## SIEMENS

## Data sheet

## 3RT6023-1AG20



Contactor AC 110 V 50/60 HZ AC3 4 kW 400 V AUX contacts 1 NO +1 NC 3-pole, size S0 screw terminal

9113	
product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT6
General technical data	
size of contactor	SO
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state per pole</li> </ul>	0.4 W
<ul> <li>without load current share typical</li> </ul>	1.97 W
type of calculation of power loss depending on pole	quadratic
insulation voltage rated value	690 V
degree of pollution	3
surge voltage resistance rated value	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	7,5g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
● at AC	11,8g / 5 ms, 7,4g / 10 ms
mechanical service life (operating cycles)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
Substance Prohibitance (Date)	05/01/2012
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 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	
<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V
• at AC-3e rated value maximum	690 V
operational current	
• at AC-1 up to 690 V	
- at ambient temperature 40 °C rated value	40 A
— at ambient temperature 60 °C rated value	35 A
• at AC-3	

— at 400 V rated value	9 A
— at 690 V rated value	9 A
• at AC-3e	
— at 400 V rated value	9 A
— at 690 V rated value	9 A
connectable conductor cross-section in main circuit at AC-	
1	
• at 60 °C minimum permissible	10 mm <sup>2</sup>
• at 40 °C minimum permissible	10 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
operating power	
• at AC-1	
— at 230 V rated value	13.3 kW
— at 230 V at 60 °C rated value	13.3 kW
— at 400 V at 60 °C rated value	23 kW
— at 690 V at 60 °C rated value	40 kW
• at AC-3	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 690 V rated value	7.5 kW
• at AC-3e	
— at 400 V rated value	4 kW
— at 690 V rated value	7.5 kW
operating power for approx. 200000 operating cycles at AC-	
<ul> <li>at 400 V rated value</li> </ul>	2 kW
at 690 V rated value	2.5 kW
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-3 maximum	1 000 1/h
• at AC-3e maximum	1 000 1/h
• at AC-4 maximum	300 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
	A0
control supply voltage at AC	110.1/
• at 50 Hz rated value	110 V
at 50 Hz rated value     at 60 Hz rated value     operating range factor control supply voltage rated value of	110 V 110 V
at 50 Hz rated value     at 60 Hz rated value     operating range factor control supply voltage rated value of     magnet coil at AC	110 V
at 50 Hz rated value     at 60 Hz rated value      operating range factor control supply voltage rated value of magnet coil at AC         • at 50 Hz	110 V 0.8 1.1
<ul> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> </ul> operating range factor control supply voltage rated value of magnet coil at AC <ul> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	110 V
<ul> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>apparent pick-up power of magnet coil at AC</li> </ul>	110 V 0.8 1.1 0.85 1.1
<ul> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>apparent pick-up power of magnet coil at AC</li> <li>at 50 Hz</li> </ul>	110 V 0.8 1.1 0.85 1.1 68 VA
<ul> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>apparent pick-up power of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	110 V 0.8 1.1 0.85 1.1
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<ul> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>apparent pick-up power of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>inductive power factor with closing power of the coil</li> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	110 V 0.8 1.1 0.85 1.1 68 VA 67 VA
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<ul> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>apparent pick-up power of magnet coil at AC</li> <li>at 60 Hz</li> <li>at 60 Hz</li> <li>inductive power factor with closing power of the coil</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>at 60 Hz</li> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	110 V 0.8 1.1 0.85 1.1 68 VA 67 VA 0.72 0.74 7.9 VA
<ul> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>apparent pick-up power of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>inductive power factor with closing power of the coil</li> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	110 V 0.8 1.1 0.85 1.1 68 VA 67 VA 0.72 0.74
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<ul> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>apparent pick-up power of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>inductive power factor with closing power of the coil</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>apparent holding power of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>at 60 Hz</li> <li>apparent folding power of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>at 60 Hz</li> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	110 V 0.8 1.1 0.85 1.1 68 VA 67 VA 0.72 0.74 7.9 VA 6.5 VA
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<ul> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> <li>operating range factor control supply voltage rated value of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>apparent pick-up power of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>inductive power factor with closing power of the coil</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>apparent holding power of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>at 60 Hz</li> <li>apparent folding power of magnet coil at AC</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>at 60 Hz</li> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	110 V 0.8 1.1 0.85 1.1 68 VA 67 VA 0.72 0.74 7.9 VA 6.5 VA 0.25

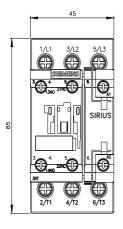
contact	
operational current at AC-12 maximum	10 A
operational current at AC-15	
<ul> <li>at 230 V rated value</li> </ul>	10 A
• at 400 V rated value	3 A
• at 690 V rated value	1 A
operational current at DC-12	
• at 24 V rated value	6 A
• at 110 V rated value	3 A
at 220 V rated value	1 A
operational current at DC-13	
at 24 V rated value	6 A
• at 110 V rated value	1 A
at 220 V rated value	0.3 A
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
JL/CSA ratings	
yielded mechanical performance [hp] for 3-phase AC motor at 460/480 V rated value	5 hp
Short-circuit protection	
design of the fuse link	
<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
- with type of coordination 1 required	gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A
— with type of assignment 2 required	gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	fuse gL/gG: 10 A
nstallation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and
	backward by +/- $22.5^{\circ}$ on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022
<ul> <li>side-by-side mounting</li> </ul>	Yes
height	85 mm
width	45 mm
depth	97 mm
required spacing with side-by-side mounting at the side	0 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
type of connectable conductor cross-sections for main contacts	
<ul> <li>solid or stranded</li> </ul>	2x (1 2.5 mm²), 2x (2.5 10 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
type of connectable conductor cross-sections	
<ul> <li>for auxiliary contacts</li> </ul>	
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
- finely stranded with core end processing	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )
<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14)
Safety related data	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Approvals Certificates	
	EMC
General Product Approval	EIVIC
Declaration of Con- formity other	

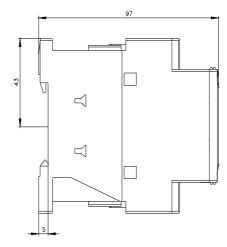


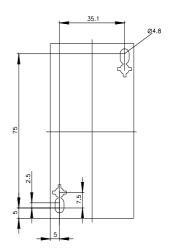
**Confirmation** 

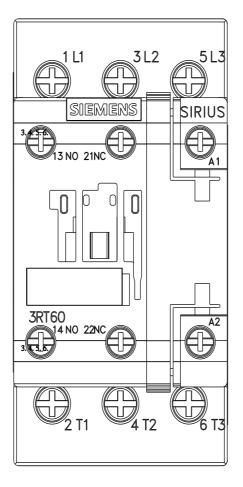
Further information

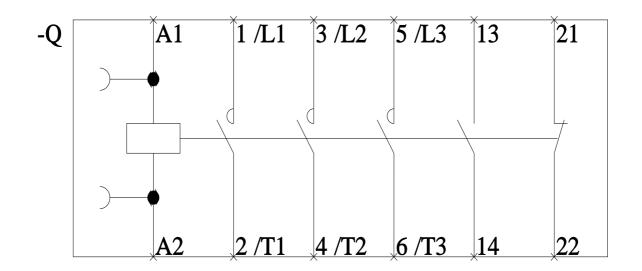
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