SIEMENS

Data sheet

3RT2026-1AP00



power contactor, AC-3e/AC-3, 25 A, 11 kW / 400 V, 3-pole, 230 V AC, 50 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S0

4/13			
product brand name	SIRIUS		
product designation	Power contactor		
product type designation	3RT2		
General technical data			
size of contactor	S0		
product extension			
 function module for communication 	No		
auxiliary switch	Yes		
power loss [W] for rated value of the current			
 at AC in hot operating state 	5.7 W		
 at AC in hot operating state per pole 	1.9 W		
 without load current share typical 	2.5 W		
type of calculation of power loss depending on pole	quadratic		
insulation voltage			
 of main circuit with degree of pollution 3 rated value 	690 V		
 of auxiliary circuit with degree of pollution 3 rated value 	690 V		
surge voltage resistance			
 of main circuit rated value 	6 kV		
 of auxiliary circuit 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	8,3g / 5 ms, 5,3g / 10 ms		
shock resistance with sine pulse			
• at AC	13,5g / 5 ms, 8,3g / 10 ms		
mechanical service life (operating cycles)			
 of contactor typical 	10 000 000		
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000		
 of the contactor with added auxiliary switch block typical 	10 000 000		
reference code according to IEC 81346-2	Q		
Substance Prohibitance (Date)	10/01/2009		
Weight	0.418 kg		
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 %		

Environmental footprint	
Environmental Product Declaration(EPD)	Yes
Global Warming Potential [CO2 eq] total	74.2 kg
Global Warming Potential [CO2 eq] during manufacturing	1.9 kg
Global Warming Potential [CO2 eq] during operation	72.4 kg
Global Warming Potential [CO2 eq] after end of life	-0.117 kg
Main 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
at AC-3e rated value maximum	690 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	40 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	40 A
— up to 690 V at ambient temperature 60 °C rated value	35 A
• at AC-3	05.4
— at 400 V rated value	25 A
— at 500 V rated value	18 A
 — at 690 V rated value • at AC-3e 	13 A
• at AC-3e — at 400 V rated value	25 A
— at 500 V rated value	25 A 18 A
— at 690 V rated value	13 A
 at 690 v rated value at AC-4 at 400 V rated value 	15.5 A
• at AC-5a up to 690 V rated value	35.2 A
• at AC-5b up to 400 V rated value	20.7 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	20.2 A
— up to 400 V for current peak value n=20 rated value	20.2 A
— up to 500 V for current peak value n=20 rated value	20.2 A
— up to 690 V for current peak value n=20 rated value	12.9 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	13.5 A
 up to 400 V for current peak value n=30 rated value 	13.5 A
— up to 500 V for current peak value n=30 rated value	13.5 A
— up to 690 V for current peak value n=30 rated value	13 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm ²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	9 A
• at 690 V rated value	9 A
operational current	
 at 1 current path at DC-1 	
— at 24 V rated value	35 A
— at 60 V rated value	20 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
• with 2 current paths in series at DC-1	25.4
- at 24 V rated value	35 A
- at 60 V rated value	35 A
- at 110 V rated value	35 A
- at 220 V rated value	5 A
- at 440 V rated value	1A
— at 600 V rated value	0.8 A

