## SIEMENS

## Data sheet

## 3RT2017-1AG61



power contactor, AC-3e/AC-3, 12 A, 5.5 kW / 400 V, 3-pole, 100 V AC, 50 Hz / 100-110 V, 60 Hz, auxiliary contacts: 1 NO, screw terminal, size: S00

product brand name product designation product type designation	SIRIUS Power contactor
product type designation	
product () po doorgnation	3RT2
General technical data	
size of contactor	S00
product extension	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	1.5 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	0.5 W
<ul> <li>without load current share typical</li> </ul>	1.7 W
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
surge voltage resistance	
<ul> <li>of main circuit rated value</li> </ul>	6 kV
<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	7,3g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,4g / 5 ms, 7,3g / 10 ms
mechanical service life (operating cycles)	
of contactor typical	30 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
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
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
lain circuit	
number of poles for main current circuit	3

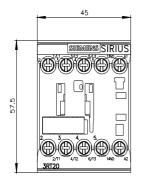
number of NO contacts for main contacts	3
operating voltage	
at AC-3 rated value maximum	690 V
<ul> <li>at AC-3e rated value maximum</li> </ul>	690 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated	22 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	22 A
— up to 690 V at ambient temperature 60 °C rated	20 A
value	
• at AC-3	
— at 400 V rated value	12 A
— at 500 V rated value	9.2 A
— at 690 V rated value	6.7 A
● at AC-3e	
— at 400 V rated value	12 A
— at 500 V rated value	9.2 A
— at 690 V rated value	6.7 A
• at AC-4 at 400 V rated value	8.5 A
• at AC-5a up to 690 V rated value	19.4 A
• at AC-5b up to 400 V rated value	9.9 A
● at AC-6a	
<ul> <li>— up to 230 V for current peak value n=20 rated value</li> </ul>	7.2 A
<ul> <li>— up to 400 V for current peak value n=20 rated value</li> </ul>	7.2 A
<ul> <li>— up to 500 V for current peak value n=20 rated value</li> </ul>	7.2 A
— up to 690 V for current peak value n=20 rated value	6.7 A
● at AC-6a	
<ul> <li>— up to 230 V for current peak value n=30 rated value</li> </ul>	4.8 A
<ul> <li>— up to 400 V for current peak value n=30 rated value</li> </ul>	4.8 A
<ul> <li>— up to 500 V for current peak value n=30 rated value</li> </ul>	4.8 A
<ul> <li>— up to 690 V for current peak value n=30 rated value</li> </ul>	4.8 A
minimum cross-section in main circuit at maximum AC-1 rated value	4 mm <sup>2</sup>
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	4.1 A
at 690 V rated value	3.3 A
operational current	
<ul> <li>at 1 current path at DC-1</li> </ul>	
— at 24 V rated value	20 A
— at 60 V rated value	20 A
— 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 60 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
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	20 A
— at 60 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
• at 1 current path at DC-3 at DC-5	

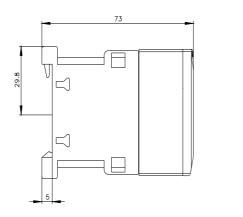
— at 24 V rated value	20 A
— at 60 V rated value	0.5 A
— at 110 V rated value	0.15 A
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 110 V rated value	0.35 A
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	20 A
— at 60 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-3	
— at 230 V rated value	3 kW
— at 400 V rated value	5.5 kW
— at 500 V rated value	5.5 kW
— at 690 V rated value	5.5 kW
• at AC-3e	
— at 230 V rated value	3 kW
— at 400 V rated value	5.5 kW
— at 500 V rated value	5.5 kW
— at 690 V rated value	5.5 kW
operating power for approx. 200000 operating cycles at AC-	0.0 KW
4	
• at 400 V rated value	2 kW
• at 690 V rated value	2.5 kW
operating apparent power at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	2.8 kVA
• up to 400 V for current peak value n=20 rated value	4.9 kVA
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	6.2 kVA
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	8 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	1.9 kVA
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	3.3 kVA
• up to 500 V for current peak value n=30 rated value	4.1 kVA
• up to 690 V for current peak value n=30 rated value	5.7 kVA
short-time withstand current in cold operating state up to	
40 °C	
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	200 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	123 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	96 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 30 s switching at zero current maximum	74 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 60 s switching at zero current maximum	61 A; Use minimum cross-section acc. to AC-1 rated value
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-3e 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	100 V
at 60 Hz rated value	110 V
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.81.1

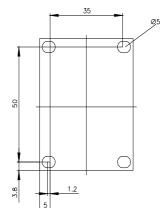
• at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	
• at 50 Hz	36 VA
• at 60 Hz	43 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.8
• at 60 Hz	0.8
apparent holding power of magnet coil at AC	
• at 50 Hz	5.9 VA
• at 60 Hz	6.5 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.24
• at 60 Hz	0.25
	0.20
elosing delay • at AC	9 35 ms
	9 50 IIIS
opening delay • at AC	4 15 mg
	4 15 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
• at 230 V rated value	10 A
<ul> <li>at 400 V rated value</li> </ul>	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
operational current at DC-12	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
<ul> <li>at 60 V rated value</li> </ul>	6 A
<ul> <li>at 110 V rated value</li> </ul>	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1A
at 600 V rated value	0.15 A
operational current at DC-13	
at 24 V rated value	10 A
at 24 V rated value	2 A
at 40 V rated value	2 A
at 110 V rated value	2 A 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 3-phase AC motor	
• at 480 V rated value	11 A
• at 600 V rated value	11 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	0.5 hp
— at 230 V rated value	2 hp
<ul> <li>for 3-phase AC motor</li> </ul>	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	7.5 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	

