## **SIEMENS**

Data sheet 3RT2036-3AF04



power contactor, AC-3e/AC-3, 51 A, 22 kW / 400 V, 3-pole, 110 V AC, 50 Hz, auxiliary contacts: 2 NO + 2 NC, main circuit: screw terminal, control and auxiliary circuit: spring-loaded 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	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	No
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	12 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	4 W
<ul> <li>without load current share typical</li> </ul>	16 W
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
surge voltage resistance	
<ul> <li>of main circuit rated value</li> </ul>	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)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	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

3
690 V
690 V
70 A
70 A
60 A
51 A
51 A
24 A
51 A
51 A
24 A
41 A
61.6 A
41.5 A
43.2 A
43.2 A
43.2 A
24 A
28.8 A
28.8 A
28.8 A
24 A
25 mm <sup>2</sup>
24 A
24 A
20 A
EE A
55 A
23 A
23 A 4.5 A
23 A 4.5 A 1 A
23 A 4.5 A 1 A 0.4 A
23 A 4.5 A 1 A
23 A 4.5 A 1 A 0.4 A 0.25 A
23 A 4.5 A 1 A 0.4 A 0.25 A
23 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A
23 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A
23 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 45 A 5 A
23 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 45 A 5 A 1 A
23 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 45 A 5 A
23 A 4.5 A 1 A 0.4 A 0.25 A  55 A 45 A 45 A 5 A 1 A 0.8 A
23 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 45 A 5 A 1 A 0.8 A
23 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 5 A 1 A 0.8 A 55 A 55 A
23 A 4.5 A 1 A 0.4 A 0.25 A  55 A 45 A 5 A 1 A 0.8 A
23 A 4.5 A 1 A 0.4 A 0.25 A  55 A 45 A 1 A 0.8 A
23 A 4.5 A 1 A 0.4 A 0.25 A  55 A 45 A 5 A 1 A 0.8 A

— 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
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
— 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
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— 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	22 kW
• at AC-3	
— at 230 V rated value	15 kW
— at 400 V rated value	22 kW
— at 500 V rated value	30 kW
— at 690 V rated value	22 kW
• at AC-3e	
— at 400 V rated value	22 kW
— at 500 V rated value	30 kW
— at 690 V rated value	22 kW
operating power for approx. 200000 operating cycles at AC-	
4	
at 400 V rated value	12.6 kW
at 690 V rated value	18.2 kW
operating apparent power at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	17.2 kVA
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	29.9 kVA
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	37.4 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	11.4 kVA
• up to 400 V for current peak value n=30 rated value	19.9 kVA
• up to 500 V for current peak value n=30 rated value	24.9 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	
Iimited to 1 s switching at zero current maximum	937 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	697 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	468 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	282 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 60 s switching at zero current maximum	229 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	600 1/h
• at AC-3 maximum	800 1/h
• at AC-3e maximum	800 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	440.74
at 50 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
apparent pick-up power of magnet coil at AC	0.0 1.1
• at 50 Hz	190 VA
inductive power factor with closing power of the coil	150 VA
at 50 Hz	0.72
apparent holding power of magnet coil at AC	0.72
• at 50 Hz	16 VA
inductive power factor with the holding power of the coil	10 VA
at 50 Hz	0.37
closing delay	0.01
• at AC	10 80 ms
opening delay	10 00 m3
• at AC	10 18 ms
arcing time	10 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	Contract of the Contract of th
number of NC contacts for auxiliary contacts instantaneous	2
contact	2
number of NO contacts for auxiliary contacts instantaneous	2
contact	
operational current at AC-12 maximum	10 A
operational current at AC-15	
• at 230 V rated value	6 A
<ul> <li>at 400 V rated value</li> </ul>	3 A
<ul> <li>at 500 V rated value</li> </ul>	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
<ul><li>at 110 V rated value</li></ul>	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	6 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	52 A
at 600 V rated value	52 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	3 hp
— at 230 V rated value	10 hp
• for 3-phase AC motor	
— at 200/208 V rated value	15 hp
— at 220/230 V rated value	15 hp
— at 460/480 V rated value	40 hp
— at 575/600 V rated value	50 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)		
<ul> <li>— with type of assignment 2 required</li> </ul>	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	178 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	spring-loaded terminals		
at contactor for auxiliary contacts	Spring-type terminals		
of magnet coil	Spring-type terminals		
type of connectable conductor cross-sections for main contacts	0: (4 05 :::::2) 4: (4 50 2)		
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	1 25 mm²		
finely stranded with core end processing	1 35 mm²		
connectable conductor cross-section for auxiliary contacts  • solid or stranded	0.5 2.5 mm <sup>2</sup>		
	0.5 2.5 mm <sup>2</sup> 0.5 1.5 mm <sup>2</sup>		
finely stranded with core end processing			
	$0.5 - 2.5 \text{ mm}^2$		
finely stranded without core end processing  type of connectable conductor cross-sections	0.5 2.5 mm <sup>2</sup>		
type of connectable conductor cross-sections	0.5 2.5 mm <sup>2</sup>		
type of connectable conductor cross-sections  • for auxiliary contacts			
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded	2x (0.5 2.5 mm²)		
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — finely stranded with core end processing	2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²)		
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  — finely stranded without core end processing	2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²)		
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  — finely stranded without core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross	2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²)		
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  — finely stranded without core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section	2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²) 2x (20 14)		
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  — finely stranded without core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section  • for main contacts	2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²) 2x (20 14)		
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  — finely stranded without core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section  • for main contacts  • for auxiliary contacts	2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²) 2x (20 14)		
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  — finely stranded without core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section  • for main contacts  • for auxiliary contacts  Safety related data	2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²) 2x (20 14)		
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  — finely stranded without core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section  • for main contacts  • for auxiliary contacts  Safety related data  product function	2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²) 2x (20 14) 18 1 20 14		
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  — finely stranded without core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section  • for main contacts  • for auxiliary contacts  Safety related data	2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²) 2x (20 14)		

