SIEMENS

Data sheet 3RT2035-1CP04



power contactor, AC-3e/AC-3, 41 A, 18.5 kW / 400 V, 3-pole, 230 V AC, 50 Hz, with plugged-in varistor, 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 curve 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 rated value.	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 		

— at 24 V rated value	35 A
— at 60 V rated value	6 A
— at 220 V rated value	1A
— 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-	
at 400 V rated value	11.6 kW
at 690 V rated value at 690 V rated value	16.8 kW
operating apparent power at AC-6a	10.0 KVV
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 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	20.0 (0/1
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 400 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	
 limited to 1 s switching at zero current maximum 	843 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	596 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	400 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	241 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 60 s switching at zero current maximum	196 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	1 200 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	110
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
design of the surge suppressor	with varistor
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 contact	2
operational current at AC-12 maximum	10 A
operational current at AC-15	
• 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	
• at 24 V rated value	10 A
at 48 V rated value	6 A
at 60 V rated value at 110 V rated value	6 A
at 110 V rated value at 135 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	U.10 A
at 24 V rated value	6 A
at 48 V rated value at 48 V rated value	2 A
at 60 V rated value at 60 V rated value	2 A
at 110 V rated value	1A
at 175 V rated value 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	40 A
at 600 V rated value	41 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	3 hp
— at 230 V rated value	7.5 hp
• for 3-phase AC motor	
1,000/000 1/ 1 1 1	10 hp
— at 200/208 V rated value	
— at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value	15 hp 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	40
— 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 for a william, and control circuit	screw-type terminals
for auxiliary and control circuit	screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals
of magnet coil The of compactable conductor cross scatters for main contacts.	Screw-type terminals
type of connectable conductor cross-sections for main contacts	2v /1 25 mm²) 1v /1 50 mm²)
solid or stranded finally stranded with core and processing.	2x (1 35 mm²), 1x (1 50 mm²)
inely stranded with core end processing connectable conductor cross-section for main contacts	2x (1 25 mm²), 1x (1 35 mm²)
	1 35 mm ²
finely stranded with core end processing connectable conductor cross-section for auxiliary contacts.	1 35 mm ²
connectable conductor cross-section for auxiliary contacts • solid or stranded	0.5 2.5 mm²
	0.5 2.5 mm ² 0.5 2.5 mm ²
inely stranded with core end processing type of connectable conductor cross-sections	V.O 2.0 IIIIII
for auxiliary contacts	
•	2v (0.5
solid or stranded finely stranded with core and processing.	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 finely stranded with core end processing for AWG cables for auxiliary contacts 	2x (0.5 1.5 minr), 2x (0.75 2.5 minr) 2x (20 16), 2x (18 14)
AWG number as coded connectable conductor cross	2A (20 10), 2A (10 17)
section	
• for main contacts	18 1
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

40 %
73 %
100 FIT
20 a
IP20
finger-safe, for vertical contact from the front
Yes

Certificates/ approvals

General Product Approval





Confirmation



<u>KC</u>



EMC	Functional Safety/Safety of Ma- chinery	Declaration of Conformity	Test Certificates
-----	---	---------------------------	-------------------



Type Examination Cer**tificate**





Type Test Certificates/Test Report

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

Marine / Shipping













Marine / Shipping other Railway **Dangerous Good**



Confirmation

Confirmation

Vibration and Shock

Transport Information

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,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2035-1CP04

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT2035-1CP04}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2035-1CP04

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

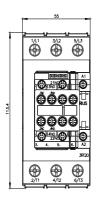
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2035-1CP04&lang=en

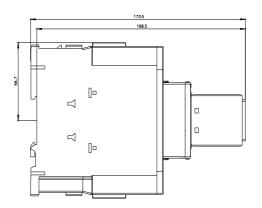
Characteristic: Tripping characteristics, I2t, Let-through current

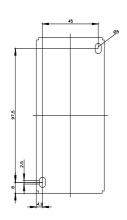
https://support.industry.siemens.com/cs/ww/en/ps/3RT2035-1CP04/char

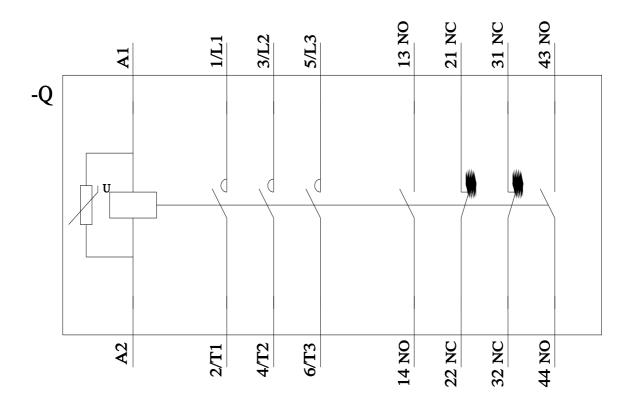
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2035-1CP04&objecttype=14&gridview=view1









last modified: 2/10/2023 🖸

3RT20351CF Page 8/8	P04