SIEMENS

Data sheet 3RT1266-6NP36



vacuum contactor AC-3e/AC-3 300 A, 160 kW / 400 V, 3-pole, Uc: 200-277 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	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 	42 W
 at AC in hot operating state per pole 	14 W
 without load current share typical 	3.4 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)	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	330 A	
• at AC-1		
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	330 A	
— up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ rated value	300 A	
— up to 1000 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	330 A	
— up to 1000 V at ambient temperature 60 °C rated value	300 A	
• at AC-3		
— at 400 V rated value	300 A	
— at 500 V rated value	300 A	
— at 690 V rated value	300 A	
— at 1000 V rated value	300 A	
• at AC-3e		
— at 400 V rated value	300 A	
— at 500 V rated value	300 A	
— at 690 V rated value	300 A	
— at 1000 V rated value	300 A	
 at AC-4 at 400 V rated value 	280 A	
• at AC-6a		
 up to 230 V for current peak value n=20 rated value 	300 A	
 up to 400 V for current peak value n=20 rated value 	300 A	
 up to 500 V for current peak value n=20 rated value 	300 A	
 up to 690 V for current peak value n=20 rated value 	300 A	
— up to 1000 V for current peak value n=20 rated value	300 A	
• at AC-6a	200 A	
— up to 230 V for current peak value n=30 rated value	209 A	
— up to 400 V for current peak value n=30 rated value	209 A	
— up to 500 V for current peak value n=30 rated value	209 A	
 up to 690 V for current peak value n=30 rated value up to 1000 V for current peak value n=30 rated value 	209 A 209 A	
ninimum cross-section in main circuit at maximum AC-1 rated ratue	185 mm²	
operational current for approx. 200000 operating cycles at AC-4		
• at 400 V rated value	140 A	
at 690 V rated value	140 A	
perating power		
• at AC-3		
— at 230 V rated value	90 kW	
— at 400 V rated value	160 kW	
— at 500 V rated value	200 kW	
— at 690 V rated value	250 kW	
— at 1000 V rated value	400 kW	
• at AC-3e		
— at 230 V rated value	90 kW	
— at 400 V rated value	160 kW	
— at 500 V rated value	200 kW	
— at 690 V rated value	250 kW	
— at 1000 V rated value	400 kW	
operating power for approx. 200000 operating cycles at AC-		

• at 400 V rated value	79 kW
• at 690 V rated value	138 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	120 000 kVA
• up to 400 V for current peak value n=20 rated value	200 000 VA
• up to 500 V for current peak value n=20 rated value	260 000 VA
 up to 690 V for current peak value n=20 rated value 	350 000 VA
 up to 1000 V for current peak value n=20 rated value 	520 000 VA
operating apparent power at AC-6a	
up to 230 V for current peak value n=30 rated value	80 000 VA
 up to 400 V for current peak value n=30 rated value 	140 000 VA
• up to 500 V for current peak value n=30 rated value	180 000 VA
• up to 690 V for current peak value n=30 rated value	250 000 VA
• up to 1000 V for current peak value n=30 rated value	360 000 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	750 1/h
at AC-1 maximum at AC-2 maximum	250 1/h
• at AC-2 maximum • at AC-3 maximum	750 1/h
at AC-3 maximum at AC-3e maximum	750 1/h
at AC-3e maximum at AC-4 maximum	250 1/h
Control circuit/ Control	250 1/11
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type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	000 0771/
• at 50 Hz rated value	200 277 V
at 60 Hz rated value	200 277 V
control supply voltage at DC	000 077.1/
rated value	200 277 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	0.0 4.4
• 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 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
design of the surge suppressor	with varistor
apparent pick-up power of magnet coil at AC	
● at 50 Hz	570 VA
• at 60 Hz	570 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	8.5 VA
• at 60 Hz	8.5 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	630 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	
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• 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	- Caspadado		
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	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	302 A		
• at 600 V rated value	289 A		
yielded mechanical performance [hp]			
• for 3-phase AC motor			
— at 200/208 V rated value	100 hp		
— at 220/230 V rated value	125 hp		
— at 460/480 V rated value	250 hp		
— at 575/600 V rated value	300 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: 500 A (690 V, 100 kA), aM: 400 A (690 V, 50 kA), BS88: 450 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	+/-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	210 mm		
width	145 mm		
depth	206 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		
— 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		
solid or stranded	0.5 4 mm²	
finely stranded with core end processing	0.5 2.5 mm²	
type of connectable conductor cross-sections		
for auxiliary contacts		
— 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	
Safety related data		
product function		
 mirror contact according to IEC 60947-4-1 	Yes	
 positively driven operation according to IEC 60947-5-1 	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		
General Product Approval		



Confirmation





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	Functional Safety/Safety of Ma- chinery	Declaration of Conformity	Test Certificates
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Type Examination Cer**tificate**





Type Test Certificates/Test Report

Special Test Certificate

Marine / Shipping

other











Confirmation

other Railway

Confirmation **Miscellaneous** Vibration and Shock **Special Test Certific-**

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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=3RT1266-6NP36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1266-6NP36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1266-6NP36

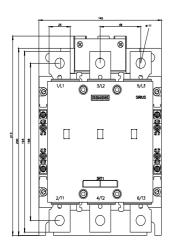
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

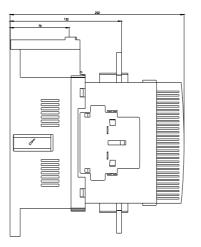
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1266-6NP36&lang=en

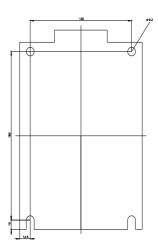
Characteristic: Tripping characteristics, I2t, Let-through current

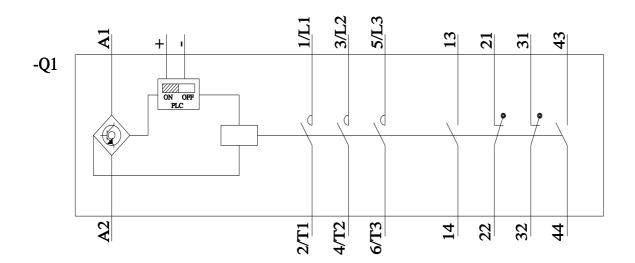
https://support.industry.siemens.com/cs/ww/en/ps/3RT12

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1266-6NP36&objecttype=14&gridview=view1









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