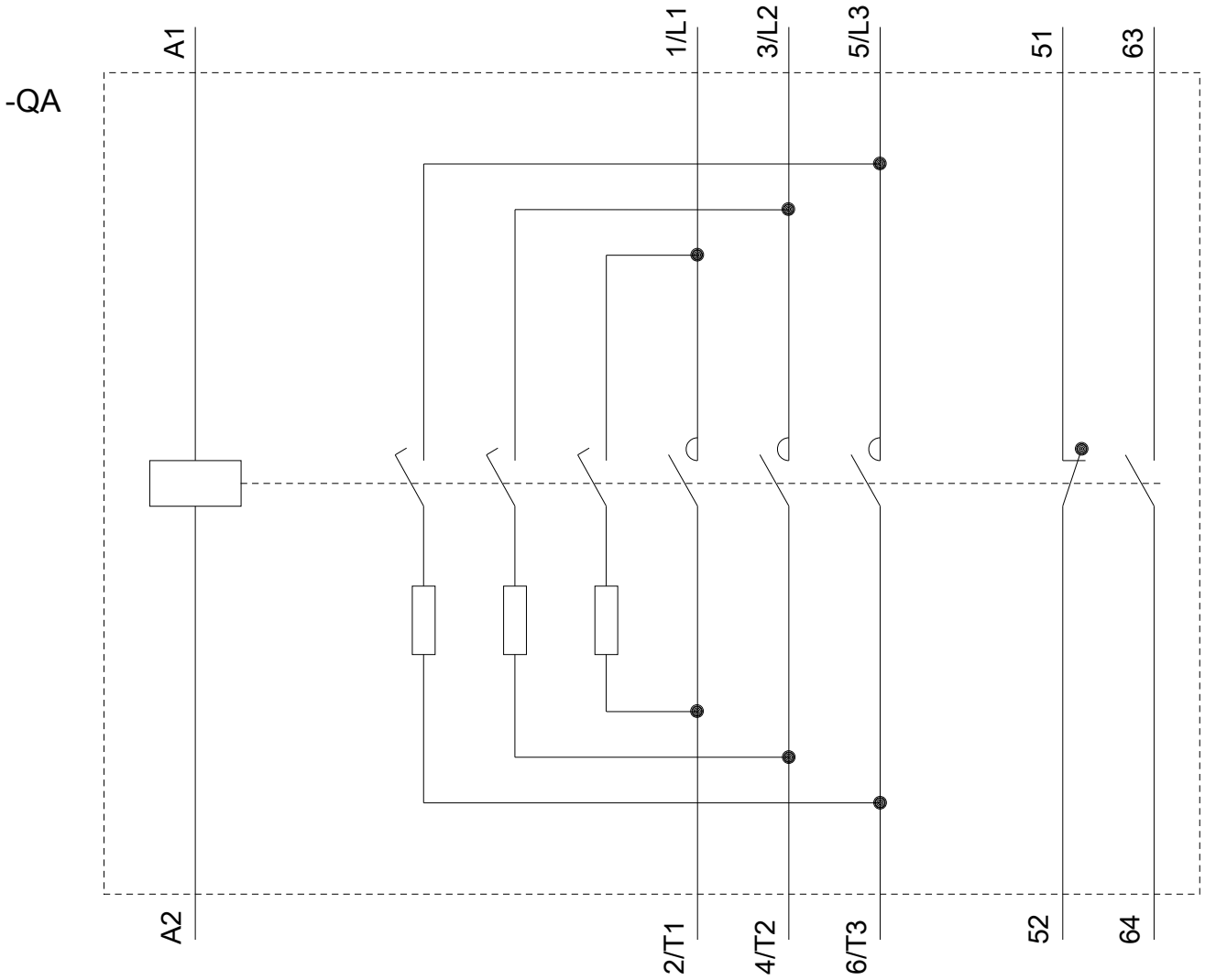
Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RT2646-1AF03/char

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









last modified: 04/11/2020