



Vacuum contactor, AC-3 500 A, 250 kW / 400 V AC (50-60 Hz) / DC operation 110-127 V UC Auxiliary contacts 2 NO + 2 NC 3-pole, Size S12 Busbar connections Drive: conventional

product brand name	SIRIUS
product designation	Vacuum contactor
product type designation	3RT12
General technical data	
size of contactor	S12
product extension	
<ul style="list-style-type: none"> function module for communication auxiliary switch 	<p>No</p> <p>Yes</p>
power loss [W] for rated value of the current at AC in hot operating state	96 W
<ul style="list-style-type: none"> per pole 	32 W
power loss [W] for rated value of the current without load current share typical	10 W
surge voltage resistance	
<ul style="list-style-type: none"> of main circuit rated value of auxiliary circuit rated value 	<p>8 kV</p> <p>6 kV</p>
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	690 V
shock resistance at rectangular impulse	
<ul style="list-style-type: none"> at AC at DC 	<p>8,5g / 5 ms, 4,2g / 10 ms</p> <p>8,5g / 5 ms, 4,2g / 10 ms</p>
shock resistance with sine pulse	
<ul style="list-style-type: none"> at AC at DC 	<p>13,4g / 5 ms, 6,5g / 10 ms</p> <p>13,4g / 5 ms, 6,5g / 10 ms</p>
mechanical service life (switching cycles)	
<ul style="list-style-type: none"> of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical 	<p>10 000 000</p> <p>5 000 000</p> <p>10 000 000</p>
reference code acc. to IEC 81346-2	Q
Substance Prohibition (Date)	01.05.2012 00:00:00
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul style="list-style-type: none"> during operation during storage 	<p>-25 ... +60 °C</p> <p>-55 ... +80 °C</p>
relative humidity minimum	10 %
relative humidity at 55 °C acc. 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
operational current	
<ul style="list-style-type: none"> ● at AC-1 at 400 V at ambient temperature 40 °C rated value 	610 A
<ul style="list-style-type: none"> ● at AC-1 <ul style="list-style-type: none"> — up to 690 V at ambient temperature 40 °C rated value 	610 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — up to 690 V at ambient temperature 60 °C rated value 	550 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — up to 1000 V at ambient temperature 40 °C rated value 	610 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — up to 1000 V at ambient temperature 60 °C rated value 	550 A
<ul style="list-style-type: none"> ● at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	500 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 500 V rated value 	500 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 690 V rated value 	500 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 1000 V rated value 	500 A
<ul style="list-style-type: none"> ● at AC-4 at 400 V rated value 	430 A
<ul style="list-style-type: none"> ● at AC-6a <ul style="list-style-type: none"> — up to 230 V for current peak value n=20 rated value 	439 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — up to 400 V for current peak value n=20 rated value 	439 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — up to 500 V for current peak value n=20 rated value 	439 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — up to 690 V for current peak value n=20 rated value 	439 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — up to 1000 V for current peak value n=20 rated value 	439 A
<ul style="list-style-type: none"> ● at AC-6a <ul style="list-style-type: none"> — up to 230 V for current peak value n=30 rated value 	293 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — up to 400 V for current peak value n=30 rated value 	293 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — up to 500 V for current peak value n=30 rated value 	293 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — up to 690 V for current peak value n=30 rated value 	293 A
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — up to 1000 V for current peak value n=30 rated value 	293 A
minimum cross-section in main circuit at maximum AC-1 rated value	370 mm ²
operational current for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> ● at 400 V rated value 	215 A
<ul style="list-style-type: none"> ● at 690 V rated value 	215 A
operating power	
<ul style="list-style-type: none"> ● at AC-3 <ul style="list-style-type: none"> — at 230 V rated value 	160 kW
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 400 V rated value 	250 kW
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 500 V rated value 	355 kW
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 690 V rated value 	500 kW
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 1000 V rated value 	710 kW
operating power for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> ● at 400 V rated value 	122 kW
<ul style="list-style-type: none"> ● at 690 V rated value 	212 kW
operating apparent power at AC-6a	
<ul style="list-style-type: none"> ● up to 230 V for current peak value n=20 rated value 	170 000 kV·A
<ul style="list-style-type: none"> ● up to 400 V for current peak value n=20 rated value 	300 000 V·A
<ul style="list-style-type: none"> ● up to 500 V for current peak value n=20 rated value 	380 000 V·A

<ul style="list-style-type: none"> • up to 690 V for current peak value n=20 rated value • up to 1000 V for current peak value n=20 rated value 	520 000 V·A 760 000 V·A
operating apparent power at AC-6a <ul style="list-style-type: none"> • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 1000 V for current peak value n=30 rated value 	110 000 V·A 200 000 V·A 250 000 V·A 350 000 V·A 500 000 V·A
no-load switching frequency <ul style="list-style-type: none"> • at AC • at DC 	2 000 1/h 2 000 1/h
operating frequency <ul style="list-style-type: none"> • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum 	700 1/h 250 1/h 750 1/h 250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC <ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value 	110 ... 127 V 110 ... 127 V
control supply voltage at DC <ul style="list-style-type: none"> • rated value 	110 ... 127 V
operating range factor control supply voltage rated value of magnet coil at DC <ul style="list-style-type: none"> • initial value • full-scale value 	0.8 1.1
operating range factor control supply voltage rated value of magnet coil at AC <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.8 ... 1.1 0.8 ... 1.1
design of the surge suppressor	with varistor
apparent pick-up power of magnet coil at AC <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	830 V·A 830 V·A
inductive power factor with closing power of the coil <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.9 0.9
apparent holding power of magnet coil at AC <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	9.2 V·A 9.2 V·A
inductive power factor with the holding power of the coil <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.9 0.9
closing power of magnet coil at DC	920 W
holding power of magnet coil at DC	10 W
closing delay <ul style="list-style-type: none"> • at AC • at DC 	45 ... 100 ms 45 ... 100 ms
opening delay <ul style="list-style-type: none"> • at AC • at DC 	60 ... 100 ms 60 ... 100 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	2

