SIEMENS

Data sheet 3RT2035-1AP04



power contactor, AC-3e/AC-3, 41 A, 18.5 kW / 400 V, 3-pole, 230 V AC, 50 Hz, auxiliary contacts: 2 NO + 2 NC, screw terminal, size: S2, removable auxiliary switch

product brand name	SIRIUS		
product designation	Power contactor		
product type designation	3RT2		
General technical data			
size of contactor	S2		
product extension			
 function module for communication 	No		
auxiliary switch	No		
power loss [W] for rated value of the current			
 at AC in hot operating state 	6.6 W		
 at AC in hot operating state per pole 	2.2 W		
 without load current share typical 	16 W		
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	9.8g / 5 ms, 6.5g / 10 ms		
shock resistance with sine pulse			
• at AC	15.3g / 5 ms, 10.1g / 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)	10/01/2014		
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 %		
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 	60 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated	60 A
value	EE A
 up to 690 V at ambient temperature 60 °C rated value 	55 A
• at AC-3	
— at 400 V rated value	41 A
— at 500 V rated value	41 A
— at 690 V rated value	24 A
• at AC-3e	277
— at 400 V rated value	41 A
— at 500 V rated value	41 A
— at 690 V rated value	24 A
at AC-4 at 400 V rated value at AC-5 cup to 600 V rated value	35 A 52.8 A
at AC-5a up to 690 V rated value	
at AC-5b up to 400 V rated value	33.2 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	36.5 A
— up to 400 V for current peak value n=20 rated value	36.5 A
 up to 500 V for current peak value n=20 rated value 	36.5 A
 up to 690 V for current peak value n=20 rated value 	24 A
• at AC-6a	
 up to 230 V for current peak value n=30 rated value 	24.2 A
 up to 400 V for current peak value n=30 rated value 	24.2 A
 up to 500 V for current peak value n=30 rated value 	24.2 A
 up to 690 V for current peak value n=30 rated value 	24 A
minimum cross-section in main circuit at maximum AC-1 rated value	16 mm ²
operational current for approx. 200000 operating cycles at	
AC-4	
• at 400 V rated value	22 A
• at 690 V rated value	18.5 A
operational current	
at 1 current path at DC-1	
— at 24 V rated value	55 A
— at 60 V rated value	23 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	55 A
— at 60 V rated value	45 A
— at 110 V rated value	45 A
— at 110 V rated value — 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 sets d valve.	EE A
— at 24 V rated value	55 A
— at 60 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	45 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
 at 1 current path at DC-3 at DC-5 	

