SIEMENS

Data sheet 3RT1065-2NF36



Power contactor, AC-3 265 A, 132 kW / 400 V AC (50-60 Hz) / DC operation 96-127 V UC Auxiliary contacts 2 NO + 2 NC 3-pole, Size S10 Busbar connections Drive: electronic with PLC interface 24 V DC Spring-type terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT1
General technical data	
size of contactor	S10
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	54 W
per pole	_ 18 W
power loss [W] for rated value of the current without load current share typical	3.4 W
surge voltage resistance	
 of main circuit rated value 	8 kV
of auxiliary circuit rated value	_ 6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	690 V
shock resistance at rectangular impulse	
• at AC	8,5g / 5 ms, 4,2g / 10 ms
• at DC	8,5g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at AC	13,4g / 5 ms, 6,5g / 10 ms
• at DC	13,4g / 5 ms, 6,5g / 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)	01.05.2012 00:00:00
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature during operation	-25 +60 °C
ambient temperature 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	1 000 V
operational current	
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	330 A
• at AC-1	
 up to 690 V at ambient temperature 40 °C rated value 	330 A
 up to 690 V at ambient temperature 60 °C rated value 	300 A
— up to 1000 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	150 A
 up to 1000 V at ambient temperature 60 °C rated value 	150 A
• at AC-3	
— at 400 V rated value	265 A
— at 500 V rated value	265 A
— at 690 V rated value	265 A
— at 1000 V rated value	95 A
• at AC-4 at 400 V rated value	230 A
at AC-5a up to 690 V rated value	290 A
at AC-5b up to 400 V rated value	219 A
at AC-6a — up to 230 V for current peak value n=20 rated	265 A
value — up to 400 V for current peak value n=20 rated value	265 A
up to 500 V for current peak value n=20 rated value	265 A
 up to 690 V for current peak value n=20 rated value 	265 A
 up to 1000 V for current peak value n=20 rated value 	95 A
• at AC-6a	
 up to 230 V for current peak value n=30 rated value 	184 A
— up to 400 V for current peak value n=30 rated value	184 A
— up to 500 V for current peak value n=30 rated value	184 A
 — up to 690 V for current peak value n=30 rated value — up to 1000 V for current peak value n=30 rated 	95 A
value minimum cross-section in main circuit at maximum AC-1	185 mm ²
rated value	
operational current for approx. 200000 operating cycles at AC-4	447
at 400 V rated value	117 A
at 690 V rated value	105 A
operational current	
at 1 current path at DC-1— at 24 V rated value	200 A
— at 24 V rated value — at 110 V rated value	300 A 33 A
— at 110 V rated value — at 220 V rated value	3.8 A
— at 440 V rated value	0.9 A
— at 600 V rated value	0.6 A
at 600 v rated value with 2 current paths in series at DC-1	0.0 A
with 2 current paths in series at DC-1 — at 24 V rated value	300 A
— at 24 V rated value — at 110 V rated value	300 A
— at 110 V rated value — at 220 V rated value	300 A 300 A
— at 440 V rated value — at 440 V rated value	4 A
— at 440 v rateu value	47

— at 600 V rated value	2 A
 with 3 current paths in series at DC-1 	
— at 24 V rated value	300 A
— at 110 V rated value	300 A
— at 220 V rated value	300 A
— at 440 V rated value	11 A
— at 600 V rated value	5.2 A
operational current	
 at 1 current path at DC-3 at DC-5 	
— at 24 V rated value	300 A
— at 110 V rated value	3 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.18 A
— at 600 V rated value	0.125 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	300 A
— at 110 V rated value	300 A
— at 220 V rated value	2.5 A
— at 440 V rated value	0.65 A
— at 600 V rated value	0.37 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	300 A
— at 110 V rated value	300 A
— at 220 V rated value	300 A
— at 440 V rated value	1.4 A
— at 600 V rated value	0.75 A
operating power	
• at AC-3	
— at 230 V rated value	75 kW
— at 400 V rated value	132 kW
— at 500 V rated value	160 kW
— at 690 V rated value	250 kW
— at 1000 V rated value	132 kW
operating power for approx. 200000 operating cycles	
at AC-4	
at 400 V rated value	66 kW
at 690 V rated value	102 kW
operating apparent power at AC-6a	
 up to 230 V for current peak value n=20 rated value 	100 000 kV·A
 up to 400 V for current peak value n=20 rated value 	180 000 V·A
• up to 500 V for current peak value n=20 rated value	220 000 V·A
• up to 690 V for current peak value n=20 rated value	310 000 V·A
• up to 1000 V for current peak value n=20 rated	160 000 V·A
value	
operating apparent power at AC-6a	70,000.1/ A
• up to 230 V for current peak value n=30 rated value	70 000 V·A
• up to 400 V for current peak value n=30 rated value	120 000 V·A
• up to 500 V for current peak value n=30 rated value	150 000 V·A
• up to 690 V for current peak value n=30 rated value	220 000 V·A
 up to 1000 V for current peak value n=30 rated value 	160 000 V·A
short-time withstand current in cold operating state	
up to 40 °C	
 limited to 1 s switching at zero current maximum 	4 880 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	4 045 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	2 785 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	1 664 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	1 276 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	

