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

product brand name	SIRIUS		
product designation	Power contactor		
product type designation	3RT6		
General technical data	General technical data		
size of contactor	S0		
product extension auxiliary switch	Yes		
power loss [W] for rated value of the current			
 at AC in hot operating state per pole 	0.4 W		
without load current share typical	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)			
of contactor typical	10 000 000		
of the contactor with added auxiliary switch block typical	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			
 at AC-3 rated value maximum 	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-	
at 60 °C minimum permissible	10 mm²
• at 40 °C minimum permissible	10 mm ²
operational current for approx. 200000 operating cycles at	10 111111
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-	
4	
• at 400 V rated value	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
control supply voltage at AC	
• at 50 Hz rated value	110 V
at 60 Hz rated value	110 V
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.8 1.1
● at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	
● at 50 Hz	68 VA
● at 60 Hz	67 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.72
• at 60 Hz	0.74
apparent holding power of magnet coil at AC	
● at 50 Hz	7.9 VA
● at 60 Hz	6.5 VA
inductive power factor with the holding power of the coil	
● at 50 Hz	0.25
• at 60 Hz	0.28
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	1
number of NO contacts for auxiliary contacts instantaneous	1

contact	
contact operational current at AC-12 maximum	10 A
· · · · · · · · · · · · · · · · · · ·	10 A
operational current at AC-15	40.4
at 230 V rated value	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)
UL/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	
for short-circuit protection of the main circuit	
— 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
for short-circuit protection of the auxiliary switch required	fuse gL/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
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022
side-by-side mounting	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	
for main current circuit	
	screw-type terminals
	screw-type terminals
for auxiliary and control circuit	screw-type terminals screw-type terminals
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts	screw-type terminals
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing	screw-type terminals
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections	2x (1 2.5 mm²), 2x (2.5 10 mm²)
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts	2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts — solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts — solid or stranded — finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts	2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts — solid or stranded — finely stranded with core end processing for AWG cables for auxiliary contacts Safety related data	2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14)
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts Safety related data protection class IP on the front according to IEC 60529	2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 1.5 mm²), 2x (18 14)
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts Safety related data protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529	2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14)
for auxiliary and control circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts Safety related data protection class IP on the front according to IEC 60529	2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 1.5 mm²), 2x (18 14)





Confirmation







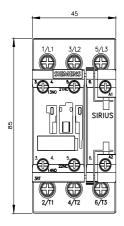
Declaration of Conformity

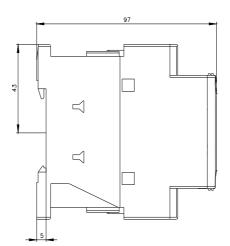
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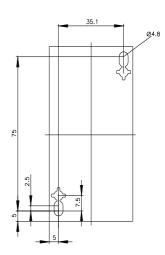


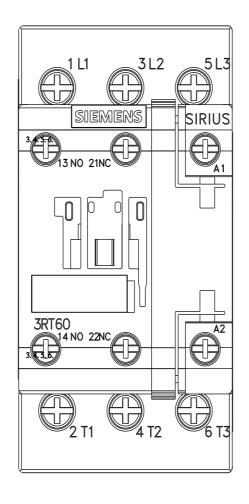
Further information

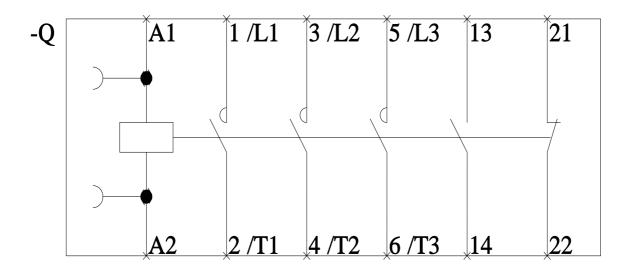
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