

Vacuum contactor, AC-3 225 A, 110 kW / 400 V AC (50-60 Hz) / DC operation 220-240 V UC, Auxiliary contacts 2 NO + 2 NC, 3-pole, Size S10, busbar connections Drive: conventional Customer-specific device



Figure similar

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
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 acc. to EN 60947-1	690 V
Protection class IP	
• on the front	IP00; IP20 on the front with cover / box terminal
• of the terminal	IP00

Shock resistance at rectangular impulse	
<ul style="list-style-type: none"> • at AC • at DC 	8,5g / 5 ms, 4,2g / 10 ms 8,5g / 5 ms, 4,2g / 10 ms
Shock resistance with sine pulse	
<ul style="list-style-type: none"> • at AC • at DC 	13,4g / 5 ms, 6,5g / 10 ms 13,4g / 5 ms, 6,5g / 10 ms
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • of contactor typical • of the contactor with added electronics-compatible auxiliary switch block typical • of the contactor with added auxiliary switch block typical 	10 000 000 5 000 000 10 000 000
Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	K
Reference code acc. to DIN EN 81346-2	Q

Ambient conditions

Installation altitude at height above sea level	
<ul style="list-style-type: none"> • maximum 	2 000 m
Ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage 	-25 ... +60 °C -55 ... +80 °C

Main circuit

Number of poles for main current circuit	3
Number of NO contacts for main contacts	3
Operating voltage	
<ul style="list-style-type: none"> • at AC-3 rated value maximum 	1 000 V
Operating current	
<ul style="list-style-type: none"> • at AC-1 at 400 V <ul style="list-style-type: none"> — at ambient temperature 40 °C rated value • at AC-1 <ul style="list-style-type: none"> — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 1000 V at ambient temperature 40 °C rated value — up to 1000 V at ambient temperature 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value — at 500 V rated value 	330 A 330 A 300 A 330 A 300 A 225 A 225 A 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	
— up to 230 V for current peak value n=20 rated value	278 A
— up to 400 V for current peak value n=20 rated value	278 A
— up to 500 V for current peak value n=20 rated value	278 A
— up to 690 V for current peak value n=20 rated value	278 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	185 A
— up to 400 V for current peak value n=30 rated value	185 A
— up to 500 V for current peak value n=30 rated value	185 A
— up to 690 V for current peak value n=30 rated value	185 A
Minimum cross-section in main circuit	
• at maximum AC-1 rated value	185 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	97 A
• at 690 V rated value	68 A
Operating power	
• at AC-1	
— at 230 V at 60 °C rated value	113 kW
— at 400 V rated value	197 kW
— at 400 V at 60 °C rated value	300 kW
— at 690 V rated value	340 kW
— at 690 V at 60 °C rated value	340 kW
— at 1000 V at 60 °C rated value	492 kW
• at AC-2 at 400 V rated value	110 kW
• at AC-3	
— 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-4	
<ul style="list-style-type: none"> • at 400 V rated value • at 690 V rated value 	<p>55 kW</p> <p>94 kW</p>
Thermal short-time current limited to 10 s	1 800 A
No-load switching frequency	
<ul style="list-style-type: none"> • at AC • at DC 	<p>2 000 1/h</p> <p>2 000 1/h</p>
Operating frequency	
<ul style="list-style-type: none"> • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum 	<p>800 1/h</p> <p>300 1/h</p> <p>750 1/h</p> <p>250 1/h</p>

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 	<p>220 ... 240 V</p> <p>220 ... 240 V</p>
Control supply voltage at DC	
<ul style="list-style-type: none"> • rated value 	220 ... 240 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 	<p>0.8</p> <p>1.1</p>
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 	<p>0.8 ... 1.1</p> <p>0.8 ... 1.1</p>
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 	590 V·A
Inductive power factor with closing power of the coil	
<ul style="list-style-type: none"> • at 50 Hz 	0.9
Apparent holding power of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz 	6.1 V·A
Inductive power factor with the holding power of the coil	
<ul style="list-style-type: none"> • at 50 Hz 	0.9
Closing power of magnet coil at DC	700 W
Holding power of magnet coil at DC	8.2 W
Closing delay	
<ul style="list-style-type: none"> • at AC 	30 ... 95 ms

