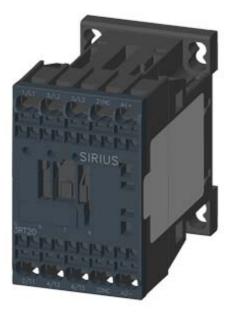
SIEMENS

Data sheet

3RT2015-2BB42-0CC0

CONTACTOR, AC-3, 3KW/400V, 1NC, DC 24V, COM. CAPABILITY 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 	Yes
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 DC	6,7g / 5 ms, 4,2g / 10 ms

• at DC10,5g / 5 ms, 6,6g / 10 msMechanical service life (switching cycles)30 000 000• of contactor typical30 000 000• of the contactor with added electronics- compatible auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• Ambient conditions-25 +60 °C• during operation • during storage-25 +80 °C	Shock resistance with sine pulse	
		10,5g / 5 ms, 6,6g / 10 ms
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 temperature • during operation • during storage -25 +60 °C -55 +80 °C • Mumber of poles for main current circuit 3 Number of NO contacts for main contacts 3 Operating outgase • at AC-3 rated value maximum 690 V • during operation • at mbient temperature 40 °C rated value 18 A • at AC-1 18 A • at AC-1 18 A • at AC-2 16 A rated value 7 A • at AC-3 7 A • at AC-1 9 A Connectable conductor cross-section in main circuit at AC-1 7 A • at 60 °C minimum permissible 2.5 mm² • at 60 °C minimum permissible 2.5 mm² • at 60 °C minimum permissible 2.5 mm² • at AC-4 <td>Mechanical service life (switching cycles)</td> <td></td>	Mechanical service life (switching cycles)	
compatible auxiliary switch block typical10 000 000Ambient conditionsAmbient conditionsMumber of poles for main current circuitNumber of NO contacts for main contactsOperating currentet AC-3 rated value maximumet AC-1 at 400 V- at ambient temperature 40 °C rated valueet AC-1- up to 690 V at ambient temperature 40 °C rated valueet AC-2 at 400 V rated value- at AC-2 at 400 V rated value- at 400 V rated value- at 400 V rated value- at 690 V rated value- at 60 °C minimum permissible- at 60 °C minimum permissible- at 60 °C minimum permissible	 of contactor typical 	30 000 000
• of the contactor with added auxiliary switch block typical10 000 000Ambient conditionsAmbient temperature • during operation • during storage-25 +60 °C - 55 +80 °C• during storage-25 +60 °C - 55 +80 °CMumber of poles for main current circuit3Number of NO contacts for main current circuit3Operating voltage • at AC-3 rated value maximum690 VOperating current • at AC-1 at 400 V - at ambient temperature 40 °C rated value18 A rated value• at AC-1 rated value18 A• at AC-1 rated value7 A A at AC-2 at 400 V rated value7 A A at AC-3 at 400 V rated value• at AC-3 rated value7 A A A• at AC-3 rated value7 A A A• at AC-3 rated value7 A A 	 of the contactor with added electronics- 	5 000 000
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Ambient temperature -25 +60 °C • during storage -55 +80 °C Main circuit 3 Number of poles for main current circuit 3 Number of NO contacts for main contacts 3 Operating voltage - • at AC-3 rated value maximum 690 V Operating current • at AC-1 at 400 V - at ambient temperature 40 °C rated value 18 A • at AC-1 -up to 690 V at ambient temperature 40 °C rated value - up to 690 V at ambient temperature 60 °C rated value 16 A - up to 690 V at ambient temperature 60 °C rated value 7 A • at AC-3 - - up to 690 V at ambient temperature 60 °C rated value 7 A • at AC-3 - - up to 690 V rated value 7 A • at AC-3 - - at 90 V rated value 7 A - at 500 V rated value 4.9 A Connectable conductor cross-section in main circuit at AC-1 2.5 mm² • at 40 °C minimum permissible 2.5 mm² • at 40 °C minimum permissible 2.5 mm² • at 40 °C minimum permissible 2.5 mm² • at 40 °C minimum permissible </td <td>block typical</td> <td></td>	block typical	
• during storage-25 +60 °C -55 +80 °C• during storage-25 +80 °CMamber of poles for main current circuit3Number of NO contacts for main contacts3Operating voltage • at AC-3 rated value maximum690 VOperating current • at AC-1 at 400 V - at ambient temperature 40 °C rated value18 A• at AC-1 rated value18 A• at AC-1 rated value18 A• at AC-1 rated value7 A• at AC-2 at 400 V rated value7 A• at AC-3 rated value7 A• at AC-3 - at 400 V rated value7 A• at AC-3 - at 690 V rated value7 A• at AC-3 - at 600 V rated value7 A• at AC-1 rated value7 A• at AC-3 - at 600 V rated value7 A• at AC-47 A• at AC-1 - at 600 V rated value7 A• at AC-1 - at 600 V rated value7 A• at AC-1 - at 600 V rated value7 A• at AC-1 - at 600 V rated value2.5 mm²• at AC-1 - at 60 °C minimum permissible2.5 mm²	Ambient conditions	
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Number of poles for main current circuit 3 Number of NO contacts for main contacts 3 Operating voltage at AC-3 rated value maximum 690 V Operating current at AC-1 at 400 V at anbient temperature 40 °C rated value 18 A at AC-1 up to 690 V at ambient temperature 40 °C 18 A at AC-1 up to 690 V at ambient temperature 60 °C rated value at AC-2 at 400 V rated value at AC-3 bit AC-1 bit AC-1	 during storage 	-55 +80 °C
