SIEMENS

Data sheet 3RT1044-1AM20

Figure similar

CONTACTOR, AC-3 30 KW/400 V, AC 208 V, 50/60 HZ, 3-POLE, SIZE S3, SCREW CONNECTION

product brand name	SIRIUS
Product designation	power contactor

General technical data:

Size of contactor	S3
Insulation voltage	
• Rated value	1 000 V
Surge voltage resistance Rated value	6 kV
Protection class IP	
• on the front	IP00
• of the terminal	IP00
Degree of pollution	3
Mechanical service life (switching cycles)	
• of the contactor typical	10 000 000
• of the contactor with added electronics-compatible auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000

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-1 at 400 V	
— at ambient temperature 40 °C Rated value	100 A
• at AC-1 up to 690 V	
— at ambient temperature 40 °C Rated value	100 A
— at ambient temperature 60 °C Rated value	90 A
• at AC-3	
— at 400 V Rated value	65 A
— at 690 V Rated value	47 A
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	35 mm²
• at 40 °C minimum permissible	35 mm²
Operating current for ≥ 200000 operating cycles at AC-4	
• at 400 V Rated value	28 A
• at 690 V Rated value	20 A
Operating current	
• with 1 current path at DC-1	
— at 24 V Rated value	90 A
— at 110 V Rated value	4.5 A
• with 2 current paths in series at DC-1	
— at 24 V Rated value	90 A
— at 110 V Rated value	90 A
• with 3 current paths in series at DC-1	
— at 24 V Rated value	90 A
— at 110 V Rated value	90 A
Operating current	
• with 1 current path at DC-3 at DC-5	
— at 24 V Rated value	40 A
— at 110 V Rated value	2.5 A
• with 2 current paths in series at DC-3 at DC-5	
— at 110 V Rated value	90 A
— at 24 V Rated value	90 A
• with 3 current paths in series at DC-3 at DC-5	
— at 110 V Rated value	90 A
— at 24 V Rated value	90 A
Operating power	
• at AC-1	
— at 230 V at 60 °C Rated value	34 kW
— at 400 V Rated value	59 kW

— at 690 V Rated value	102 kW
— at 690 V at 60 °C Rated value	102 kW
• at AC-2 at 400 V Rated value	30 kW
• at AC-3	
— at 230 V Rated value	18.5 kW
— at 400 V Rated value	30 kW
— at 500 V Rated value	37 kW
— at 690 V Rated value	45 kW
Operating power for ≥ 200000 operating cycles at AC-4	
• at 400 V Rated value	15.1 kW
• at 690 V Rated value	18.6 kW
Thermal short-time current restricted to 10 s	600 A
Active power loss at AC-3 at 400 V for rated value of the operating current per conductor	4.6 W
No-load switching frequency	
• at AC	5 000 1/h
Operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	400 1/h
• at AC-3 maximum	1 000 1/h
• at AC-4 maximum	300 1/h

Control circuit/ Control:	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz Rated value	208 V
• at 60 Hz Rated value	208 V
• Rated value	50 Hz
Control supply voltage frequency 2 Rated value	60 Hz
Operating range factor control supply voltage rated value of the magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.85 ... 1.1
Apparent pick-up power of the magnet coil at AC	247 V·A
Inductive power factor with closing power of the coil	0.62
Apparent holding power of the magnet coil at AC	25 V·A
Inductive power factor with the holding power of the coil	0.27
Closing delay	
• at AC	16 ... 57 ms
Opening delay	
• at AC	10 ... 19 ms

Arcing time	10 ... 15 ms

Auxiliary circuit:	
Number of NC contacts	
• for auxiliary contacts	
— instantaneous contact	0
Number of NO contacts	
• for auxiliary contacts	
— instantaneous contact	0
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
• at 230 V Rated value	6 A
• at 400 V Rated value	3 A
Operating current at DC-12	
• at 60 V Rated value	6 A
• at 110 V Rated value	3 A
• at 220 V Rated value	1 A
Operating current at DC-13	
• at 24 V Rated value	10 A
• at 60 V Rated value	2 A
• at 110 V Rated value	1 A
• at 220 V Rated value	0.3 A
Contact reliability of the auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings:	
Contact rating of the auxiliary contacts acc. to UL	A600 / Q600

