SIEMENS

Data sheet 3RT1064-6AP36



Power 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 screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT1
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	51 W
• per pole	17 W
power loss [W] for rated value of the current without load current share typical	7.4 W
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
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 acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.05.2012
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 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	
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	275 A
• at AC-1	
 up to 690 V at ambient temperature 40 °C rated value 	275 A
 up to 690 V at ambient temperature 60 °C rated value 	250 A
 — up to 1000 V at ambient temperature 40 °C rated value 	100 A
— up to 1000 V at ambient temperature 60 °C rated value• at AC-3	100 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	68 A
• at AC-4 at 400 V rated value	195 A
at AC-5a up to 690 V rated value	242 A
at AC-5b up to 400 V rated value	186 A
• at AC-6a	
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	68 A
• at AC-6a	470 A
— up to 230 V for current peak value n=30 rated value	172 A
 up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated 	172 A
value — up to 690 V for current peak value n=30 rated — up to 690 V for current peak value n=30 rated	172 A
value — up to 1000 V for current peak value n=30 rated	68 A
value	
minimum cross-section in main circuit at maximum AC-1 rated value	150 mm²
operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value	96 A
at 690 V rated value	85 A
operating power	
• at AC-3	EE IAM
— 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 operating power for approx. 200000 operating cycles at AC-4	90 kW
	54 kW
at 600 V rated value at 600 V rated value	
at 690 V rated value	82 kW
operating apparent power at AC-6a	00 000 11/4 A
• up to 230 V for current peak value n=20 rated value	90 000 kV·A

 up to 400 V for current peak value n=20 rated value 	150 000 V·A
 up to 500 V for current peak value n=20 rated value 	190 000 V·A
 up to 690 V for current peak value n=20 rated value 	260 000 V·A
 up to 1000 V for current peak value n=20 rated 	110 000 V·A
value	
operating apparent power at AC-6a	00.000.17.4
• up to 230 V for current peak value n=30 rated value	60 000 V·A
• up to 400 V for current peak value n=30 rated value	110 000 V·A
• up to 500 V for current peak value n=30 rated value	140 000 V·A
• up to 690 V for current peak value n=30 rated value	200 000 V·A 110 000 V·A
 up to 1000 V for current peak value n=30 rated value 	110 000 V·A
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	4 000 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	2 807 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	2 082 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	1 397 A; Use minimum cross-section acc. to AC-1 rated value
limited to 60 s switching at zero current maximum	1 144 A; Use minimum cross-section acc. to AC-1 rated value
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	500 1/h
• at AC-4 maximum	130 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	000 040 V
at 50 Hz rated value at 60 Hz rated value	220 240 V 220 240 V
a at hit HZ rated Valle	77H 74H V
	220 240 V
control supply voltage at DC	
control supply voltage at DC • rated value	220 240 V
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC	220 240 V
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value	220 240 V 0.8
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC	220 240 V
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated	220 240 V 0.8
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC	220 240 V 0.8 1.1
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz	220 240 V 0.8 1.1 0.8 1.1
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz • at 50 Hz • at 50 Hz • at 50 Hz • at 60 Hz	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz • at 50 Hz • at 60 Hz • at 60 Hz inductive power factor with closing power of the coil	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A 0.9 0.9
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A 0.9 0.9 0.9
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A 0.9 0.9
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A 0.9 0.9 6.7 V·A 6.7 V·A
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A 0.9 0.9 6.7 V·A 6.7 V·A
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A 0.9 0.9 6.7 V·A 6.7 V·A 0.9 0.9
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A 0.9 0.9 6.7 V·A 6.7 V·A 0.9 0.9 0.9
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz closing power of magnet coil at DC holding power of magnet coil at DC	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A 0.9 0.9 6.7 V·A 6.7 V·A 0.9 0.9
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz closing power of magnet coil at DC holding power of magnet coil at DC closing delay	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A 0.9 0.9 6.7 V·A 6.7 V·A 0.9 0.9 650 W 7.4 W
control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz closing power of magnet coil at DC holding power of magnet coil at DC	220 240 V 0.8 1.1 0.8 1.1 0.8 1.1 with varistor 590 V·A 590 V·A 0.9 0.9 6.7 V·A 6.7 V·A 0.9 0.9 0.9

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	
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 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		
 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: 400 A (690 V, 100 kA), aM: 315 A (690 V, 50 kA), BS88: 400 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	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back	
fastening method	screw fixing	
side-by-side mounting	Yes	
height	210 mm	
width	145 mm	
depth	202 mm	
required spacing		
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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	
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
type of connectable conductor cross-sections	
at 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 mm ²
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
Safety related data	
B10 value with high demand rate acc. to SN 31920	1 000 000
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	
 safety-related switching OFF 	Yes
Certificates/ approvals	
General Product Approval	

General Product Approval



Confirmation





<u>KC</u>



EMC Safety/Safety of Declaration of Conformity Test Cerember 1	ificates
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Type Examination Certificate



UK Declaration of Conformity

Special Test Certificate

Type Test Certificates/Test Report

Test Certificates

Marine / Shipping

other

Miscellaneous









Miscellaneous

other

Railway

Confirmation

Confirmation

Miscellaneous

Special Test Certific-

<u>ate</u>

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=3RT1064-6AP36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1064-6AP36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1064-6AP36

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

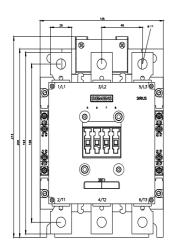
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1064-6AP36&lang=en

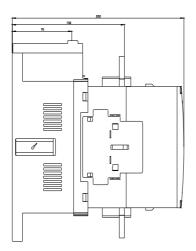
Characteristic: Tripping characteristics, I2t, Let-through current

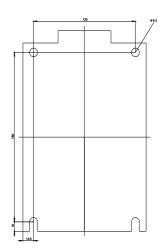
https://support.industry.siemens.com/cs/ww/en/ps/3RT1064-6AP36/char

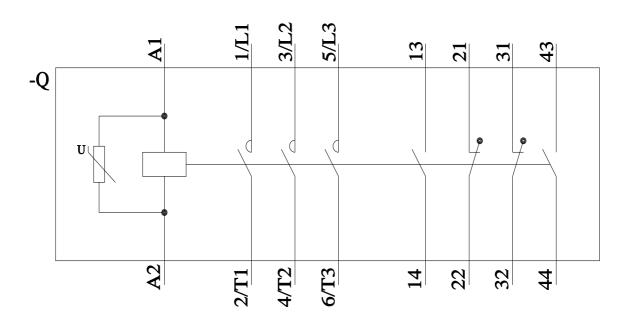
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1064-6AP36&objecttype=14&gridview=view1









last modified: 10/27/2021 🖸