SIEMENS

Data sheet

3RT2018-2AP02

CONTACTOR, AC-3, 7.5KW/400V, 1NC, AC 230V, 50/60 HZ, 3-POLE, SZ S00 SPRING-LOADED TERMINAL



product brandname	SIRIUS
Product designation	Power contactor
Product type designation	3RT2
General technical data	
Size of contactor	S00
Product extension	
 function module for communication 	No
Auxiliary switch	Yes
Insulation voltage	
 rated value 	690 V
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
 between coil and main contacts acc. to EN 	400 V
60947-1	
Protection class IP	
• on the front	IP20
• of the terminal	IP20
Shock resistance at rectangular impulse	
• at AC	7,3g / 5 ms, 4,7g / 10 ms

• at AC11,4g / 5 ms, 7,3g / 10 msMechanical service life (switching cycles)30 000 000• of contactor typical30 000 000• of the contactor with added electronics- compatible auxiliary switch block typical5 000 000• of the contactor with added auxiliary switch block typical10 000 000Ambient conditions	Shock resistance with sine pulse																																																																												
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	— at 110 V rated value	2.1 A																																																																											

— at 220 V rated value	0.8 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
 with 2 current paths in series at DC-1 	
— at 24 V rated value	20 A
— at 110 V rated value	12 A
— at 220 V rated value	1.6 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.7 A
 with 3 current paths in series at DC-1 	
— at 24 V rated value	20 A
— at 110 V rated value	20 A
— at 220 V rated value	20 A
— at 440 V rated value	1.3 A
— at 600 V rated value	1 A
Operating current	
 at 1 current path at DC-3 at DC-5 	
— at 24 V rated value	20 A
— at 110 V rated value	0.1 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	20 A
— at 110 V rated value	0.35 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	20 A
— at 110 V rated value	20 A
— at 220 V rated value	1.5 A
— at 440 V rated value	0.2 A
— at 600 V rated value	0.2 A
Operating power	
• at AC-1	
— at 230 V rated value	7.5 kW
— at 230 V at 60 °C rated value	7.5 kW
— at 400 V rated value	13 kW
— at 400 V at 60 °C rated value	13 kW
— at 690 V rated value	22 kW
— at 690 V at 60 °C rated value	22 kW
• at AC-2 at 400 V rated value	7.5 kW
● at AC-3	
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 690 V rated value	7.5 kW

Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	2.5 kW
• at 690 V rated value	3.5 kW
Thermal short-time current limited to 10 s	128 A
Power loss [W] at AC-3 at 400 V for rated value of	2.2 W
the operating current per conductor	
No-load switching frequency	
• at AC	10 000 1/h
Operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
● at AC-3 maximum	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz rated value	230 V
• at 60 Hz rated value	230 V
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
● at 60 Hz	0.85 1.1
Apparent pick-up power of magnet coil at AC	
• at 50 Hz	37 V·A
• at 60 Hz	43 V·A
Inductive power factor with closing power of the coil	
• at 50 Hz	0.8
• at 60 Hz	0.8
Apparent holding power of magnet coil at AC	
• at 50 Hz	5.7 V·A
• at 60 Hz	6.5 V·A
Inductive power factor with the holding power of the coil	
● at 50 Hz	0.25
● at 60 Hz	0.25
Closing delay	
• at AC	8 33 ms
Opening delay	
• at AC	4 15 ms
Arcing time	10 15 ms
Residual current of the electronics for control with signal <0>	

• at AC at 230 V maximum permissible	4 mA
• at DC at 24 V maximum permissible	10 mA
Auxiliary circuit	
Number of NC contacts	
 for auxiliary contacts 	
— instantaneous contact	1
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
Operating current at DC-12	-
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 A
• at 600 V rated value	0.15 A
Operating current at DC-13	
• at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
• at 220 V rated value	0.3 A
• at 600 V rated value	0.1 A
Contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings	
Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	14 A
• at 600 V rated value	11 A
Yielded mechanical performance [hp]	
 for single-phase AC motor 	
— at 110/120 V rated value	1 hp
— at 230 V rated value	2 hp
 for three-phase AC motor 	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	5 hp
— at 460/480 V rated value	10 hp