 with 3 current paths in series at DC-1 				
— at 24 V rated value	35 A			
— at 60 V rated value	35 A			
— at 110 V rated value	35 A			
— at 220 V rated value	35 A			
— at 440 V rated value	35 A 2.9 A			
— at 600 V rated value	2.9 A 1.4 A			
• at 1 current path at DC-3 at DC-5				
— at 24 V rated value	20 A			
— at 60 V rated value	5 A			
— at 220 V rated value	1A			
— at 440 V rated value	0.09 A			
— at 600 V rated value	0.06 A			
with 2 current paths in series at DC-3 at DC-5	0.00 A			
— at 24 V rated value	35 A			
— at 60 V rated value	35 A			
— at 110 V rated value	15 A			
— at 220 V rated value	3A			
— at 440 V rated value	0.27 A			
— at 600 V rated value	0.27 A 0.16 A			
with 3 current paths in series at DC-3 at DC-5	0.10 A			
with 3 current paths in series at DC-3 at DC-5 — at 24 V rated value	35 A			
— at 60 V rated value	35 A			
— at 10 V rated value	35 A			
— at 220 V rated value	10 A			
— at 440 V rated value	0.6 A			
— at 600 V rated value	0.6 A			
operating power	0.07			
• at AC-3				
— at 230 V rated value	5.5 kW			
— at 400 V rated value	11 kW			
— at 500 V rated value	11 kW			
— at 690 V rated value	11 kW			
• at AC-3e				
— at 230 V rated value	5.5 kW			
— at 400 V rated value	11 kW			
— at 500 V rated value	11 kW			
— at 690 V rated value	11 kW			
operating power for approx. 200000 operating cycles at AC-				
4				
• at 400 V rated value	4.4 kW			
at 690 V rated value	7.7 kW			
operating apparent power at AC-6a				
 up to 230 V for current peak value n=20 rated value 	8 kVA			
• up to 400 V for current peak value n=20 rated value	13.9 kVA			
• up to 500 V for current peak value n=20 rated value	17.4 kVA			
• up to 690 V for current peak value n=20 rated value	15.4 kVA			
operating apparent power at AC-6a	50.114			
• up to 230 V for current peak value n=30 rated value	5.3 kVA			
• up to 400 V for current peak value n=30 rated value	9.3 kVA			
• up to 500 V for current peak value n=30 rated value	11.6 kVA			
up to 690 V for current peak value n=30 rated value	15.5 kVA			
short-time withstand current in cold operating state up to 40 °C				
 limited to 1 s switching at zero current maximum 	375 A; Use minimum cross-section acc. to AC-1 rated value			
 limited to 5 s switching at zero current maximum 	300 A; Use minimum cross-section acc. to AC-1 rated value			
 limited to 10 s switching at zero current maximum 	210 A; Use minimum cross-section acc. to AC-1 rated value			
 limited to 30 s switching at zero current maximum 	144 A; Use minimum cross-section acc. to AC-1 rated value			
• limited to 60 s switching at zero current maximum	118 A; Use minimum cross-section acc. to AC-1 rated value			
no-load switching frequency				
• at AC	5 000 1/h			

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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	230 111
	40
type of voltage of the control supply voltage	AC
control supply voltage at AC	222.14
at 50 Hz rated value	230 V
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
	0.0 1.1
apparent pick-up power of magnet coil at AC	77.1/4
• at 50 Hz	77 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.82
apparent holding power of magnet coil at AC	
• at 50 Hz	9.8 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.25
closing delay	
• at AC	8 40 ms
opening delay	
• at AC	4 16 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous	1
contact	
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
• at 400 V rated value	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
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	1A
at 220 V rated value at 600 V rated value	0.15 A
operational current at DC-13	10.4
• 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	0.3 A
at 220 V rated value	0.3 A
• at 600 V rated value	0.3 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	21 A
• at 600 V rated value	22 A
yielded mechanical performance [hp]	
for single-phase AC motor	

