Data sheet 3RT1076-6SF36-3PA0



power contactor, AC-3e/AC-3 500 A, 250 kW / 400 V AC (50-60 Hz) / DC 96-127 V x (0.8-1.1) F-PLC input 24 V DC 3-pole, auxiliary contacts 2 NO + 2 NC permanently mounted drive: electronic main circuit: busbar control and auxiliary circuit: screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT1
General technical data	
size of contactor	S12
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 	165 W
 at AC in hot operating state per pole 	55 W
 without load current share typical 	3.6 W
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	1 000 V
of auxiliary circuit with degree of pollution 3 rated value	500 V
surge voltage resistance	
 of main circuit rated value 	8 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according 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 (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)	03/01/2017
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 %

lain 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
at AC-3e rated value maximum	1 000 V
operational current	
at AC-1 at 400 V at ambient temperature 40 °C rated value	610 A
• at AC-1	
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	610 A
— up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ rated value	550 A
— up to 1000 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	200 A
— up to 1000 V at ambient temperature 60 °C rated value	200 A
• at AC-3	
— at 400 V rated value	500 A
— at 500 V rated value	500 A
— at 690 V rated value	450 A
— at 1000 V rated value	180 A
• at AC-3e	
— at 400 V rated value	500 A
— at 500 V rated value	500 A
— at 690 V rated value	450 A
— at 1000 V rated value	180 A
• at AC-4 at 400 V rated value	430 A
• at AC-5a up to 690 V rated value	536 A
 at AC-5b up to 400 V rated value 	415 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	414 A
— up to 400 V for current peak value n=20 rated value	414 A
— up to 500 V for current peak value n=20 rated value	414 A
— up to 690 V for current peak value n=20 rated value	414 A
— up to 1000 V for current peak value n=20 rated value	180 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	276 A
— up to 400 V for current peak value n=30 rated value	276 A
— up to 500 V for current peak value n=30 rated value	276 A
— up to 690 V for current peak value n=30 rated value	276 A
up to 1000 V for current peak value n=30 rated value value	180 A
minimum cross-section in main circuit at maximum AC-1 rated value	370 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	175 A
at 690 V rated value	150 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	400 A
— at 60 V rated value	330 A
— at 110 V rated value	33 A
— at 220 V rated value	3.8 A
— at 440 V rated value	0.9 A
— at 600 V rated value	0.6 A
 with 2 current paths in series at DC-1 	
— at 24 V rated value	400 A
— at 60 V rated value	400 A

— at 220 V rated value	400 A
— at 440 V rated value	4 A
— at 600 V rated value	2 A
 with 3 current paths in series at DC-1 	
— at 24 V rated value	400 A
— at 60 V rated value	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 A
— at 440 V rated value	11 A
— at 600 V rated value	5.2 A
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	400 A
— at 60 V rated value	11 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	0.120 A
— at 24 V rated value	400 A
— at 60 V rated value	400 A
— at 110 V rated value — at 220 V rated value	400 A
	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	400 A
— at 60 V rated value	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 A
— at 440 V rated value	1.4 A
— at 600 V rated value	0.75 A
operating power	
 at AC-2 at 400 V rated value 	250 kW
• at AC-3	
— at 230 V rated value	160 kW
— at 400 V rated value	250 kW
— at 500 V rated value	315 kW
— at 690 V rated value	400 kW
— at 1000 V rated value	250 kW
• at AC-3e	
— at 230 V rated value	160 kW
— at 400 V rated value	250 kW
— at 500 V rated value	315 kW
— at 690 V rated value	400 kW
— at 1000 V rated value	250 kW
operating power for approx. 200000 operating cycles at AC-	
4	
• at 400 V rated value	98 kW
at 690 V rated value	148 kW
operating apparent power at AC-6a	
 up to 230 V for current peak value n=20 rated value 	160 000 kVA
 up to 400 V for current peak value n=20 rated value 	280 000 VA
• up to 500 V for current peak value n=20 rated value	350 000 VA
• up to 690 V for current peak value n=20 rated value	490 000 VA
• up to 1000 V for current peak value n=20 rated value	310 000 VA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	110 000 VA
• up to 400 V for current peak value n=30 rated value	190 000 VA
• up to 500 V for current peak value n=30 rated value	230 000 VA
• up to 690 V for current peak value n=30 rated value	330 000 VA
• up to 1000 V for current peak value n=30 rated value	310 000 VA

