SIEMENS

Data sheet

3RT1045-1BB40



CONTACTOR, AC-3 37 KW/400 V, DC 24 V, 3-POLE, SIZE S3, SCREW CONNECTION

Figure similar	
product brand name	SIRIUS
Product designation	power contactor
General technical data:	
Size of contactor	\$3
Insulation voltage	
Rated value	1 000 V
Degree of pollution	3
Surge voltage resistance Rated value	6 kV
Mechanical service life (switching cycles)	
 of the contactor typical 	10 000 000
 of the contactor with added electronics- 	5 000 000
compatible auxiliary switch block typical	
 of the contactor with added auxiliary switch 	10 000 000
block typical	
Protection class IP	
• on the front	IP00
• of the terminal	IP00
Equipment marking	
• acc. to DIN EN 61346-2	Q
• acc. to DIN EN 81346-2	Q
Ambient conditions:	
Installation altitude at height above sea level	2 000 m
maximum	
Ambient temperature	
 during operation 	-25 +60 °C

• during storage	-55 +80 °C
Main circuit:	
Number of poles for main current circuit	3
Number of NC contacts for main contacts	0
Number of NO contacts for main contacts	3
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	
• at AC-1 at 400 V	
— at ambient temperature 40 °C Rated value	120 A
• at AC-1 up to 690 V	
— at ambient temperature 40 °C Rated value	120 A
— at ambient temperature 60 °C Rated value	100 A
• at AC-3	
— at 400 V Rated value	80 A
— at 690 V Rated value	58 A
• at AC-4 at 400 V Rated value	66 A
Operating current for ≥ 200000 operating cycles at AC-4	
• at 400 V Rated value	34 A
• at 690 V Rated value	22 A
Operating current	
• with 1 current path at DC-1	
— at 24 V Rated value	100 A
— at 110 V Rated value	9 A
 with 2 current paths in series at DC-1 	
— at 24 V Rated value	100 A
— at 110 V Rated value	100 A
 with 3 current paths in series at DC-1 	
— at 24 V Rated value	100 A
— at 110 V Rated value	100 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	100 A
— at 24 V Rated value	100 A
• with 3 current paths in series at DC-3 at DC-5	

— at 110 V Rated value	100 A
— at 24 V Rated value	100 A
Operating power	
• at AC-1	
— at 230 V at 60 °C Rated value	38 kW
— at 690 V at 60 °C Rated value	114 kW
Operating power for ≥ 200000 operating cycles at AC-4	
• at 400 V Rated value	17.9 kW
• at 690 V Rated value	21.1 kW
Thermal short-time current restricted to 10 s	760 A
Active power loss at AC-3 at 400 V for rated value of	7.7 W
the operating current per conductor	
No-load switching frequency	
• for DC	1 000 1/h
Operating frequency	
• at AC-1 maximum	900 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	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
uxiliary 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
· · · ·	10 A
Operating current at AC-12 maximum Operating current at AC-15 • at 230 V Rated value	10 A 6 A

Operating current at DC-12 6 A • 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 1 A • at 24 V Rated value 10 A • at 60 V Rated value 1 A • at 20 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 UL/CSA ratings: Contact reliability 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: 10 A required fuse gL/gG: 10 A Installation/ mounting / dimensions: Mounting type Mounting type screw and snap-on mounting onto 35 mm mounting rail • Side-by-side mounting Yes Height 145 mm Width 70 mm Depth 152 mm required spacing <					
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for auxiliary and control current circuit screw-type terminals Type of connectable conductor cross-section for main contacts					
Type of connectable conductor cross-section • for main contacts — solid 2x (2.5 16 mm²)					
• for main contacts — solid 2x (2.5 16 mm ²)					
— solid 2x (2.5 16 mm ²)					
$2\sqrt{40} = 50$ mm ²					
— stranded 2x (10 50 mm ²)					
- single or multi-stranded 2x (2,5 16 mm ²)					
— finely stranded with core end processing 2x (2.5 35 mm ²)					
 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 Produc	ct Approval			Functional	Declaration of		
				Safety/Safety	Conformity		
				of Machinery			
	(SF)		FAL	Type Examination	(6		
CCC	CSA	UL	LIIL		EG-Konf.		
Test Certificate	s		Shipping Approv	val			
Special Test Certificate	Type Test Certificates/Test Report	other	CAN BURE	GL	Lloyd's Register		
			ABS	GL	LRS		
Shipping Appro	val	other					
RINA	RMRS	other	Environmental Confirmations	<u>Confirmation</u>			

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