SIEMENS

Data sheet

3RT2015-1AP02

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



product brandname	SIRIUS
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
Degree of pollution	3
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 	

-+ ^ 0	6,7g / 5 ms, 4,2g / 10 ms
— at AC	0,7970110, 4,29710110
• with sine pulse	
— at AC	10,5g / 5 ms, 6,6g / 10 ms
Mechanical service life (switching cycles)	
 of contactor typical 	30 000 000
 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 aircuit	
Main circuit Number of poles for main current circuit	3
Number of NO contacts for main contacts	3
Number of NC contacts for main contacts	0
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	18 A
— up to 690 V at ambient temperature 60 °C rated value	16 A
• at AC-2 at 400 V rated value	7 A
• at AC-3	
— at 400 V rated value	7 A
— at 500 V rated value	6 A
— at 690 V rated value	4.9 A
Connectable conductor cross-section in main circuit	
at AC-1	
• at 60 °C minimum permissible	2.5 mm ²
• at 40 °C minimum permissible	2.5 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	2.6 A
• at 690 V rated value	1.8 A

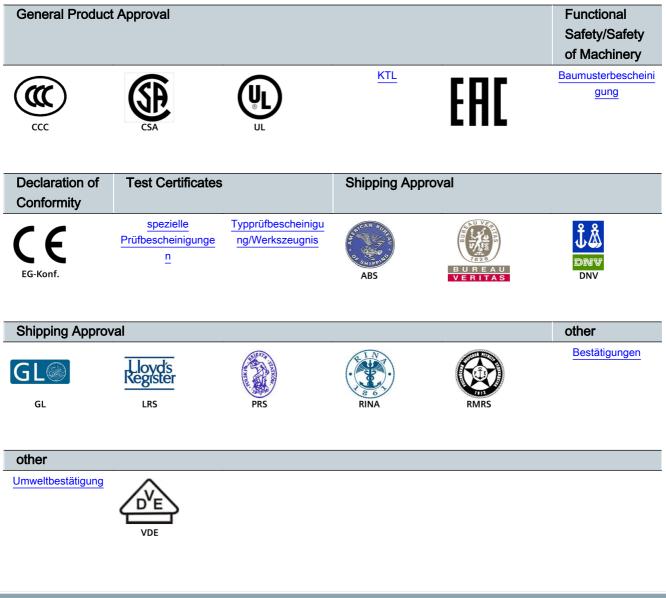
Operating current	
 at 1 current path at DC-1 	
— at 24 V rated value	15 A
— at 110 V rated value	1.5 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.42 A
— at 600 V rated value	0.42 A
 with 2 current paths in series at DC-1 	
— at 24 V rated value	15 A
— at 110 V rated value	8.4 A
— at 220 V 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 110 V rated value	0.25 A
— at 24 V rated value	15 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 110 V rated value	15 A
— at 220 V rated value	1.2 A
— at 24 V rated value	15 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 230 V rated value1.5 kW- at 400 V rated value3 kW- at 690 V rated value4 kWOperating power for approx. 20000 operating cycles at AC-4	● at AC-3	
		1.5 kW
- at 630 V rated value4 kWOperating power for approx. 200000 operating cycles at AC-41.15 kW• at 400 V rated value1.15 kW• at 630 V rated value1.15 kWThermal short-time current limited to 10 s56 APower loss [M] at AC-3 at 400 V for rated value of the operating current per conductor0.4 W• at AC10 000 1/hOperating frequency • at AC-1 maximum1000 1/h• at AC-2 maximum1000 1/h• at AC-4 maximum1000 1/h• at AC-4 maximum250 1/h• at 60 Hz0.8 1.1• at 60 Hz rated value230 V• at 50 Hz0.8 1.1• at 50 Hz0.8 1.1• at 60 Hz0.8		3 kW
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at AC-4 .15 kW • at 400 V rated value 1.15 kW • at 690 V rated value 1.15 kW Power loss (W) at AC-3 at 400 V for rated value of the operating current per conductor 0.4 W • at AC 10 000 1/h Operating frequency 0.4 W • at AC-4 maximum 1000 1/h • at AC-4 maximum 1000 1/h • at AC-4 maximum 250 1/h • at SO Hz rated value 230 V Operating range factor control supply voltage rated value of magnet coil at AC 0.8 1.1 • at 50 Hz 0.8 1.1		
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No-load switching frequency• at AC10 000 1/hOperating frequency1000 1/h• at AC -1 maximum1000 1/h• at AC -2 maximum750 1/h• at AC -2 maximum250 1/h• at AC -3 maximum250 1/h• at AC -4 maximum250 1/h• at SO Hz rated value230 V• at 50 Hz rated value230 V• at 50 Hz rated value230 V• at 60 Hz rated value0.8 1.1• at 60 Hz0.8 1.1• at 60 Hz0.8 1.1• at 60 Hz27 V·A• at 60 Hz0.8• at 60 Hz0.81• at 60 Hz4.2 V·A• at 60 Hz4.8 V·A• at 60 Hz0.25• at 60 Hz0.25		0.4 W
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Control circuit/ Control Type of voltage of the control supply voltage AC Control supply voltage at AC		750 1/h
Type of voltage of the control supply voltageACControl supply voltage at AC • at 50 Hz rated value230 V• at 60 Hz rated value230 VOperating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz0.8 1.1• at 50 Hz0.8 1.1• at 60 Hz0.8 1.1Apparent pick-up power of magnet coil at AC • at 60 Hz27 V·A• at 50 Hz0.8• at 50 Hz0.8• at 50 Hz0.8• at 60 Hz31.7 V·AInductive power factor with closing power of the coil • at 60 Hz0.8• at 50 Hz0.8• at 50 Hz0.8• at 60 Hz0.8Inductive power factor with closing power of the coil • at 60 Hz0.8• at 50 Hz0.8• at 60 Hz0.8• at 60 Hz0.8• at 60 Hz0.25• at 60 Hz0.25• at 60 Hz0.25• at 60 Hz0.25	• at AC-4 maximum	250 1/h
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• at 50 Hz 0.8 • at 60 Hz 0.81 Apparent holding power of magnet coil at AC 4.2 V·A • at 50 Hz 4.2 V·A • at 60 Hz 4.8 V·A Inductive power factor with the holding power of the coil 0.25 • at 50 Hz 0.25 • at 50 Hz 0.25	• at 60 Hz	31.7 V·A
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• at 50 Hz4.2 V·A• at 60 Hz4.8 V·AInductive power factor with the holding power of the coil		0.81
• at 60 Hz 4.8 V·A Inductive power factor with the holding power of the coil • at 50 Hz 0.25 • at 60 Hz 0.25 Closing delay Closing delay	Apparent holding power of magnet coil at AC	
Inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz 0.25 Closing delay	• at 50 Hz	
coil 0.25 • at 50 Hz 0.25 • at 60 Hz 0.25 Closing delay Closing delay		4.8 V·A
• at 60 Hz 0.25 Closing delay		
Closing delay	• at 50 Hz	0.25
	• at 60 Hz	0.25
• at AC 9 35 ms	Closing delay	
	• at AC	9 35 ms