1041/4 1 1	05.4				
— at 24 V rated value	35 A				
— at 60 V rated value	6 A				
— at 220 V rated value	1 A				
— at 440 V rated value	0.1 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	55 A				
— at 60 V rated value	45 A				
— at 110 V rated value	25 A				
— at 220 V rated value	5 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	55 A				
— at 60 V rated value	55 A				
— at 110 V rated value	55 A				
— at 220 V rated value	25 A				
— at 440 V rated value	0.6 A				
— at 600 V rated value	0.35 A				
operating power					
at AC-2 at 400 V rated value	18.5 kW				
• at AC-3					
— at 230 V rated value	11 kW				
— at 400 V rated value	18.5 kW				
— at 500 V rated value	22 kW				
— at 690 V rated value	22 kW				
• at AC-3e					
— at 230 V rated value	11 kW				
— at 400 V rated value	18.5 kW				
— at 500 V rated value	22 kW				
— at 690 V rated value	22 kW				
operating power for approx. 200000 operating cycles at AC-					
4					
 at 400 V rated value 	11.6 kW				
at 690 V rated value	16.8 kW				
operating apparent power at AC-6a					
 up to 230 V for current peak value n=20 rated value 	14.5 kVA				
 up to 400 V for current peak value n=20 rated value 	25.2 kVA				
 up to 500 V for current peak value n=20 rated value 	31.6 kVA				
• up to 690 V for current peak value n=20 rated value	28.6 kVA				
operating apparent power at AC-6a					
• up to 230 V for current peak value n=30 rated value	9.6 kVA				
• up to 400 V for current peak value n=30 rated value	16.8 kVA				
• up to 500 V for current peak value n=30 rated value	21 kVA				
• up to 690 V for current peak value n=30 rated value	28.6 kVA				
short-time withstand current in cold operating state up to 40 °C					
	843 A; Use minimum cross-section acc. to AC-1 rated value				
Iimited to 1 s switching at zero current maximum					
Iimited to 5 s switching at zero current maximum	596 A; Use minimum cross-section acc. to AC-1 rated value				
Ilmited to 10 s switching at zero current maximum Ilmited to 20 s switching at zero current maximum.	400 A; Use minimum cross-section acc. to AC-1 rated value				
Ilmited to 30 s switching at zero current maximum Ilmited to 60 s switching at zero current maximum.	241 A; Use minimum cross-section acc. to AC-1 rated value				
Iimited to 60 s switching at zero current maximum	196 A; Use minimum cross-section acc. to AC-1 rated value				
no-load switching frequency	F 000 4/b				
• at AC	5 000 1/h				
operating frequency	4 200 4/b				
• at AC-1 maximum	1 200 1/h				
• at AC-2 maximum	750 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	230 V		
operating range factor control supply voltage rated value of magnet coil at AC			
• at 50 Hz	0.8 1.1		
apparent pick-up power of magnet coil at AC			
• at 50 Hz	190 VA		
inductive power factor with closing power of the coil			
• at 50 Hz	0.72		
apparent holding power of magnet coil at AC			
• at 50 Hz	16 VA		
inductive power factor with the holding power of the coil			
● at 50 Hz	0.37		
closing delay			
• at AC	10 80 ms		
opening delay			
• at AC	10 18 ms		
arcing time	10 20 ms		
control version of the switch operating mechanism	Standard A1 - A2		
Auxiliary circuit			
number of NC contacts for auxiliary contacts instantaneous contact	2		
number of NO contacts for auxiliary contacts instantaneous	2		
contact	40.0		
operational current at AC-12 maximum	10 A		
operational current at AC-15	0.4		
at 230 V rated value	6 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	40.4		
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 at 125 V rated value	3 A		
at 125 V rated value at 220 V rated value	2 A		
at 220 V rated value at 600 V rated value	1 A 0.15 A		
at 600 V rated value operational current at DC-13	0.15 A		
at 24 V rated value	6 A		
at 48 V rated value	2 A		
at 48 V rated value at 60 V rated value	2 A		
at 50 V rated value at 110 V rated value	1 A		
at 110 V rated value at 125 V rated value	0.9 A		
at 125 V rated value at 220 V rated value	0.3 A		
at 220 V rated value 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	riddicy Switching per 100 million (17 V, 1 mz.)		
full-load current (FLA) for 3-phase AC motor			
at 480 V rated value	40 A		
at 600 V rated value at 600 V rated value	41 A		
yielded mechanical performance [hp]	7171		
• for single-phase AC motor			
— at 110/120 V rated value	3 hn		
— at 230 V rated value	3 hp		
for 3-phase AC motor	7.5 hp		
at 200/208 V rated value	10 hp		
— at 220/230 V rated value	15 hp		
— at 460/480 V rated value	30 hp		
— at 575/600 V rated value	40 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: 160 A (690 V, 100 kA), aM: 80 A (690 V, 100 kA), BS88: 125 A (415 V, 80 kA)		
 — with type of assignment 2 required 	gG: 80A (690V,100kA), aM: 50A (690V,100kA), BS88: 63A (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	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715		
side-by-side mounting	Yes		
height	114 mm		
width	55 mm		
depth	174 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		
— upwards — at the side	6 mm		
— downwards	10 mm		
• for live parts	40		
— 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 or stranded	2x (1 35 mm²), 1x (1 50 mm²)		
finely stranded with core end processing	2x (1 25 mm²), 1x (1 35 mm²)		
connectable conductor cross-section for main contacts			
finely stranded with core end processing	1 35 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			
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			
5551.511	40 4		
• for main contacts	18 1		
	18 1 20 14		
for main contacts for auxiliary contacts			
for main contacts for auxiliary contacts Safety related data			
for main contacts for auxiliary contacts Safety related data product function			
for main contacts for auxiliary contacts Safety related data product function mirror contact according to IEC 60947-4-1	20 14 Yes		
for main contacts for auxiliary contacts Safety related data product function	20 14		

 with low demand rate according to SN 31920 	40 %	
 with high demand rate according to SN 31920 	73 %	
failure rate [FIT] with low demand rate according to SN 31920	100 FIT	
T1 value for proof test interval or service life according to IEC 61508	20 a	
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	
suitability for use		
 safety-related switching OFF 	Yes	
Cartificates/ approvals		

Certificates/ approvals

General Product Approval





Confirmation



KC



Functional ЕМС Safety/Safety of Machinery

Declaration of Conformity

Test Certificates



Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certific-<u>ate</u>

Marine / Shipping













Marine / Shipping

other

Railway

Dangerous Good

Environment



Confirmation

Confirmation

Vibration and Shock

Transport Information

Environmental Confirmations

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

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

Information- and Downloadcenter (Catalogs, Brochures,...)

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2035-1AP04

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2035-1AP04

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2035-1A

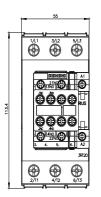
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2035-1AP04&lang=en

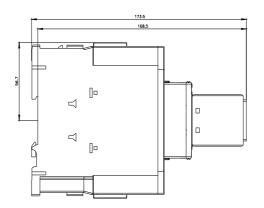
Characteristic: Tripping characteristics, I2t, Let-through current

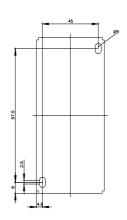
https://support.industry.siemens.com/cs/ww/en/ps/3RT2035-1AP04/char

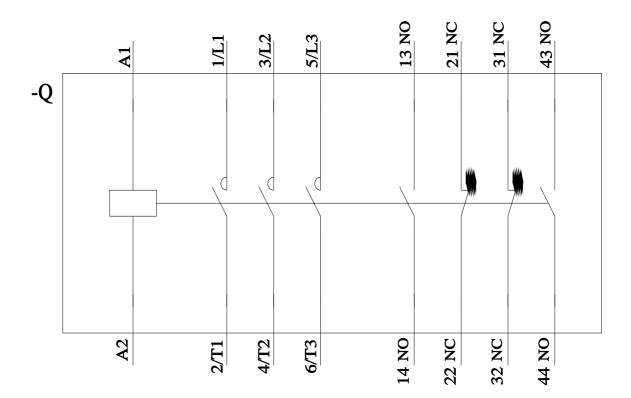
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2035-1AP04&objecttype=14&gridview=view1









last modified: 2/10/2023 🖸

3RT20 Page	 1AP	04