SIEMENS

Data sheet 3RT1264-6NP36



vacuum contactor AC-3e/AC-3 225 A, 110 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 	27 W
 at AC in hot operating state per pole 	9 W
 without load current share typical 	3.4 W
type of calculation of power loss depending on pole	quadratic
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
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Perfluorobutane sulfonic acid (PFBS) and its salts
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 %
Main 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	330 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	330 A
— up to 690 V at ambient temperature 60 °C rated value	300 A
— up to 1000 V at ambient temperature 40 °C rated value	330 A
— up to 1000 V at ambient temperature 60 °C rated value	300 A
• at AC-3	225 A
— at 400 V rated value	225 A
— at 500 V rated value	225 A
— at 690 V rated value	225 A 225 A
— at 1000 V rated value ● at AC-3e	220 A
— at 400 V rated value	225 A
— at 500 V rated value	225 A
— at 690 V rated value	225 A
— at 1000 V rated value	225 A
at AC-4 at 400 V rated value	195 A
• at AC-6a	10071
— up to 230 V for current peak value n=20 rated value	225 A
— up to 400 V for current peak value n=20 rated value	225 A
— up to 500 V for current peak value n=20 rated value	225 A
— up to 690 V for current peak value n=20 rated value	225 A
— up to 1000 V for current peak value n=20 rated value	225 A
• at AC-6a	000.4
— 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 value	209 A
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	97 A
at 690 V rated value	97 A
operating power	
— at 230 V rated value	55 kW
— at 400 V rated value	110 kW
— at 500 V rated value	160 kW
— at 690 V rated value	200 kW
— at 1000 V rated value	315 kW
• at AC-3e	
— at 230 V rated value	55 kW
— at 400 V rated value	110 kW
— at 500 V rated value	160 kW

— at 690 V rated value	200 kW
— at 1000 V rated value	315 kW
operating power for approx. 200000 operating cycles at AC-	
at 400 V rated value	55 kW
at 690 V rated value	94 kW
operating apparent power at AC-6a	O4 KW
up to 230 V for current peak value n=20 rated value	90 000 kVA
up to 400 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value	150 000 VA
·	
up to 500 V for current peak value n=20 rated value	190 000 VA
up to 690 V for current peak value n=20 rated value	260 000 VA
• up to 1000 V for current peak value n=20 rated value	390 000 VA
operating apparent power at AC-6a	00 000 1/4
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	
• at AC-1 maximum	800 1/h
• at AC-2 maximum	300 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	200 277 V
• at 60 Hz rated value	200 277 V
control supply voltage at DC 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	
● 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	
 at minimum rated control supply voltage at AC 	
— at 50 Hz	420 VA
— at 60 Hz	420 VA
 at maximum rated control supply voltage at AC 	
— at 60 Hz	570 VA
— at 50 Hz	570 VA
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	

 at minimum rated control supply voltage at DC 	2.8 VA
at maximum rated control supply voltage at DC	3.4 VA
apparent holding power	
 at minimum rated control supply voltage at AC 	
— at 50 Hz	5.5 VA
— at 60 Hz	5.5 VA
 at maximum rated control supply voltage 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	0.5
● 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	
• at AC	80 100 ms
• at DC	80 100 ms
arcing time	10 15 ms
control version of the switch operating mechanism	PLC-IN or Standard A1 - A2 (adjustable)
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	
• at 480 V rated value	180 A
at 600 V rated value	192 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	
— at 200/208 V rated value	60 hp
— at 220/230 V rated value	75 hp
— at 460/480 V rated value	150 hp
— at 460/460 V rated value	200 hp
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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
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	20
— forwards	20 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
• for live parts	20
— forwards	20 mm
— upwards	10 mm
downwards at the side	10 mm
Connections/ Terminals	10 mm
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 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	
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
AMO	
AWG number as coded connectable conductor cross section	
	18 14
section	18 14
section • for auxiliary contacts	18 14
section • for auxiliary contacts Safety related data	18 14 Yes
section • for auxiliary contacts Safety related data product function	

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

Approvals Certificates

General Product Approval



Confirmation







<u>KC</u>

General Product Approval

EMV

Functional Saftey

Test Certificates

Marine / Shipping





Type Examination Certificate

Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping









Confirmation

other

Confirmation

other

Railway

Environment

Miscellaneous

Special Test Certificate

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=3RT1264-6NP36

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT1264-6NP36}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1264-6NP36

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

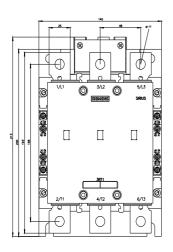
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1264-6NP36&lang=en

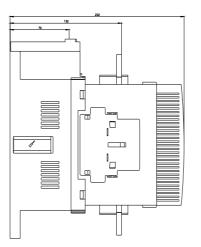
Characteristic: Tripping characteristics, I2t, Let-through current

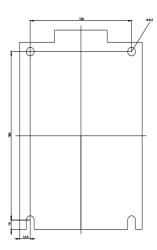
 $\underline{\text{https://support.industry.siemens.com/cs/ww/en/ps/3RT1264-6NP36/char}}$

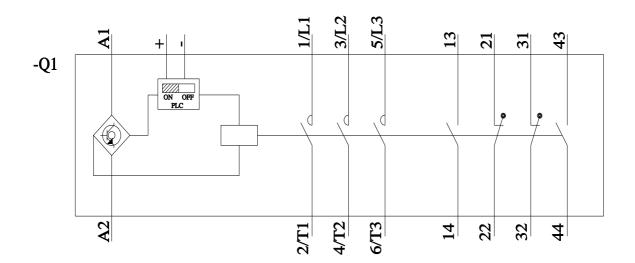
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1264-6NP36&objecttype=14&gridview=view1









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