Number of poles for main current circuit 3 Number of NO contacts for main contacts 3 Operating voltage 690 V • at AC-3 rated value maximum 690 V Operating current 18 A • at AC-1 18 A • at AC-1 - at ambient temperature 40 °C • at AC-1 18 A • at AC-1 - up to 690 V at ambient temperature 40 °C - up to 690 V at ambient temperature 60 °C 16 A • at AC-2 at 400 V rated value 7 A • at AC-3 - at 400 V rated value • at AC-3 - at 690 V rated value • at AC-3 - at 600 V rated value • at AC-3 - at 600 V rated value • at AC-4 2.5 mm² • at AC-1 - at 600 V rated value • at AC-1 2.5 mm² • at 40 °C minimum permissible 2.5 mm² • at 40 °C minimum permissible 2.5 mm² • at 40 °C minimum permissible 2.5 mm²	Main circuit	
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• at AC-3 rated value maximum690 VOperating currentImage: constraint of the second	Number of NO contacts for main contacts	3
Operating current• at AC-1 at 400 V- at ambient temperature 40 °C rated value• at AC-1- up to 690 V at ambient temperature 40 °Crated value- up to 690 V at ambient temperature 60 °Crated value- up to 690 V at ambient temperature 60 °Crated value- up to 690 V at ambient temperature 60 °Crated value- up to 690 V at ambient temperature 60 °Crated value- at AC-2 at 400 V rated valuerated value- at 400 V rated value- at 400 V rated value- at 500 V rated value- at 690 V rated value- at 690 V rated value- at 60 °C minimum permissible2.5 mm²- at 40 °C minimum permissible2.5 mm²- at 40 °C minimum permissible2.5 mm²	Operating voltage	
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- at ambient temperature 40 °C rated value18 A- up to 690 V at ambient temperature 40 °C18 A- up to 690 V at ambient temperature 40 °C18 A- up to 690 V at ambient temperature 60 °C16 A- up to 690 V at ambient temperature 60 °C16 A- at AC-2 at 400 V rated value7 A- at 400 V rated value6 A- at 500 V rated value4.9 AConnectable conductor cross-section in main circuit at AC-12.5 mm²- at 60 °C minimum permissible2.5 mm²- at 40 °C minimum permissible2.5 mm²	Operating current	
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- up to 690 V at ambient temperature 40 °C rated value18 A- up to 690 V at ambient temperature 60 °C rated value16 A- up to 690 V at ambient temperature 60 °C rated value7 A• at AC-2 at 400 V rated value7 A• at AC-3 at 400 V rated value6 A- at 500 V rated value6 A- at 690 V rated value2.5 mm²• at 60 °C minimum permissible2.5 mm²• at 40 °C minimum permissible2.5 mm²	— at ambient temperature 40 °C rated value	18 A
rated value - up to 690 V at ambient temperature 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 - at 400 V rated value - at 600 V rated value - at 690 V rated value • at 600 V rated value • at 60 °C minimum permissible • at 40 °C mi	• at AC-1	
rated value • at AC-2 at 400 V rated value • at AC-3 - at 400 V rated value - at 500 V rated value - at 600 V rated value - at 600 V rated value • at 60 °C minimum permissible • at 40 °C minimum permissible • at 4		18 A
 at AC-3 at AC-3 at 400 V rated value at 500 V rated value A b A Connectable conductor cross-section in main circuit at AC-1 at 60 °C minimum permissible at 40 °C minimum permissible S mm² Coperating current for approx. 20000 operating cycles at AC-4 		16 A
- at 400 V rated value7 A- at 500 V rated value6 A- at 690 V rated value4.9 AConnectable conductor cross-section in main circuit at AC-12.5 mm²• at 60 °C minimum permissible2.5 mm²• at 40 °C minimum permissible2.5 mm²	• at AC-2 at 400 V rated value	7 A
at 500 V rated value6 A at 690 V rated value4.9 AConnectable conductor cross-section in main circuit at AC-12.5 mm²• at 60 °C minimum permissible2.5 mm²• at 40 °C minimum permissible2.5 mm²Operating current for approx. 200000 operating cycles at AC-42.0 m²	• at AC-3	
at 690 V rated value4.9 AConnectable conductor cross-section in main circuit at AC-12.5 mm²• at 60 °C minimum permissible2.5 mm²• at 40 °C minimum permissible2.5 mm²• at 40 °C minimum permissible2.5 mm²	— at 400 V rated value	7 A
Connectable conductor cross-section in main circuit at AC-1 2.5 mm² • at 60 °C minimum permissible 2.5 mm² • at 40 °C minimum permissible 2.5 mm² Operating current for approx. 200000 operating cycles at AC-4 0.0 m²	— at 500 V rated value	6 A
at AC-1.• at 60 °C minimum permissible2.5 mm²• at 40 °C minimum permissible2.5 mm²Operating current for approx. 200000 operating cycles at AC-4.	— at 690 V rated value	4.9 A
• at 40 °C minimum permissible 2.5 mm ² Operating current for approx. 200000 operating cycles at AC-4		
Operating current for approx. 200000 operating cycles at AC-4	• at 60 °C minimum permissible	2.5 mm ²
cycles at AC-4	• at 40 °C minimum permissible	2.5 mm ²
at 400 V rated value 2.6 A	cycles at AC-4	
• at 690 V rated value 1.8 A		1.8 A
Operating current		
• at 1 current path at DC-1	• at 1 current path at DC-1	
— at 24 V rated value 15 A	— at 24 V rated value	
- at 110 V rated value 1.5 A	— at 110 V rated value	1.5 A

