SIEMENS

Data sheet 3RT2026-1AC20



power contactor, AC-3 25 A, 11 kW / 400 V 1 NO + 1 NC, 24 V AC, 50 / 60 Hz, 3-pole, Size S0, screw terminal

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	4.8 W
• per pole	1.6 W
power loss [W] for rated value of the current without load current share typical	10.5 W
surge voltage resistance	
of main circuit rated value	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. 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 (switching 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 acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.10.2009 00:00:00
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
operating voltage at AC-3 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	
— at 400 V rated value	25 A
— at 500 V rated value	18 A
— at 690 V rated value	13 A
• 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 at AC-6a 	12.9 A
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 mm²
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 110 V rated value	4.5 A
— at 220 V rated value	1 A
— 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 	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— 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 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
operational current	
 at 1 current path at DC-3 at DC-5 	
— at 24 V rated value	20 A

— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— 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 	
— at 24 V rated value	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 A
— at 600 V rated value	0.16 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	35 A
— at 110 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	
• 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
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	012/ 4
• up to 230 V for current peak value n=20 rated value	8 kV·A
• up to 400 V for current peak value n=20 rated value	13.9 kV·A
• up to 500 V for current peak value n=20 rated value	17.4 kV·A
• up to 690 V for current peak value n=20 rated value	15.4 kV·A
operating apparent power at AC-6a	5 2 IA/ A
• up to 230 V for current peak value n=30 rated value	5.3 kV·A
 up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value 	9.3 kV·A 11.6 kV·A
 up to 500 V for current peak value n=30 rated value 	15.5 kV·A
short-time withstand current in cold operating state	13.3 KV A
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 	299 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	200 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	128 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	106 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 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-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	24 V
at 60 Hz rated value	24 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	81 V·A
● at 60 Hz	79 V·A
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	10.5 V·A
● at 60 Hz	8.5 V·A
inductive power factor with the holding power of the coil	
● at 50 Hz	0.25
● at 60 Hz	0.28
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 contact	1
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	1 A
at 600 V rated value	0.15 A
operational 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 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 hp
— at 230 V rated value	3 hp
 for 3-phase AC motor 	
— 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 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)
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
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
 side-by-side mounting 	Yes
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 mm²), 2x (2,5 10 mm²)
finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
at 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 mm²
type of connectable conductor cross-sections	

 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	
 at 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 acc. to IEC 60947-4-1	Yes	
B10 value with high demand rate acc. to SN 31920	450 000	
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	
T1 value for proof test interval or service life acc. to IEC 61508	20 y	
protection class IP on the front acc. to IEC 60529	IP20	
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front	
suitability for use		
 safety-related switching OFF 	Yes	
Certificates/ approvals		
General Product Approval		EMC







<u>KC</u>





Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates	Marine / Shipping
Type Examination Certificate	UK Declaration of Conformity EG-Kenf.	Type Test Certificates/Test Report Special Test Certificates ate	ABS

Marine / Shipping









Confirmation

other

other



Confirmation

Further information

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=3RT2026-1AC20

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2026-1AC20

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

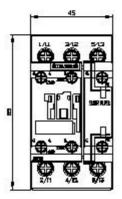
https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-1AC20

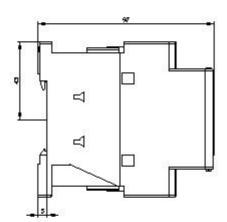
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2026-1AC20&lang=en

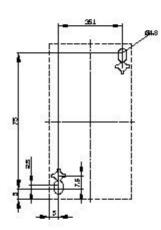
Characteristic: Tripping characteristics, I2t, Let-through current

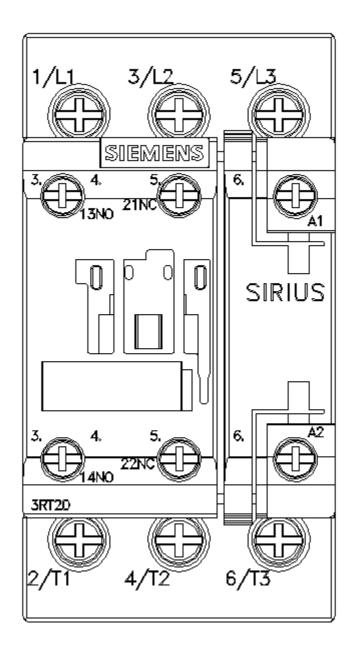
https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-1AC20/char

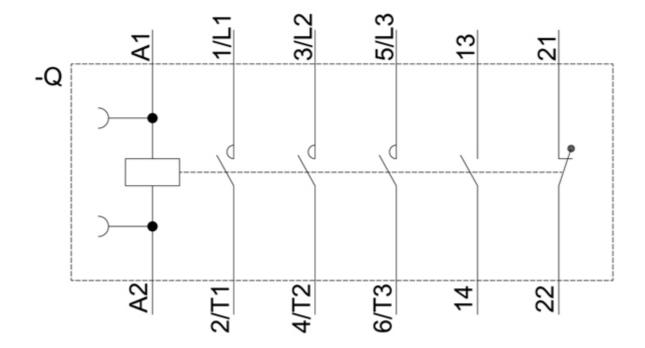
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2026-1AC20&objecttype=14&gridview=view1











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