SIEMENS

Data sheet 3RT1446-6BB46

Figure similar

CONTACTOR AC-1, 140 A/400 V, 24 V DC, 3-POLE, SIZE S3, SCREW TERMINAL, WITHOUT BOX TERMINALS LATERAL AUX. SWITCH BLOCK L+ R 2 NO + 2 NC.

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

Changes preserved
© Copyright Siemens AG

Number of NC contacts for main contacts	0
Operating current	
• at AC-1 at 400 V	
— at ambient temperature 40 °C Rated value	140 A
• at AC-1 up to 690 V	
— at ambient temperature 40 °C Rated value	140 A
— at ambient temperature 60 °C Rated value	130 A
• at AC-3	
— at 400 V Rated value	44 A
— at 690 V Rated value	44 A
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	35 mm²
• at 40 °C minimum permissible	50 mm²
Operating current	
• with 1 current path at DC-1	
— at 24 V Rated value	130 A
— at 110 V Rated value	12 A
• with 2 current paths in series at DC-1	
— at 24 V Rated value	130 A
— at 110 V Rated value	130 A
• with 3 current paths in series at DC-1	
— at 24 V Rated value	130 A
— at 110 V Rated value	130 A
Operating current	
• with 1 current path at DC-3 at DC-5	
— at 24 V Rated value	6 A
— at 110 V Rated value	1.25 A
• with 2 current paths in series at DC-3 at DC-5	
— at 110 V Rated value	130 A
— at 24 V Rated value	130 A
• with 3 current paths in series at DC-3 at DC-5	
— at 110 V Rated value	130 A
— at 24 V Rated value	130 A
Operating power	
• at AC-1	
— at 230 V at 60 °C Rated value	50 kW
— at 400 V Rated value	86 kW
— at 690 V Rated value	148 kW
— at 690 V at 60 °C Rated value	148 kW
• at AC-2 at 400 V Rated value	22 kW
• at AC-3	

Changes preserved
© Copyright Siemens AG

— at 230 V Rated value	12.7 kW
— at 400 V Rated value	22 kW
— at 500 V Rated value	29.9 kW
— at 690 V Rated value	38.2 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	12.5 W
No-load switching frequency	
• for DC	1 000 1/h
Operating frequency	
• at AC-1 maximum	650 1/h

Control circuit/ Control:	
Type of voltage of the control supply voltage	DC
Control supply voltage for DC	
• Rated value	24 V
Operating range factor control supply voltage rated value of the magnet coil for DC	0.8 ... 1.1
Closing power of the magnet coil for DC	15 W
Holding power of the magnet coil for DC	15 W
Closing delay	
• for DC	90 ... 230 ms
Arcing time	10 ... 15 ms

Auxiliary circuit:	
Number of NC contacts	
• for auxiliary contacts	
— instantaneous contact	2
Number of NO contacts	
• for auxiliary contacts	
— instantaneous contact	2
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

Changes preserved
© Copyright Siemens AG

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: 250 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	90 mm
Depth	152 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 AWG conductors for main contacts	7 ... 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:	

Changes preserved
© Copyright Siemens AG

General Product Approval				Functional Safety/Safety of Machinery	Declaration of Conformity
CCC	CSA	UL	EAC	Type Examination	EG-Konf.

Test Certificates	Shipping Approval				other
Special Test Certificate	ABS	GL	RINA	RMRS	Confirmation

other	
Environmental Confirmations	other

Further information

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

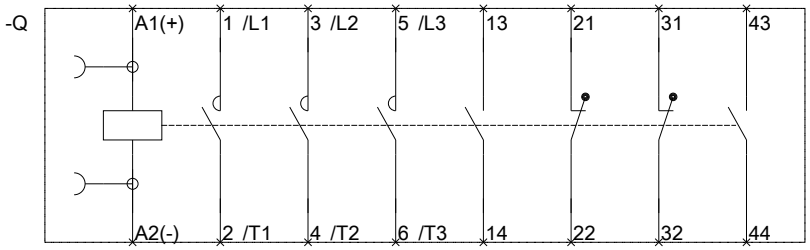
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT14466BB46

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT14466BB46

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT14466BB46&lang=en

Changes preserved
© Copyright Siemens AG



last modified: 16.06.2015

Changes preserved
© Copyright Siemens AG