short-time withstand current in cold operating state up to 40 °C	
Iimited to 1 s switching at zero current maximum	7 484 A; Use minimum cross-section acc. to AC-1 rated value
-	7 484 A: Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum 	5 978 A; Use minimum cross-section acc. to AC-1 rated value
Ilmited to 10's switching at zero current maximum Ilmited to 30's switching at zero current maximum	3 765 A; Use minimum cross-section acc. to AC-1 rated value
-	
Ilimited to 60 s switching at zero current maximum	2 887 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	F00.4/L
• at AC	500 1/h
• at DC	500 1/h
operating frequency	200.4/1-
• at A.C. 2 maximum	200 1/h
• at AC-2 maximum	170 1/h
• at AC-3 maximum	200 1/h
at AC-3e maximum	200 1/h
at AC-4 maximum	130 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC/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	96 127 V
operating range factor control supply voltage rated value of	
magnet coil at DC	0.0
• 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
type of PLC-control input according to IEC 60947-1	Type 1
consumed current at PLC-control input according to IEC	14 mA
60947-1 maximum	14 1101
voltage at PLC-control input rated value	24 V
operating range factor of the voltage at PLC-control input	0.8 1.1
design of the surge suppressor	with varistor
apparent pick-up power of magnet coil at AC	
● at 50 Hz	750 VA
● at 60 Hz	750 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.8
● at 60 Hz	0.8
apparent holding power of magnet coil at AC	
● at 50 Hz	9 VA
• at 60 Hz	9 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.4
● at 60 Hz	0.4
closing power of magnet coil at DC	800 W
holding power of magnet coil at DC	3.6 W
closing delay	
• at AC	60 75 ms
• at DC	60 75 ms
opening delay	
• at AC	115 130 ms
• at DC	115 130 ms
recovery time after power failure typical	2 \$
arcing time	10 15 ms
control version of the switch operating mechanism	Fail-safe PLC input (F-PLC-IN)
Auxiliary circuit	· all balls i Lo liput (i i Lo lit)
	2
number of NC contacts for auxiliary contacts instantaneous	2

contact	
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
 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	477 A
at 600 V rated value	472 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	450.1
— at 200/208 V rated value	150 hp
— at 220/230 V rated value	200 hp
— at 460/480 V rated value	400 hp
— at 575/600 V rated value	500 hp A600 / P600
contact rating of auxiliary contacts according to UL Short-circuit protection	A000 / P000
design of the fuse link	
for short-circuit protection of the main circuit	
with type of coordination 1 required	gG: 630 A (690 V, 100 kA)
with type of coordination is required with type of assignment 2 required	gG: 500 A (690 V, 100 kA), aM: 500 A (690 V, 50 kA), BS88: 500 A (415 V, 50
— with type of assignment 2 required	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	214 mm
width	160 mm
depth	225 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
· r · · · ·	

10 mm 10 mm 20 mm 10 mm
20 mm
10 mm
10 mm
10 mm
Connection bar
screw-type terminals
Screw-type terminals
Screw-type terminals
25 mm
6 mm
11 mm
1
70 240 mm²
0.5 4 mm²
0.5 2.5 mm²
2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), max. 2x (0.75 4 mm²)
2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), max. 2x (0,75 4 mm²)
2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
2x (20 16), 2x (18 14), 1x 12
.x (20 10), 2x (10 11), 1x 12
18 14
Yes
No
Type B
1 000 000
2
2
C
2
0
93 % 400 FIT
100 FIT
4.5E-7 1/h
0.007
75 a -
0
20 a
IP00; IP20 with box terminal/cover
finger-safe, for vertical contact from the front with box terminal/cover
No
No Yes





Confirmation







Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates

other

Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certificate

Confirmation

other

Railway

Miscellaneous

Miscellaneous

Special Test Certific-

<u>ate</u>

Further information

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

https://press.siemens.com/qlobal/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=3RT1076-6SF36-3PA0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1076-6SF36-3PA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6SF36-3PA0

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

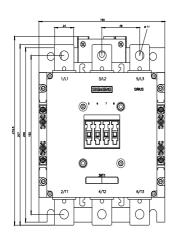
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1076-6SF36-3PA0&lang=en

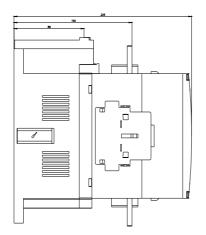
Characteristic: Tripping characteristics, I2t, Let-through current

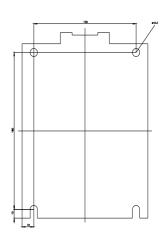
https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6SF36-3PA0/char

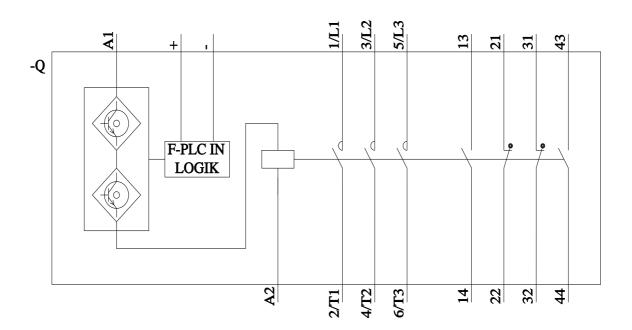
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1076-6SF36-3PA0&objecttype=14&gridview=view1









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