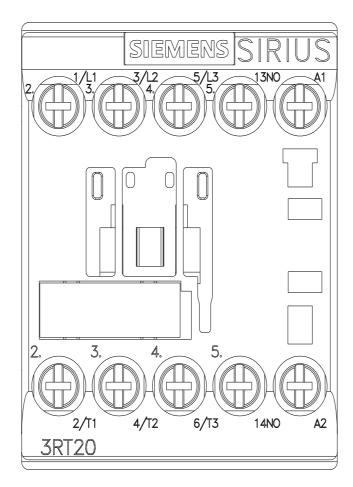
• for short-circuit protection of the main circuit			
- with type of coordination 1 required	gG: 50A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)		
<ul> <li>— with type of assignment 2 required</li> </ul>	gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)		
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)		
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		
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes		
side-by-side mounting     height	58 mm		
width	45 mm		
depth	73 mm		
required spacing			
with side-by-side mounting			
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	0 mm		
<ul> <li>for grounded parts</li> </ul>			
— forwards	10 mm		
— upwards	10 mm		
— at the side	6 mm		
— downwards	10 mm		
• for live parts			
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	6 mm		
Connections/ Terminals			
type of electrical connection			
<ul> <li>for main current circuit</li> </ul>	screw-type terminals		
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals		
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Screw-type terminals		
of magnet coil	Screw-type terminals		
type of connectable conductor cross-sections for main contacts			
• solid	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>		
solid or stranded	2x (0,5 1,5 mm <sup>2</sup> ), 2x (0,75 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>		
finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)		
connectable conductor cross-section for main contacts	0.5 4 mm²		
• solid	0.5 4 mm <sup>2</sup>		
<ul> <li>stranded</li> <li>finely stranded with core and processing</li> </ul>	0.5 4 mm² 0.5 2.5 mm²		
finely stranded with core end processing     connectable conductor cross-section for auxiliary contacts	0.0 2.0 mm		
solid or stranded	0.5 4 mm²		
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm <sup>2</sup>		
type of connectable conductor cross-sections			
for auxiliary contacts			
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²		
<ul> <li>— finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )		
for AWG cables for auxiliary contacts	2x (2016), 2x (1814), 2x 12		
AWG number as coded connectable conductor cross			
section			
for main contacts	20 12		
<ul> <li>for auxiliary contacts</li> </ul>	20 12		
Safety related data			
product function			
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes; with 3RH29		
suitability for use safety-related switching OFF	Yes		
B10 value with high demand rate according to SN 31920	1 000 000		
proportion of dangerous failures			
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %		

<ul> <li>with high deman</li> </ul>	nd rate according to SN 319	020 73 %	, 0		
failure rate [FIT] with lo	ow demand rate according t	o SN 31920 100	FIT		
T1 value for proof test 61508	interval or service life acco	rding to IEC 20 a			
protection class IP or	n the front according to I	EC 60529 IP20			
touch protection on the front according to IEC 60529		60529 finge	er-safe, for vertical contac	t from the front	
ertificates/ approvals					
General Product App	oroval				
SP M		<u>Confirmation</u>		KC	EHC
EMC	Functional Safety/Safety of Ma- chinery	Declaration of Confo	rmity	Test Certificates	
RCM	<u>Type Examination Cer-</u> <u>tificate</u>	UK CA	EG-Konf.	<u>Special Test Certific-</u> <u>ate</u>	<u>Type Test Certific-</u> ates/Test Report
Marine / Shipping					
ABS	B U REAU VERITAS		Lloyds Register uxs	PRS	RINA
Marine / Shipping	other			Railway	Environment
KMRS RMRS	<u>Confirmation</u>		<u>Confirmation</u>	Vibration and Shock	Environmental Con firmations
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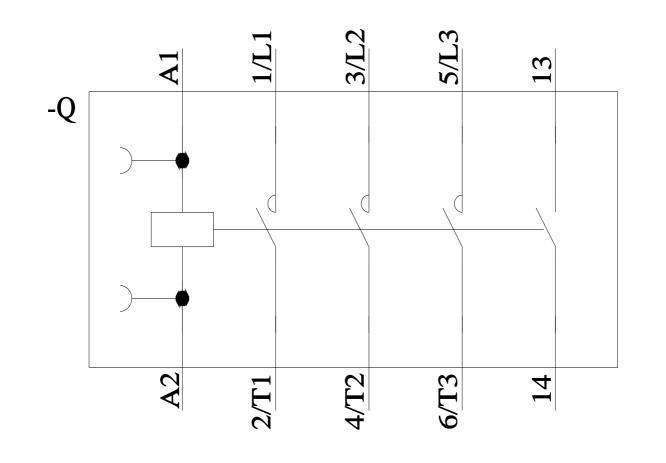








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