## **SIEMENS**

Data sheet 3RT1266-6AB36



vacuum contactor AC-3e/AC-3 300 A, 160 kW / 400 V, 3-pole, Uc: 23-26 V AC(50-60 Hz) / DC drive: conventional 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	
<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>	42 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	14 W
<ul> <li>without load current share typical</li> </ul>	8.2 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	1 000 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	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
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Lead - 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	
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
<ul> <li>at AC-3 rated value maximum</li> </ul>	1 000 V
at AC-3e rated value maximum	1 000 V
operational current	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	330 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated	330 A
value	
— up to 690 V at ambient temperature 60 °C rated	300 A
value	000 A
<ul> <li>up to 1000 V at ambient temperature 40 °C rated value</li> </ul>	330 A
— up to 1000 V at ambient temperature 60 °C rated	300 A
value	
• 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
<ul> <li>at AC-4 at 400 V rated value</li> </ul>	280 A
• at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	300 A
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	300 A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	300 A
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	300 A
— up to 1000 V for current peak value n=20 rated	300 A
value ● at AC-6a	
— 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	209 A
— up to 1000 V for current peak value n=30 rated	209 A
value	
minimum cross-section in main circuit at maximum AC-1 rated value	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
operating 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 400 V rated value     at 690 V rated value	138 kW
	130 KVV
operating apparent power at AC-6a	400 000 IA/A
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
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	140 000 VA
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	180 000 VA
<ul> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	250 000 VA
<ul> <li>up to 1000 V for current peak value n=30 rated value</li> </ul>	360 000 VA
no-load switching frequency	
• at AC	2 000 1/h
• at DC	2 000 1/h
operating frequency	
at AC-1 maximum	750 1/h
• at AC-2 maximum	250 1/h
at AC-3 maximum	750 1/h
at AC-3e maximum	750 1/h
at AC-4 maximum	250 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	23 26 V
at 60 Hz rated value	23 26 V
control supply voltage at DC rated value	20 20 V
a	23 26 V
operating range factor control supply voltage rated value of	20 20 V
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	
<ul> <li>at minimum rated control supply voltage at AC</li> </ul>	
— at 50 Hz	530 VA
— at 60 Hz	530 VA
<ul> <li>at maximum rated control supply voltage at AC</li> </ul>	
— at 60 Hz	630 VA
— at 50 Hz	630 VA
apparent pick-up power of magnet coil at AC	
• at 50 Hz	590 VA
● at 60 Hz	590 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	6.8 VA
at maximum rated control supply voltage at DC     at maximum rated control supply voltage at DC	8.2 VA
apparent holding power	5.L. 1/1
at minimum rated control supply voltage at AC	6.4.VA
— at 50 Hz	6.1 VA
— at 60 Hz	6.1 VA
at maximum rated control supply voltage at AC	

— at 50 Hz	7.4 VA
— at 50 Hz — at 60 Hz	7.4 VA
inductive power factor with the holding power of the coil	7.4 VA
	0.0
• at 50 Hz	0.9
• at 60 Hz	0.9
closing power of magnet coil at DC	700 W
holding power of magnet coil at DC	8.2 W
closing delay	00 05
• at AC	30 95 ms
• at DC	30 95 ms
opening delay	40 00
• at AC	40 80 ms
• at DC	40 80 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	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	000 4
• at 480 V rated value	302 A
at 600 V rated value	289 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	400 hr
— 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	0.7004/0004/10044
— 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)

nounting position	1/ 22 5° rotation possible on vertical mounting surfaces and he tilts of
mounting position	+/-22,5° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
fastening method	screw fixing
height	210 mm
width	145 mm
depth	206 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
onnections/ 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
type of connectable conductor cross-sections	
for 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	70 240 Hilli
solid or stranded	0.5 4 mm²
finely stranded with core end processing	0.5 2.5 mm <sup>2</sup>
type of connectable conductor cross-sections	0.0 2.0 Hilli
for auxiliary contacts	
— solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), max. 2x (0.75 4 mm²)
solid     solid or stranded	2x (0.5 1.5 milr), 2x (0.75 2.5 milr), max. 2x (0.75 4 milr) 2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), max. 2x (0,75 4 mm²)
	2x (0,5 1,5 milr), 2x (0,75 2,5 milr), max. 2x (0,75 4 milr) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14), 1x 12
AWG number as coded connectable conductor cross section	ZA (20 10), ZA (10 17), 1A 1Z
for auxiliary contacts	18 14
afety related data	
<del>_</del>	
product function  • mirror contact according to IEC 60947.4.1	Vec
mirror contact according to IEC 60947-4-1     positively driven expertion according to IEC 60947-5-1	Yes
positively driven operation according to IEC 60947-5-1  Floating Sefert.	No
Electrical Safety	IDOO IDOO with how to regin - !!
protection class IP on the front according to IEC 60529	IP00; IP20 with box terminal/cover finger-safe, for vertical contact from the front with box terminal/cover
touch protection on the front according to IEC 60529	







Confirmation



<u>KC</u>

General Product Approval

**EMV** 

**Functional Saftey** 

**Test Certificates** 

Marine / Shipping





Type Examination Certificate Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping









Confirmation

other

**Miscellaneous** 

other

Railway

Environment

Confirmation

Special Test Certific-

<u>ate</u>

Environmental Confirmations

## Further information

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=3RT1266-6AB36

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT1266-6AB36}}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1266-6AB36

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

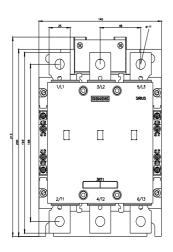
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT1266-6AB36&lang=en

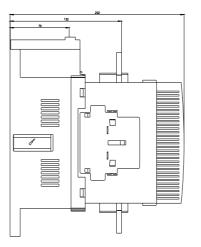
Characteristic: Tripping characteristics, I²t, Let-through current

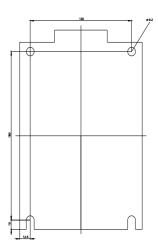
https://support.industry.siemens.com/cs/ww/en/ps/3RT1266-6AB36/char

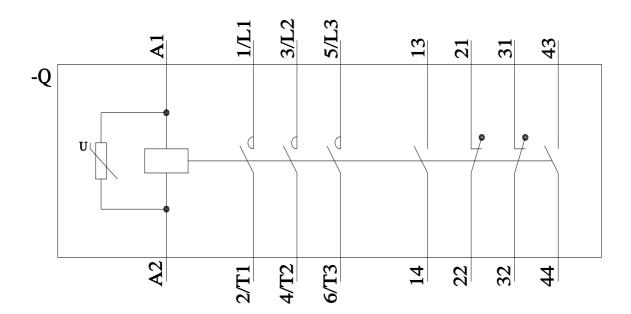
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1266-6AB36&objecttype=14&gridview=view1









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