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>



Functional Safety/Safet chinery	y of Ma- Declaration of Conformity	Test Certificates
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Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

## Marine / Shipping













Marine / Shipping	other	Railway	Dangerous Good	Environment



Confirmation

Confirmation

Vibration and Shock

**Transport Information** 

Environmental Confirmations

## Further 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=3RT2036-3AF04

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2036-3AF04

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2036-3AF04

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

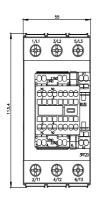
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2036-3AF04&lang=en

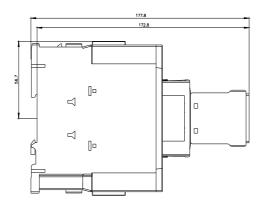
Characteristic: Tripping characteristics, I²t, Let-through current

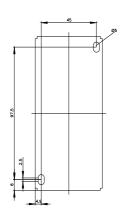
https://support.industry.siemens.com/cs/ww/en/ps/3RT2036-3AF04/char

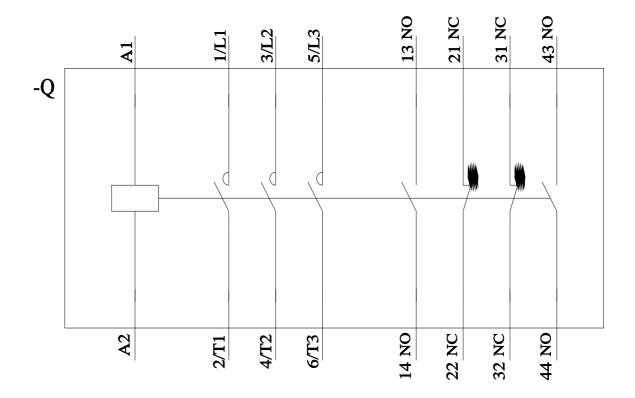
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2036-3AF04&objecttype=14&gridview=view1









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