instantaneous contact	
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	477 A
• at 600 V rated value	472 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	
— 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	
— with type of coordination 1 required	gG: 800 A (690 V, 100 kA)
— with type of assignment 2 required	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	
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

width of connection bar	25 mm
thickness of connection bar	6 mm
diameter of holes	11 mm
number of holes	1
type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil 	Connection bar screw-type terminals Screw-type terminals Screw-type terminals
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • at AWG cables for main contacts 	2/0 ... 500 kcmil
connectable conductor cross-section for main contacts	
<ul style="list-style-type: none"> • stranded 	70 ... 240 mm ²
connectable conductor cross-section for auxiliary contacts	
<ul style="list-style-type: none"> • solid or stranded • finely stranded with core end processing 	0.5 ... 4 mm ² 0.5 ... 2.5 mm ²
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts 	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), max. 2x (0.75 ... 4 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), max. 2x (0.75 ... 4 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 1x 12
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> • for auxiliary contacts 	18 ... 14

Safety related data

product function mirror contact acc. to IEC 60947-4-1	Yes
product function positively driven operation acc. to IEC 60947-5-1	No
protection class IP on the front acc. to IEC 60529	IP00; IP20 with box terminal/cover
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front with box terminal/cover
suitability for use	
<ul style="list-style-type: none"> • safety-related switching OFF 	Yes

Certificates/ approvals

General Product Approval	EMC	Functional Safety/Safety of Machinery
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[Type Examination Certificate](#)

Declaration of Conformity	Test Certificates	Marine / Shipping
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[UK Declaration of Conformity](#)



EG-Konf.

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



RMRS

[Confirmation](#)[Confirmation](#)[Miscellaneous](#)[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=3RT1276-6AF36>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1276-6AF36>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1276-6AF36>

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

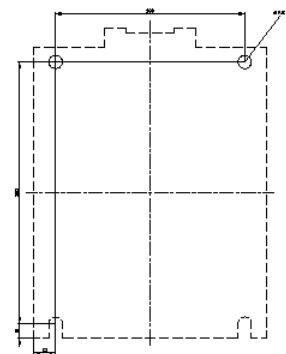
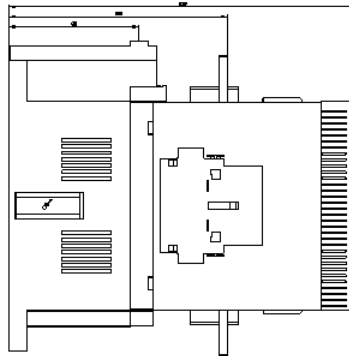
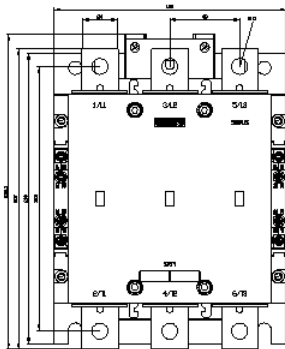
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1276-6AF36&lang=en

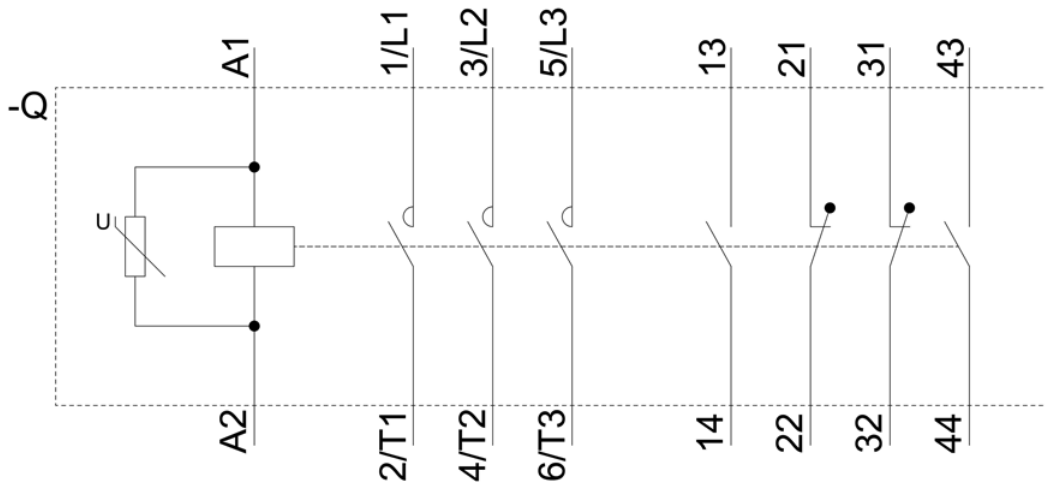
Characteristic: Tripping characteristics, I^t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1276-6AF36/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1276-6AF36&objecttype=14&gridview=view1>





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