— at 220 V rated value	0.6 A
— at 440 V rated value	0.42 A
— at 600 V rated value	0.42 A
 with 2 current paths in series at DC-1 	
— at 24 V rated value	15 A
— at 110 V rated value	8.4 A
— at 220 V rated value	1.2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.5 A
 with 3 current paths in series at DC-1 	
— at 24 V rated value	15 A
— at 110 V rated value	15 A
— at 220 V rated value	15 A
— at 440 V rated value	0.9 A
— at 600 V rated value	0.7 A
Operating current	
 at 1 current path at DC-3 at DC-5 	
— at 24 V rated value	15 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	15 A
— at 110 V rated value	0.25 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	15 A
— at 110 V rated value	15 A
— at 220 V rated value	1.2 A
— at 440 V rated value	0.14 A
— at 600 V rated value	0.14 A
Operating power	
• at AC-1	
— at 230 V rated value	6.3 kW
— at 230 V at 60 °C rated value	6 kW
— at 400 V rated value	11 kW
— at 400 V at 60 °C rated value	10.5 kW
— at 690 V rated value	19 kW
— at 690 V at 60 °C rated value	18 kW
• at AC-2 at 400 V rated value	3 kW
● at AC-3	
— at 230 V rated value	1.5 kW
— at 400 V rated value	3 kW
— at 690 V rated value	4 kW

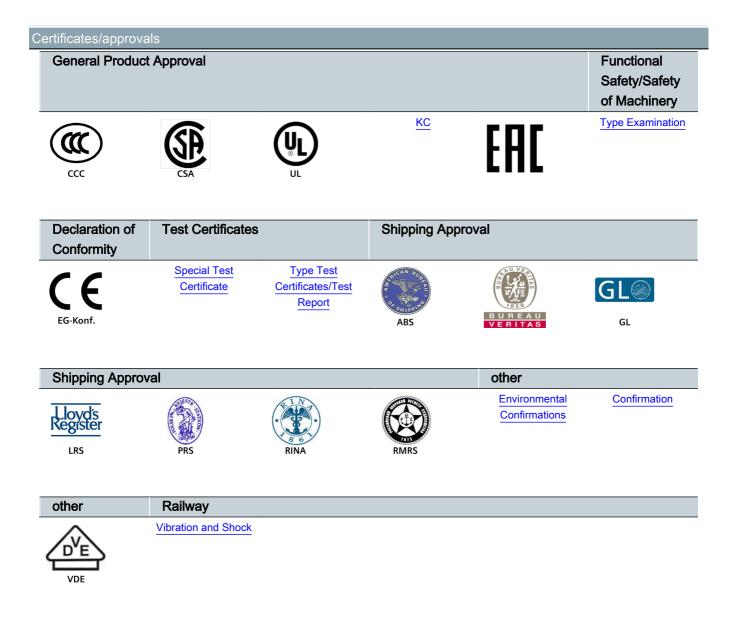
0	
Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	1.15 kW
• at 690 V rated value	1.15 kW
Thermal short-time current limited to 10 s	56 A
Power loss [W] at AC-3 at 400 V for rated value of	0.4 W
the operating current per conductor	
No-load switching frequency	
• at DC	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	DC
Control supply voltage at DC	
● rated value	24 V
Closing power of magnet coil at DC	4 W
Holding power of magnet coil at DC	4 W
Closing delay	
• at DC	30 100 ms
Opening delay	
• at DC	7 13 ms
Arcing time	10 15 ms
Residual current of the electronics for control with signal <0>	
 at AC at 230 V maximum permissible 	3 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	4.8 A
• at 600 V rated value	6.1 A
Yielded mechanical performance [hp]	