• at DC	30 ... 95 ms
Opening delay	
• 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
Operating current at AC-12 maximum	10 A
Operating 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
Operating 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
Operating 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 three-phase AC motor	
• at 480 V rated value	180 A
• at 600 V rated value	192 A
Yielded mechanical performance [hp]	
• for three-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 575/600 V rated value	200 hp
Contact rating of auxiliary contacts according to UL	A600 / Q600

Short-circuit protection

Design of the fuse link	
<ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required 	gG: 500 A (690 V, 100 kA) gG: 500 A (690 V, 100 kA), aM: 400 A (690 V, 50 kA), BS88: 450 A (415 V, 50 kA) 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
Mounting type	screw fixing
<ul style="list-style-type: none"> • Side-by-side mounting 	Yes
Height	210 mm
Width	145 mm
Depth	206 mm
Required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — upwards — downwards — at the side 	20 mm 10 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 20 mm 10 mm 10 mm 10 mm

Connections/ Terminals




Type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit 	Connection bar screw-type terminals

<ul style="list-style-type: none"> • at contactor for auxiliary contacts • of magnet coil 	<p>Screw-type terminals</p> <p>Screw-type terminals</p>
Type of connectable conductor cross-sections <ul style="list-style-type: none"> • at AWG conductors 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"> • single or multi-stranded • finely stranded with core end processing 	<p>0.5 ... 4 mm²</p> <p>0.5 ... 2.5 mm²</p>
Type of connectable conductor cross-sections <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts 	<p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)</p> <p>2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), max. 2x (0,75 ... 4 mm²)</p> <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14), 1x 12</p>
AWG number as coded connectable conductor cross section <ul style="list-style-type: none"> • for auxiliary contacts 	18 ... 14

Safety related data

Product function <ul style="list-style-type: none"> • Mirror contact acc. to IEC 60947-4-1 • positively driven operation acc. to IEC 60947-5-1 	<p>Yes</p> <p>No</p>
Protection against electrical shock	finger-safe when touched vertically from front acc. to IEC 60529

Certificates/ approvals

General Product Approval	EMC	Functional Safety/Safety of Machinery	Test Certificates	other
 CCC		 RCM	Type Examination Certificate	Special Test Certificate
				Confirmation

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1264-6AP36-0KA1>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1264-6AP36-0KA1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1264-6AP36-0KA1>

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

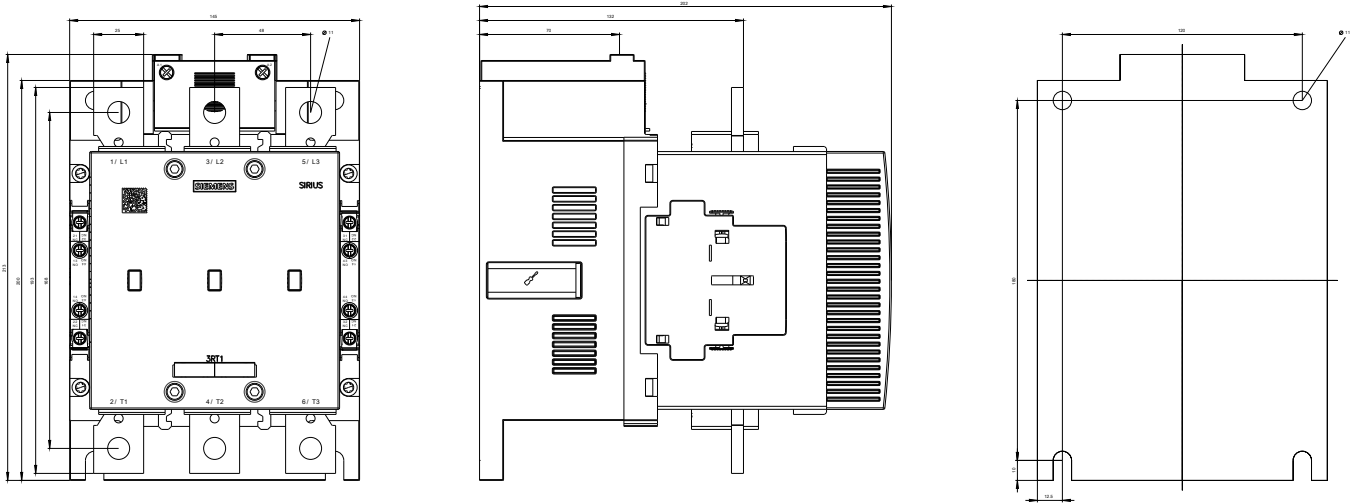
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1264-6AP36-0KA1&lang=en