• at AC	1 000 1/h
• at DC	1 000 1/h
operating frequency	
at AC-1 maximum	800 1/h
• at AC-2 maximum	300 1/h
at AC-3 maximum	700 1/h
at AC-4 maximum	130 1/h
Control circuit/ Control	
	AC/DC
type of voltage of the control supply voltage	AO/DC
control supply voltage at AC • at 50 Hz rated value	96 127 V
• at 60 Hz rated value	96 127 V
control supply voltage at DC • rated value	06 127 \/
	96 127 V
type of PLC-control input acc. to IEC 60947-1	Type 2
consumed current at PLC-control input acc. to IEC 60947-1 maximum	20 mA
voltage at PLC-control input rated value	24 V
operating range factor of the voltage at PLC-control input	0.8 1.1
operating range factor control supply voltage rated	
value of magnet coil at DC	
• initial value	0.8
full-scale value	1.1
operating range factor control supply voltage rated	
value of magnet coil at AC	
• at 50 Hz	0.8 1.1
• at 60 Hz	0.8 1.1
design of the surge suppressor	with varistor
apparent pick-up power of magnet coil at AC	
• at 50 Hz	530 V·A
inductive power factor with closing power of the coil	
● at 50 Hz	0.8
apparent holding power of magnet coil at AC	
● at 50 Hz	5 V·A
inductive power factor with the holding power of the coil	
● at 50 Hz	0.5
closing power of magnet coil at DC	580 W
holding power of magnet coil at DC	3.4 W
closing delay	
• at AC	45 80 ms
• at DC	45 80 ms
opening delay	
• at AC	80 100 ms
• at DC	80 100 ms
arcing time	10 15 ms
control version of the switch operating mechanism	PLC-IN or Standard A1 - A2 (adjustable)
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-12 maximum	
at 230 V rated value	6 A
	3 A
• at 400 V rated value	
• 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)
	readity switching per 100 million (17 V, 1 m/V)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	040.4
• at 480 V rated value	240 A
• at 600 V rated value	242 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	
— at 200/208 V rated value	75 hp
 — at 220/230 V rated value 	100 hp
 — at 460/480 V rated value 	200 hp
— at 575/600 V rated value	250 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: 500 A (690 V, 100 kA)
 — with type of assignment 2 required 	gG: 400 A (690 V, 100 kA), aM: 315 A (690 V, 50 kA), BS88: 400 A (415
	V, 50 kA)
 for short-circuit protection of the auxiliary switch required 	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting
	surface +/- 22.5° tiltable to the front and back
fastening method	screw fixing
 side-by-side mounting 	Yes
height	210 mm
width	145 mm
depth	202 mm
required spacing	
with side-by-side mounting	
— forwards	20 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
for grounded parts	
— forwards	20 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
for live parts	10 11111
— forwards	20 mm
	10 mm
upwards	10 11111
— upwards	
— upwards— downwards— at the side	10 mm 10 mm

Connections/ Terminals	
width of connection bar	25 mm
thickness of connection bar	6 mm
diameter of holes	11 mm
number of holes	1
type of electrical connection	
 for main current circuit 	Connection bar
 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	
at AWG cables for main contacts	2/0 500 kcmil
connectable conductor cross-section for main contacts	
stranded	70 240 mm²
connectable conductor cross-section for auxiliary contacts	
 solid or stranded 	0.25 2.5 mm²
 finely stranded with core end processing 	0.25 1.5 mm²
finely stranded without core end processing	0.25 2.5 mm²
type of connectable conductor cross-sections	
 for auxiliary contacts 	
— solid	2x (0.25 2.5 mm²)
— solid or stranded	2x (0,25 2,5 mm²)
 finely stranded with core end processing 	2x (0.25 1.5 mm²)
 finely stranded without core end processing 	2x (0.25 2.5 mm²)
at AWG cables for auxiliary contacts	2x (24 14)
 AWG number as coded connectable conductor cross section for auxiliary contacts 	24 14
Safety related data	
B10 value with high demand rate acc. to SN 31920	1 000 000
product function	
 mirror contact acc. to IEC 60947-4-1 	Yes
 positively driven operation acc. to IEC 60947-5-1 	No
protection class IP on the front acc. to IEC 60529	IP00; IP20 with box terminal/cover
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front with box terminal/cover
suitability for use safety-related switching OFF	Yes
Certificates/ approvals	

General Product Approval

EMC







<u>KC</u>





Declaration of Conformity

Test Certificates

Marine / Shipping

Miscellaneous



Special Test Certificate

Type Test
Certificates/Test
Report





Marine / Shipping

other

Railway



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=3RT1065-2NF36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1065-2NF36

Miscellaneous

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1065-2NF36

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

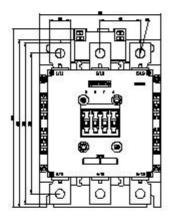
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1065-2NF36&lang=en

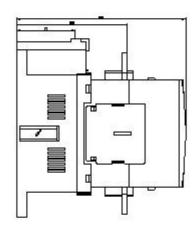
Characteristic: Tripping characteristics, I2t, Let-through current

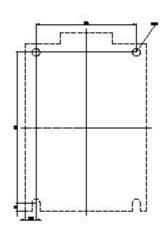
https://support.industry.siemens.com/cs/ww/en/ps/3RT1065-2NF36/char

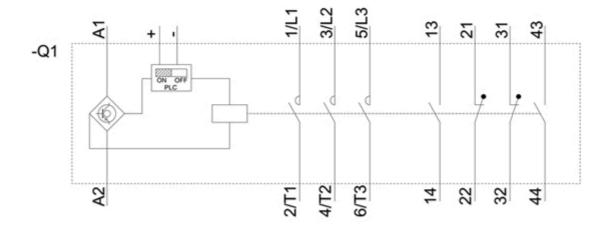
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1065-2NF36&objecttype=14&gridview=view1









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