## **SIEMENS**

Data sheet 3RT1276-6NF36

0101110



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

product brand name	SIRIUS
product designation	Vacuum contactor
product type designation	3RT12
General technical data	
size of contactor	S12
product extension	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	96 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	32 W
without load current share typical	3.6 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
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 %

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	1 000 V
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	610 A
— up to 1000 V at ambient temperature 60 °C rated value	550 A
• at AC-3	F00.4
— at 400 V rated value	500 A
— at 500 V rated value	500 A
— at 690 V rated value	500 A
— at 1000 V rated value	500 A
• at AC-3e	
— at 400 V rated value	500 A
— at 500 V rated value	500 A
— at 690 V rated value	500 A
— at 1000 V rated value	500 A
<ul> <li>at AC-4 at 400 V rated value</li> </ul>	430 A
• at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	439 A
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	439 A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	439 A
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	439 A
— up to 1000 V for current peak value n=20 rated value	439 A
• at AC-6a	000 A
— up to 230 V for current peak value n=30 rated value	293 A
— up to 400 V for current peak value n=30 rated value	293 A
— up to 500 V for current peak value n=30 rated value	293 A
<ul> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 1000 V for current peak value n=30 rated value</li> </ul>	293 A 293 A
ninimum cross-section in main circuit at maximum AC-1 rated ratue	370 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	215 A
• at 690 V rated value	215 A
pperating power	
• at AC-3	
— at 230 V rated value	160 kW
— at 400 V rated value	250 kW
— at 500 V rated value	355 kW
— at 690 V rated value	500 kW
— at 1000 V rated value	710 kW
• at AC-3e	
— at 230 V rated value	160 kW
— at 400 V rated value	250 kW
— at 500 V rated value	355 kW
— at 690 V rated value	500 kW
— at 1000 V rated value	710 kW
operating power for approx. 200000 operating cycles at AC-	

• at 400 V rated value	122 kW
• at 690 V rated value	212 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	170 000 kVA
• up to 400 V for current peak value n=20 rated value	300 000 VA
• up to 500 V for current peak value n=20 rated value	380 000 VA
• up to 690 V for current peak value n=20 rated value	520 000 VA
• up to 1000 V for current peak value n=20 rated value	760 000 VA
operating apparent power at AC-6a	
up to 230 V for current peak value n=30 rated value	110 000 VA
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	200 000 VA
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	250 000 VA
• up to 690 V for current peak value n=30 rated value	350 000 VA
• up to 1000 V for current peak value n=30 rated value	500 000 VA
no-load switching frequency	
• at AC	1 000 1/h
• at DC	1 000 1/h
operating frequency	1 000 1/11
at AC-1 maximum	700 1/h
• at AC-2 maximum	250 1/h
at AC-3 maximum     at AC-3 maximum	750 1/h
at AC-3 maximum     at AC-3e maximum	750 1/h
at AC-4 maximum  Control circuit/ Control	250 1/h
Control circuit/ Control	AOIDO
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	
• 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 2
consumed current at PLC-control input according to IEC	20 mA
60947-1 maximum	
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 90 ms
• at DC	60 90 ms
opening delay	

• at AC	80 100 ms		
• at DC	80 100 ms 80 100 ms		
arcing time	10 15 ms		
control version of the switch operating mechanism	PLC-IN or Standard A1 - A2 (adjustable)		
Auxiliary circuit	o. o. a		
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			
<ul> <li>at 24 V rated value</li> </ul>	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		
<ul> <li>at 60 V rated value</li> </ul>	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]			
<ul> <li>for 3-phase AC motor</li> </ul>			
— 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	0.000 4.000 1/.400 1 4		
<ul><li>— with type of coordination 1 required</li><li>— with type of assignment 2 required</li></ul>	gG: 800 A (690 V, 100 kA) gG: 800 A (690 V, 50 kA), aM: 630 A (690 V, 50 kA), BS88: 800 A (415 V, 50 kA)		
for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)		
Installation/ mounting/ dimensions	35(000 v, 1 lb l)		
mounting position	+/-22,5° rotation possible on vertical mounting surface; can be tilted forward		
	and backward by +/- 22.5° on vertical mounting surface; standing, on horizontal mounting surface		
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		
<ul> <li>for grounded parts</li> </ul>			
— 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		
<ul> <li>for auxiliary and control circuit</li> </ul>	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			
<ul> <li>solid or stranded</li> </ul>	0.5 4 mm²		
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm <sup>2</sup>		
type of connectable conductor cross-sections			
<ul> <li>for auxiliary contacts</li> </ul>			
— solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), max. 2x (0.75 4 mm²)		
<ul><li>— solid or stranded</li></ul>	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), max. 2x (0,75 4 mm²)		
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)		
<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14), 1x 12		
AWG number as coded connectable conductor cross section			
for auxiliary contacts	18 14		
Safety related data			
product function			
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes		
<ul> <li>positively driven operation according to IEC 60947-5-1</li> </ul>	No		
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		
suitability for use			
safety-related switching OFF	Yes		
Certificates/ approvals			











Functional Safety/Safety of Ma- chinery	Declaration of Conformity	Test Certificates	Marine / Shipping
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Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping

other







Confirmation

**Miscellaneous** 

Confirmation

## Railway

Vibration and Shock

**Special Test Certific-**

<u>ate</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=3RT1276-6NF36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1276-6NF36

 ${\bf Service \& Support\ (Manuals,\ Certificates,\ Characteristics,\ FAQs,...)}$ 

https://support.industry.siemens.com/cs/ww/en/ps/3RT1276-6NF36

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

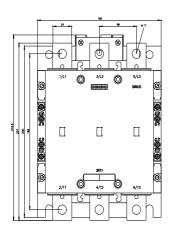
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT1276-6NF36&lang=en

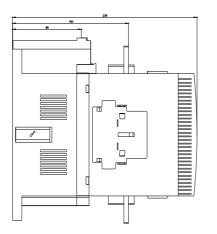
Characteristic: Tripping characteristics, I2t, Let-through current

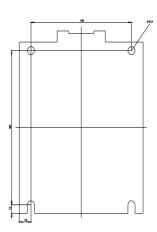
https://support.industry.siemens.com/cs/ww/en/ps/3RT1276-6NF36/char

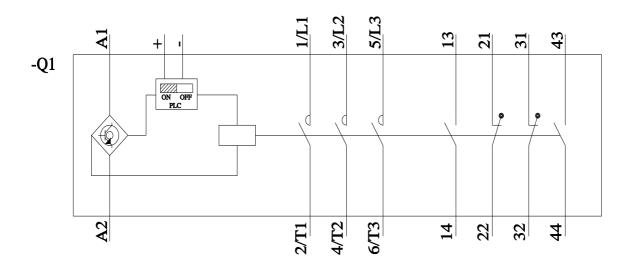
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1276-6NF36&objecttype=14&gridview=view1









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