Short-circuit:	
Design of the fuse link	
• for short-circuit protection of the main circuit	
— with type of assignment 1 required	fuse gL/gG: 250 A
— with type of assignment 2 required	fuse gL/gG: 125 A
• for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A

Installation/ mounting/ dimensions:	
Mounting type	screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail
• Side-by-side mounting	Yes
Height	146 mm
Width	70 mm
Depth	139 mm
Required spacing	
• for grounded parts	
— at the side	6 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-section	
• for main contacts	
— solid	2x (2.5 ... 16 mm²)
— stranded	2x (10 ... 50 mm²)
— single or multi-stranded	2x (2,5 ... 16 mm²)
— finely stranded with core end processing	2x (2.5 ... 35 mm²)
— finely stranded without core end processing	2x (10 ... 35 mm²)
• for AWG conductors for main contacts	2x (10 ... 1/0)
Type of connectable conductor cross-section	
• for auxiliary contacts	
— solid	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
• for AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 1x 12

Certificates/ approvals:

General Product Approval			Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
CSA	UL	EAC	Baumusterbescheinigung	EG-Konf.	spezielle Prüfbescheinigungen

Shipping Approval					other
ABS	GL	LRS	RINA	RMRS	Bestätigungen

other	
Umweltbestätigung	sonstig

Further information

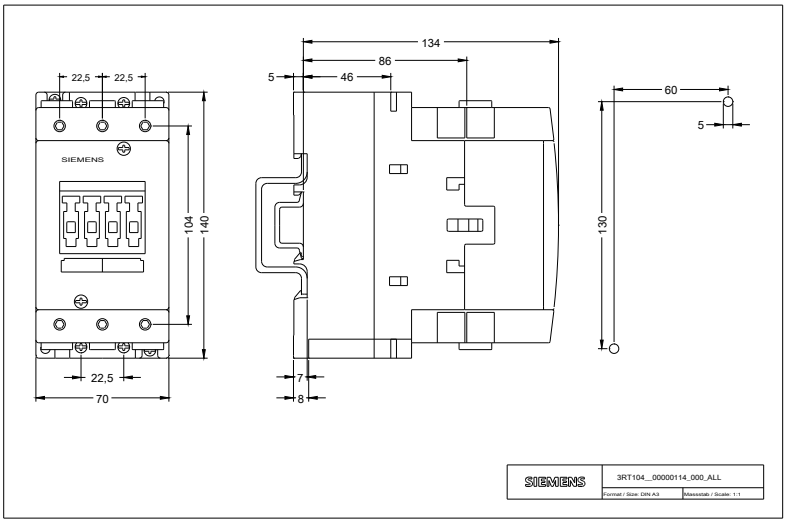
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

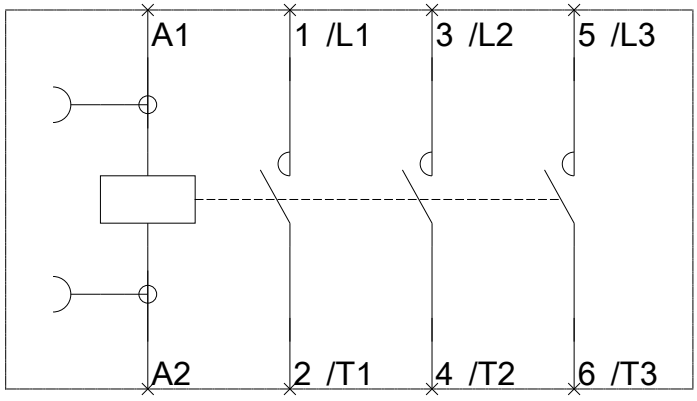
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT10441AM20

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT10441AM20

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT10441AM20&lang=en



-Q



last modified: 29.06.2015