Opening delay	_
• at AC	3.5 14 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
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	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

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 auxiliary switch required 	fuse gG: 10 A
nstallation/ 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 50022
 Side-by-side mounting 	Yes
Height	58 mm
Width	45 mm
Depth	73 mm
Required spacing	
 with side-by-side mounting 	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
 for grounded parts 	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— at the side	6 mm
— downwards	0 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— Backwards — upwards	0 mm 0 mm

— 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-sections	
• for main contacts	
— solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
— single or multi-stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²
— finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
• at AWG conductors for main contacts	2x (20 16), 2x (18 14), 2x 12
Type of connectable conductor cross-sections	
 for auxiliary contacts 	
— single or multi-stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²
 — finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 at AWG conductors for auxiliary contacts 	2x (20 16), 2x (18 14), 2x 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
Certificates/approvals	



Further information

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

Industry Mall (Online ordering system)

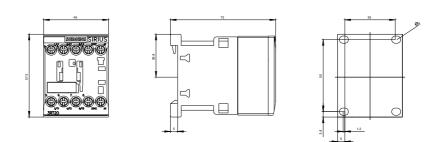
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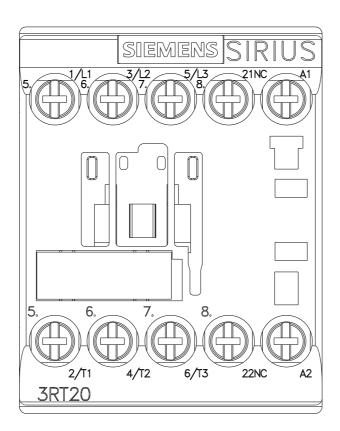
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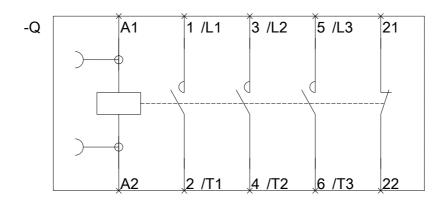
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