• for single-phase AC motor	
— at 110/120 V rated value	0.25 hp
— at 230 V rated value	0.75 hp
 for three-phase AC motor 	
— at 200/208 V rated value	1.5 hp
— at 220/230 V rated value	2 hp
— at 460/480 V rated value	3 hp
— at 575/600 V rated value	5 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 	
- with type of coordination 1 required	gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 35 A
— with type of assignment 2 required	gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 20 A
 for short-circuit protection of the auxiliary switch 	fuse gG: 10 A
required	
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)
Safety related data	
B10 value	
• with high demand rate acc. to SN 31920	1 000 000
Proportion of dangerous failures	
• with low demand rate acc. to SN 31920	40 %
• with high demand rate acc. to SN 31920	73 %
Failure rate [FIT]	
• with low demand rate acc. to SN 31920	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 у
Protection against electrical shock	finger-safe



Further information

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

Industry Mall (Online ordering system)

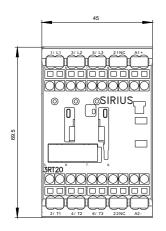
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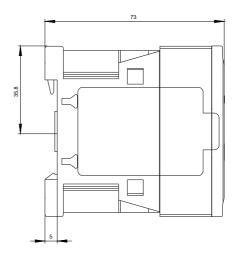
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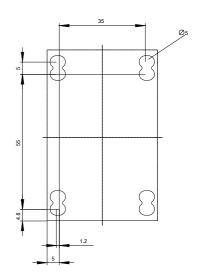
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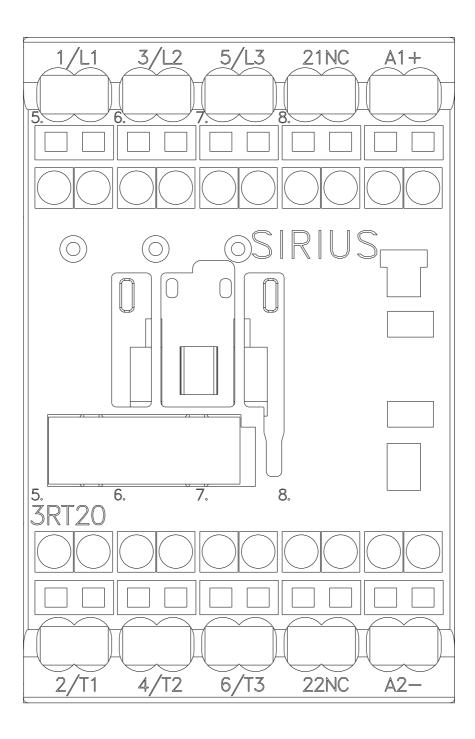
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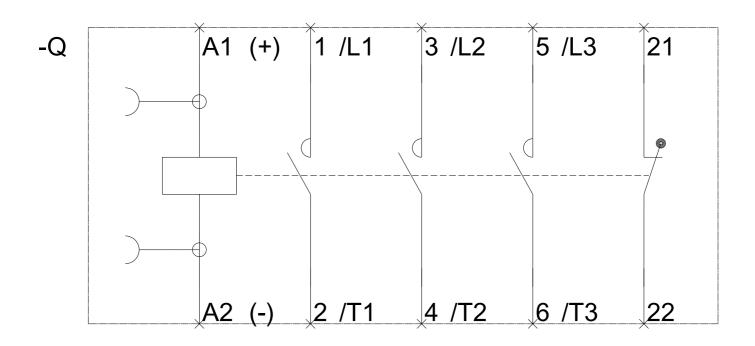
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-2BB42-0CC0&lang=en











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