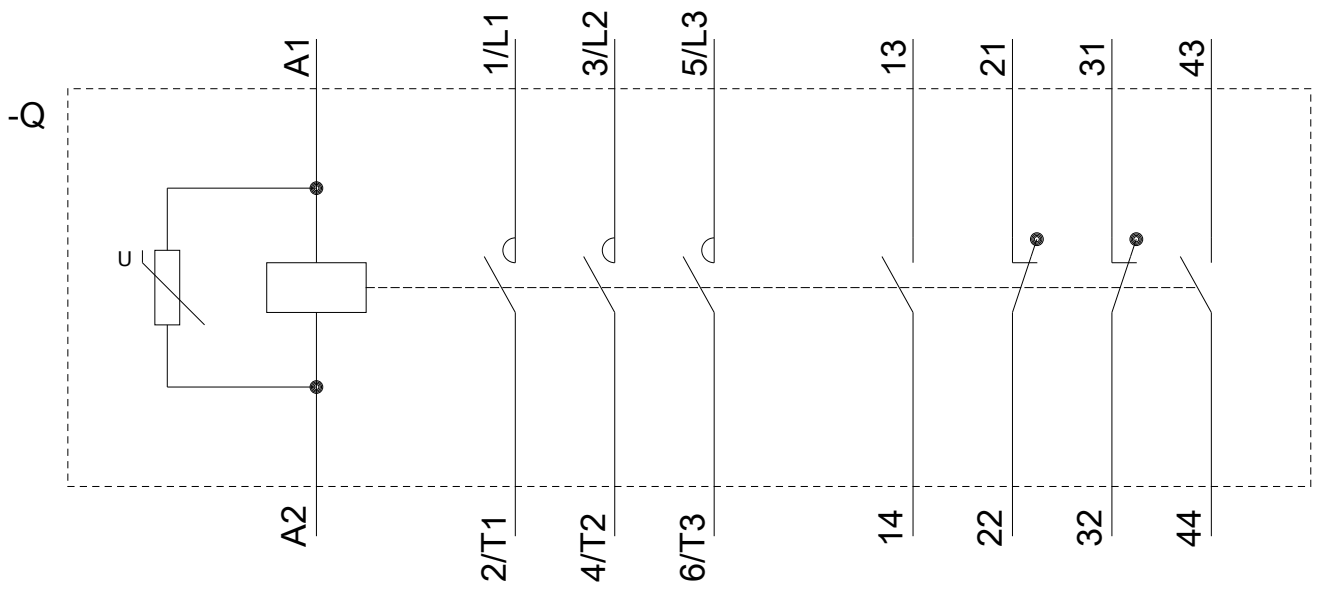
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1264-6AP36-0KA1/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1264-6AP36-0KA1&objecttype=14&gridview=view1>





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