— at 575/600 V rated value	10 hp		
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	gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 50 A		
— with type of coordination 1 required			
— with type of assignment 2 required	gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 25 A		
 for short-circuit protection of the auxiliary switch required 	fuse gG: 10 A		
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 60715		
 Side-by-side mounting 	Yes		
Height	70 mm		
Width	45 mm		
Depth	73 mm		
Required spacing			
 for grounded parts 			
— at the side	6 mm		
 for live parts 			
— at the side	6 mm		
Connections/Terminals			
Type of electrical connection			
 for main current circuit 	spring-loaded terminals		
 for auxiliary and control current circuit 	spring-loaded terminals		
Type of connectable conductor cross-sections			
 for main contacts 			
— solid	2x (0.5 4 mm²)		
— single or multi-stranded	2x (0,5 4 mm²)		
— finely stranded with core end processing	2x (0.5 2.5 mm²)		
— finely stranded without core end	2x (0.5 2.5 mm²)		
processing			
• at AWG conductors for main contacts	2x (20 12)		
Type of connectable conductor cross-sections			
 for auxiliary contacts 			
— single or multi-stranded	2x (0,5 4 mm²)		
- finely stranded with core end processing	2x (0.5 2.5 mm²)		
 finely stranded without core end processing 	2x (0.5 2.5 mm²)		

• at AWG conductors for auxiliary contacts

2x (20 ... 12)

		liacis	27 (20 12)				
afety related data							
B10 value							
 with high dema 	and rate acc. to SN 3 ²	1920	1 000 000	1 000 000			
Proportion of danger	ous failures						
 with low deman 	nd rate acc. to SN 31	920	40 %				
 with high dema 	and rate acc. to SN 3 ²	1920	73 %				
Failure rate [FIT]							
 with low deman 	nd rate acc. to SN 31	920	100 FIT				
Product function							
 Mirror contact acc. to IEC 60947-4-1 			Yes				
T1 value for proof test interval or service life acc. to IEC 61508			20 y				
Protection against el	ectrical shock		finger-safe				
ertificates/approva	ls						
General Product					Functional Safety/Safety of Machinery		
ccc Declaration of	CSA Test Certificates	UL	Shipping	Approval			
Conformity							
EG-Konf.	Special Test Certificate	<u>Type Tes</u> <u>Certificates/</u> <u>Report</u>		BUREAU VERITAS	GL		
Shipping Approv	al			other			
Lloyd's Kegister LRS	PRS	RINA	RMRS	Confirmati	ion <u>Environmental</u> Confirmations		
other							

Further information

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

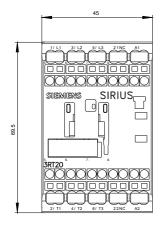
Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2018-2AP02

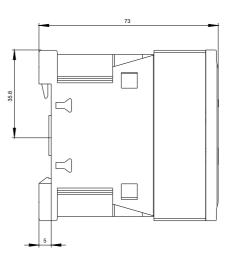
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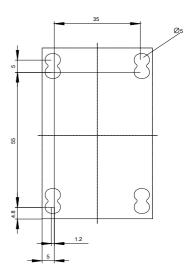
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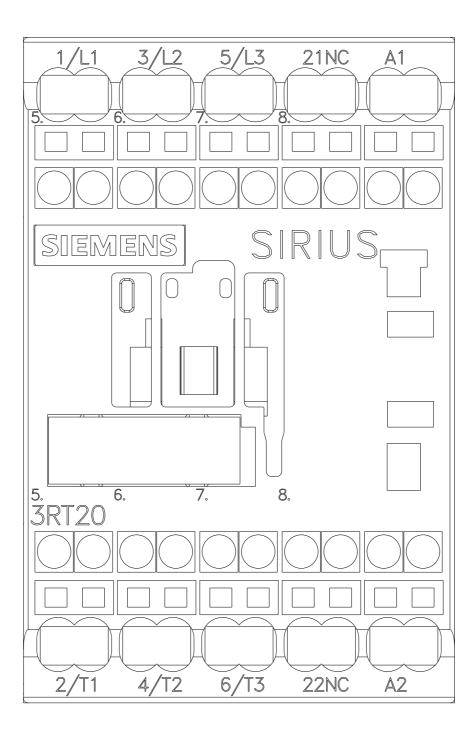
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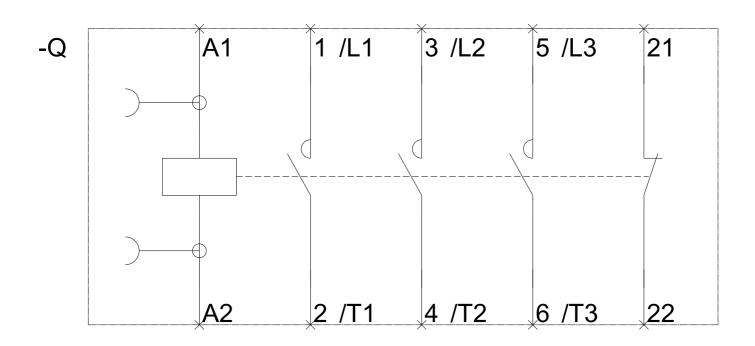
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2018-2AP02&lang=en











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