SIEMENS

3RT1275-6NP36 **Data sheet**



vacuum contactor, AC-3 400 A, 200 kW / 400 V AC (50-60 Hz) / DC operation 200-277 V AC/DC auxiliary contacts 2 NO + 2 NC 3-pole, frame size S12 busbar connections drive: electronic with SPS interface DV 24 V

product brand name	SIRIUS
product designation	Vacuum contactor
product type designation	3RT12
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 	63 W
 at AC in hot operating state per pole 	21 W
 without load current share typical 	3.6 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 safe isolation 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 (switching 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 %
lain circuit	
	3
number of poles for main current circuit number of NO contacts for main contacts	3
	3
operating voltage	1 000 V
at AC-3 rated value maximum	
at AC-3e rated value maximum	1 000 V
operational current	610 A
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	010 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C	610 A
rated value	
— up to 690 V at ambient temperature 60 °C	550 A
rated value	
— up to 1000 V at ambient temperature 40 °C	610 A
rated value	7.70 A
— up to 1000 V at ambient temperature 60 °C rated value	550 A
• at AC-3	
at AC-3 — at 400 V rated value	400 A
— at 400 V rated value — at 500 V rated value	400 A 400 A
— at 500 V rated value — at 690 V rated value	400 A 400 A
— at 1000 V rated value	400 A
• at AC-3e	400 A
— at 400 V rated value	400 A
— at 500 V rated value	400 A
— at 690 V rated value	400 A
— at 1000 V rated value	400 A
at AC-4 at 400 V rated value	350 A
• at AC-6a	
 up to 230 V for current peak value n=20 rated value 	400 A
	400 A
 up to 400 V for current peak value n=20 rated value 	400 A
— up to 500 V for current peak value n=20 rated	400 A
value	
— up to 690 V for current peak value n=20 rated	400 A
value	
— up to 1000 V for current peak value n=20 rated	400 A
value	
• 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	293 A
value	2007.
— up to 500 V for current peak value n=30 rated	293 A
value	
 up to 690 V for current peak value n=30 rated 	293 A
value	
— up to 1000 V for current peak value n=30 rated	293 A
value	270 mm²
minimum cross-section in main circuit at maximum AC-1 rated value	370 mm²
operational current for approx. 200000 operating	
cycles at AC-4	
at 400 V rated value	175 A
at 690 V rated value	175 A
operating power	
• at AC-3	
— at 230 V rated value	132 kW

— at 500 V rated value	250 kW
— at 690 V rated value	400 kW
— at 1000 V rated value	560 kW
• at AC-3e	
— at 230 V rated value	132 kW
— at 400 V rated value	200 kW
— at 500 V rated value	250 kW
— at 690 V rated value	400 kW
— at 1000 V rated value	560 kW
operating power for approx. 200000 operating cycles at AC-4	
 at 400 V rated value 	98 kW
 at 690 V rated value 	172 kW
operating apparent power at AC-6a	
 up to 230 V for current peak value n=20 rated value 	150 000 kVA
 up to 400 V for current peak value n=20 rated value 	270 000 VA
 up to 500 V for current peak value n=20 rated value 	340 000 VA
 up to 690 V for current peak value n=20 rated value 	470 000 VA
• up to 1000 V for current peak value n=20 rated	690 000 VA
value	
operating apparent power at AC-6a	
up to 230 V for current peak value n=30 rated value	110 000 VA
 up to 400 V for current peak value n=30 rated value 	200 000 VA
 up to 500 V for current peak value n=30 rated value 	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	500 000 VA
value	
no-load switching frequency	
• at AC	1 000 1/h
• at DC	1 000 1/h
operating frequency	
at AC-1 maximum	700 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	Norbo
• at 50 Hz rated value	200 277 V
at 60 Hz rated value	200 277 V
	200 211 V
control supply voltage at DC • rated value	200 277 V
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
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 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	5.6 VA
● at 60 Hz	5.6 VA
inductive power factor with the holding power of the	
coil	0.0
• at 50 Hz	0.8
• at 60 Hz	0.8 800 W
closing power of magnet coil at DC	3.6 W
holding power of magnet coil at DC	3.0 W
closing delay • at AC	60 90 ms
• at DC	60 90 ms
opening delay	00 90 ms
• 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	1. 20 of otalidard 711 712 (adjustable)
	2
number of NC contacts for auxiliary contacts instantaneous contact	4
number of NO contacts for auxiliary contacts	2
instantaneous contact	10.4
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 at 500 V rated value	2 A
at 690 V rated value at 690 V rated value	1 A
operational current at DC-12	10
• 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	0.1071
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	361 A
• at 600 V rated value	382 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	
— at 200/208 V rated value	125 hp
— at 220/230 V rated value	150 hp
— at 460/480 V rated value	300 hp
— at 575/600 V rated value	400 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

— with type of assignment 2 required

• for short-circuit protection of the auxiliary switch required

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)

gG: 10 A (500 V, 1 kA)

required	
nstallation/ 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	214 mm
width	160 mm
depth	225 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
type of connectable conductor cross-sections	
at AWG cables for main contacts	2/0 500 kcmil
connectable conductor cross-section for main	270 500 KGHIII
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)
at 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	

 mirror contact according to IEC 60947-4-1 positively driven operation according to IEC 60947-5-1 	Yes No
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

EMC



Confirmation









Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates

Marine / Shipping

Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping





Confirmation

other

Miscellaneous

Confirmation

Railway

Special Test Certificate

Further information

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=3RT1275-6NP36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1275-6NP36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1275-6NP36

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

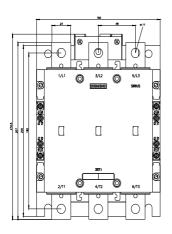
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1275-6NP36\&lang=en}}$

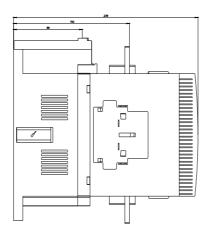
Characteristic: Tripping characteristics, I2t, Let-through current

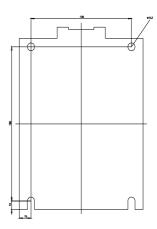
https://support.industry.siemens.com/cs/ww/en/ps/3RT1275-6NP36/char

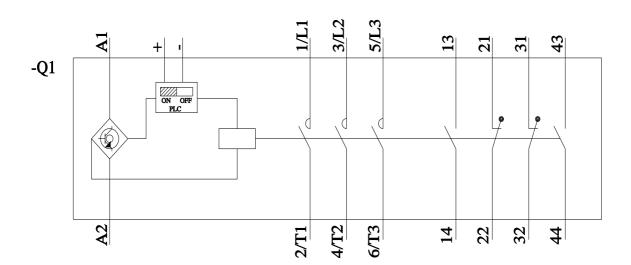
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1275-6NP36&objecttype=14&gridview=view1









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