## **SIEMENS**

Data sheet 3RT1076-6AP36



power contactor, AC-3e/AC-3 500 A, 250 kW / 400 V AC (50-60 Hz) / DC Uc: 220-240 V 3-pole, auxiliary contacts 2 NO + 2 NC drive: conventional 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	10 W
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	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)	
<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)	05/01/2012
SVHC substance name	Blei - 7439-92-1
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	95 %

maximum	
ain 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	610 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated	610 A
value	
— up to 690 V at ambient temperature 60 °C rated	550 A
value	000 A
<ul> <li>up to 1000 V at ambient temperature 40 °C rated value</li> </ul>	200 A
— up to 1000 V at ambient temperature 60 °C rated	200 A
value	
• 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-5a up to 490 V rated value     at AC-5b up to 400 V rated value	415 A
• at AC-3b up to 400 V fated Value	415 A
	44.4. A
— 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
<ul> <li>up to 1000 V for current peak value n=20 rated value</li> </ul>	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  — 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	180 A
value	10071
ninimum cross-section in main circuit at maximum AC-1 rated ralue	370 mm²
operational current for approx. 200000 operating cycles at	
at 400 V rated value	175 A
at 690 V rated value	150 A
pperational 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 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
with 2 current paths in series at DC-1  at 24 V reted value.	400 A
— 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	4 A
— at 600 V rated value	2 A
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— 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 220 V rated value	0.6 A
— at 440 V rated value	0.18 A
— at 600 V rated value	0.125 A
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
— 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	2.5 A
— at 440 V rated value	0.65 A
— at 600 V rated value	0.37 A
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— 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-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-	
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
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	280 000 VA
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	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	
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	110 000 VA
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	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
<ul> <li>up to 1000 V for current peak value n=30 rated value</li> </ul>	310 000 VA
short-time withstand current in cold operating state up to	

40 °C	7.404.4.1.1
Iimited to 1 s switching at zero current maximum	7 484 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 5 s switching at zero current maximum	7 484 A; Use minimum cross-section acc. to AC-1 rated value
limited to 10 s switching at zero current maximum	5 978 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 30 s switching at zero current maximum	3 765 A; Use minimum cross-section acc. to AC-1 rated value
Iimited 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	
• at AC	2 000 1/h
• at DC	2 000 1/h
operating frequency	
• at AC-1 maximum	500 1/h
• at AC-2 maximum	170 1/h
at AC-3 maximum	420 1/h
at AC-3e maximum	420 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	220 240 V
at 60 Hz rated value	220 240 V
control supply voltage at DC	
rated value	220 240 V
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	
at minimum rated control supply voltage at AC	
— at 50 Hz	700 VA
— at 60 Hz	700 VA
at maximum rated control supply voltage at AC	
— at 60 Hz	830 VA
— at 50 Hz	830 VA
apparent pick-up power of magnet coil at AC	
• at 50 Hz	830 VA
● at 60 Hz	830 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.9
● at 60 Hz	0.9
apparent holding power	
at minimum rated control supply voltage at DC	8.5 VA
at maximum rated control supply voltage at DC	10 VA
apparent holding power	
at minimum rated control supply voltage at AC	
— at 50 Hz	7.6 VA
— at 60 Hz	7.6 VA
at maximum rated control supply voltage at AC	
— at 50 Hz	9.2 VA
— at 60 Hz	9.2 VA
apparent holding power of magnet coil at AC	
● at 50 Hz	9.2 VA
● at 60 Hz	9.2 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.9
at 60 Hz	0.9

	40.14
holding power of magnet coil at DC	10 W
closing delay	
• at AC	45 100 ms
• at DC	45 100 ms
opening delay	
• at AC	60 100 ms
• at DC	60 100 ms
arcing time	10 15 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     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	0.10 A
• 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	
— 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
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: 630 A (690 V, 100 kA)
— 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 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	
<ul> <li>with side-by-side mounting</li> </ul>	
— 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	
— forwards	20 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm
connections/ Terminals	
type of electrical connection	
for main current circuit	Connection bar
for auxiliary and control circuit	screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals
of magnet coil	Screw-type terminals
width of connection bar	25 mm
thickness of connection bar	6 mm
diameter of holes	11 mm
number of holes	1
connectable conductor cross-section for main contacts	
stranded	70 240 mm²
connectable conductor cross-section for auxiliary contacts	70 240 HIIII
solid or stranded	0.5 4 mm²
	0.5 2.5 mm <sup>2</sup>
finely stranded with core end processing  tune of connectable conductor errors sections	0.5 2.5
type of connectable conductor cross-sections	
for auxiliary contacts	0 (0.5 4.5 mm²) 0 (0.75 0.5 mm²) mm² (0 (0.75 4.mm²)
— solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), max. 2x (0.75 4 mm²)
— solid or stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), max. 2x (0,75 4 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), 1x 12
AWG number as coded connectable conductor cross section	
for auxiliary contacts	18 14
afety related data	10 11
product function	
mirror contact according to IEC 60947-4-1	Yes
<ul> <li>minor contact according to IEC 60947-4-1</li> <li>positively driven operation according to IEC 60947-5-1</li> </ul>	No
positively driven operation according to IEC 60947-5-1 suitability for use safety-related switching OFF	Yes
· · · · · · · · · · · · · · · · · · ·	
B10 value with high demand rate according to SN 31920	1 000 000
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	IP00; IP20 with box terminal/cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with box terminal/cover
ertificates/ approvals	
General Product Approval	EMC



Confirmation









Functional Safety/Safety of Ma-

**Declaration of Conformity** 

**Test Certificates** 

chinery

Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

**Miscellaneous** 

Marine / Shipping

other











Confirmation

other Railway

<u>Miscellaneous</u> <u>Miscellaneous</u> <u>Confirmation</u> <u>Vibration and Shock</u> <u>Special Test Certificate</u>

## 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=3RT1076-6AP36

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT1076-6AP36}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6AP36

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

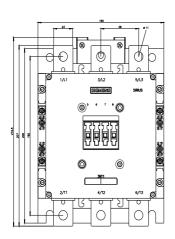
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT1076-6AP36&lang=en

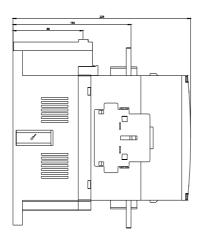
Characteristic: Tripping characteristics, I²t, Let-through current

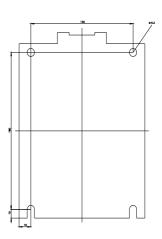
 $\underline{https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6AP36/char}$ 

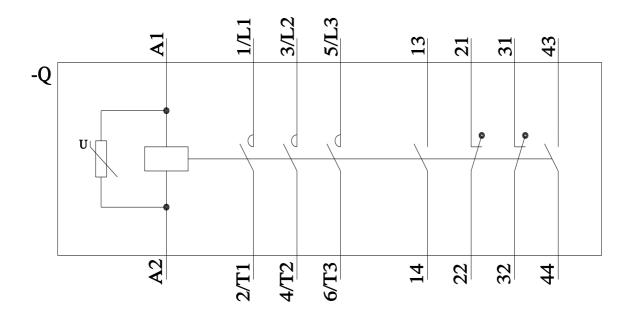
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1076-6AP36&objecttype=14&gridview=view1









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