at 110/120 V rated value	2 hz			
— at 110/120 V rated value — at 230 V rated value	2 hp 3 hp			
for 3-phase AC motor	Shp			
	5 hz			
- at 200/208 V rated value	5 hp			
- at 220/230 V rated value	7.5 hp			
- at 460/480 V rated value	15 hp			
at 575/600 V rated value	20 hp			
contact rating of auxiliary contacts according to UL	A600 / P600			
Short-circuit protection				
design of the fuse link				
for short-circuit protection of the main circuit with type of operating 1 required	aC: 100 A (600 V 100 KA) aM: 50 A (600 V 100 KA) BS89: 100 A (415 V 90			
 — with type of coordination 1 required 	gG: 100 A (690 V, 100 kA), aM: 50 A (690 V, 100 kA), BS88: 100 A (415 V, 80 kA)			
 — with type of assignment 2 required 	gG: 35A (690V, 100kA), aM: 20A (690V, 100kA), BS88: 35A (415V, 80kA)			
 for short-circuit protection of the auxiliary switch required 	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 side-by-side mounting	Yes			
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715			
height	85 mm			
width	45 mm			
depth	97 mm			
required spacing				
 with side-by-side mounting 				
— forwards	10 mm			
— upwards	10 mm			
— downwards	10 mm			
— at the side	0 mm			
 for grounded parts 				
— 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				
for main current circuit	screw-type terminals			
 for auxiliary and control circuit 	screw-type terminals			
 at contactor for auxiliary contacts 	Screw-type terminals			
of magnet coil	Screw-type terminals			
type of connectable conductor cross-sections				
• for main contacts				
— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)			
— solid or stranded	2x (1 2.5 mm ²), 2x (2.5 10 mm ²)			
— finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²			
for AWG cables for main contacts	2x (16 12), 2x (14 8)			
connectable conductor cross-section for main contacts				
• solid	1 10 mm²			
stranded	1 10 mm²			
 finely stranded with core end processing 	1 10 mm²			
connectable conductor cross-section for auxiliary contacts				
solid or stranded	0.5 2.5 mm²			
 finely stranded with core end processing 	0.5 2.5 mm ²			
type of connectable conductor cross-sections				
for auxiliary contacts				
— 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 mm²), 2x (0.75 2.5 mm²)				
 for AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14)				
AWG number as coded connectable conductor cross section					
for main contacts	16 8				
 for auxiliary contacts 	20 14				
Safety related data					
product function					
 mirror contact according to IEC 60947-4-1 	Yes				
 positively driven operation according to IEC 60947-5-1 	No				
 suitable for safety function 	Yes				
suitability for use safety-related switching OFF	Yes				
service life maximum	20 a				
test wear-related service life necessary	Yes				
proportion of dangerous failures					
 with low demand rate according to SN 31920 	40 %				
 with high demand rate according to SN 31920 	73 %				
B10 value with high demand rate according to SN 31920	1 000 000				
failure rate [FIT] with low demand rate according to SN 31920	100 FIT				
ISO 13849					
device type according to ISO 13849-1	3				
overdimensioning according to ISO 13849-2 necessary	Yes				
IEC 61508					
safety device type according to IEC 61508-2	Туре А				
Electrical Safety					
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					
General Product Approval					
	Confirmation KC				

General Product Ap- proval	EMV	Test Certificates		Marine / Shipping	
EHC	RCM	<u>Type Test Certific-</u> ates/Test Report	<u>Special Test Certific-</u> <u>ate</u>	ABS	BUREAU VERITAS
Marine / Shipping				other	
	Lloyd's Register us	RINA	RMRS	<u>Miscellaneous</u>	<u>Confirmation</u>
other	Railway	Environment			
<u>Confirmation</u>	Special Test Certific- ate	EPD	Environmental Con- firmations		
Further information					
Information on the packaging					

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...) https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2026-1AP00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2026-1AP00

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-1AP00

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

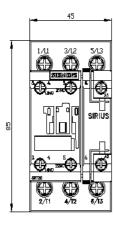
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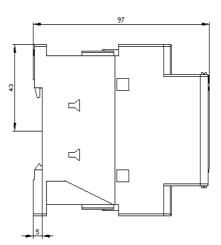
Characteristic: Tripping characteristics, I²t, Let-through current

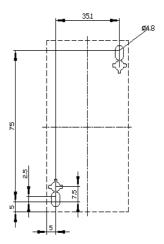
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Further characteristics (e.g. electrical endurance, switching frequency)

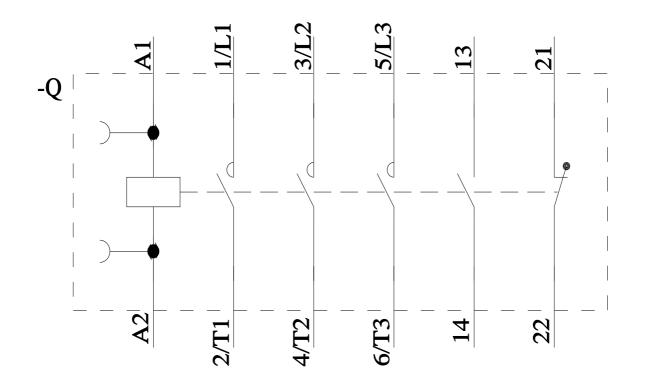
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