SIEMENS

Data sheet

3RT1076-6AB36



Power contactor, AC-3 500 A, 250 kW / 400 V AC (50-60 Hz) / DC 23-26 V UC Auxiliary contacts 2 NO + 2 NC 3-pole, size S12 Busbar connections Operating mechanism: conventional screw terminals

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT1
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	165 W
• per pole	55 W
power loss [W] for rated value of the current without load current share typical	10 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
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
 ambient temperature during operation 	-25 +60 °C
ambient temperature during storage	-55 +80 °C
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3



	4 000 1/
operating voltage at AC-3 rated value maximum	1 000 V
operational current	240.4
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	610 A
• at AC-1	
 at AC-1 — up to 690 V at ambient temperature 40 °C 	610 A
rated value	010 A
— up to 690 V at ambient temperature 60 °C rated value	550 A
— up to 1000 V at ambient temperature 40 °C rated value	200 A
 — up to 1000 V at ambient temperature 60 °C rated value 	200 A
• at AC-3	
— at 400 V rated value	500 A
— at 500 V rated value	500 A
— at 690 V rated value	450 A
— at 1000 V rated value	180 A
 at AC-4 at 400 V rated value 	430 A
• at AC-5a up to 690 V rated value	536 A
• at AC-5b up to 400 V rated value	415 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	414 A
 up to 400 V for current peak value n=20 rated value 	414 A
 — up to 500 V for current peak value n=20 rated value 	414 A
 — up to 690 V for current peak value n=20 rated value 	414 A
 — up to 1000 V for current peak value n=20 rated value 	180 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	276 A
— up to 400 V for current peak value n=30 rated value	276 A
— up to 500 V for current peak value n=30 rated value	276 A
— up to 690 V for current peak value n=30 rated value	276 A
— up to 1000 V for current peak value n=30 rated value	180 A
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	150 A
operational current	
 at 1 current path at DC-1 	
— at 24 V rated value	400 A
— at 110 V rated value	33 A
— at 220 V rated value	3.8 A
— at 440 V rated value	0.9 A
— at 600 V rated value	0.6 A
 with 2 current paths in series at DC-1 	
— at 24 V rated value	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 A
— at 440 V rated value	4 A
— at 600 V rated value	2 A

 with 3 current paths in series at DC-1 	
— at 24 V rated value	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 A
— at 440 V rated value	11 A
— at 600 V rated value	5.2 A
operational current	0.2 A
• at 1 current path at DC-3 at DC-5	
- at 24 V rated value	400 A
— at 110 V rated value	3 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.18 A
— at 600 V rated value	0.125 A
 with 2 current paths in series at DC-3 at DC-5 	0.123 A
- at 24 V rated value	400 A
— at 110 V rated value	400 A
	2.5 A
— at 220 V rated value	
— at 440 V rated value	0.65 A
— at 600 V rated value	0.37 A
• with 3 current paths in series at DC-3 at DC-5	400 A
— at 24 V rated value	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 A
— at 440 V rated value	1.4 A
— at 600 V rated value	0.75 A
operating power	
• at AC-3	
— at 230 V rated value	160 kW
— at 400 V rated value	250 kW
— at 500 V rated value	315 kW
— at 690 V rated value	400 kW
— at 1000 V rated value	250 kW
operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	98 kW
• at 690 V rated value	148 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	160 000 kV·A
• up to 400 V for current peak value n=20 rated value	280 000 V·A
• up to 500 V for current peak value n=20 rated value	350 000 V·A
• up to 690 V for current peak value n=20 rated value	490 000 V·A
 up to 1000 V for current peak value n=20 rated 	310 000 V·A
value	
operating apparent power at AC-6a	
 up to 230 V for current peak value n=30 rated value 	110 000 V·A
 up to 400 V for current peak value n=30 rated value 	190 000 V·A
 up to 500 V for current peak value n=30 rated value 	230 000 V·A
 up to 690 V for current peak value n=30 rated value 	330 000 V·A
 up to 1000 V for current peak value n=30 rated 	310 000 V·A
value	
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	7 484 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	7 484 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	5 978 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	3 765 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	2 887 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	500 1/h
• at AC-2 maximum	170 1/h
• at AC-3 maximum	420 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	
at 50 Hz rated value	23 26 V
at 60 Hz rated value	23 26 V
control supply voltage at DC	
rated value	23 26 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
design of the surge suppressor	with varistor
apparent pick-up power of magnet coil at AC	
• at 50 Hz	830 V·A
inductive power factor with closing power of the coil	
• at 50 Hz	0.9
apparent holding power of magnet coil at AC	
• at 50 Hz	9.2 V·A
inductive power factor with the holding power of the coil	
• at 50 Hz	0.9
closing power of magnet coil at DC	920 W
holding power of magnet coil at DC	10 W
closing delay	
• at AC	45 100 ms
• at DC	45 100 ms
opening delay	
• at AC	60 100 ms
• at DC	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	2
instantaneous contact	
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 200 V rated value	3 A
at 500 V rated value	2 A
at 690 V rated value 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 40 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 40 V rated value	2 A
at 110 V rated value	1A
at 125 V rated value	0.9 A
at 125 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	477 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	
	150 bp
- 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: 630 A (690 V, 100 kA)
— with type of assignment 2 required	gG: 500 A (690 V, 100 kA), aM: 500 A (690 V, 50 kA), BS88: 500 A (415 V, 50 kA)
 for short-circuit protection of the auxiliary switch required 	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
Installation/ mounting/ dimensions mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
mounting position	surface +/- 22.5° tiltable to the front and back
mounting position fastening method • side-by-side mounting	surface +/- 22.5° tiltable to the front and back screw fixing
mounting position fastening method	surface +/- 22.5° tiltable to the front and back screw fixing Yes
mounting position fastening method • side-by-side mounting height	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm
mounting position fastening method o side-by-side mounting height width depth	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm
mounting position fastening method • side-by-side mounting height width depth required spacing	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm
mounting position fastening method o side-by-side mounting height width depth	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 10 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 10 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — at the side • for grounded parts — forwards	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 10 mm 0 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — upwards — upwards	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 0 mm 20 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — at the side • for grounded parts — forwards	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — upwards — at the side — forwards — upwards — downwards — at the side — forwards — upwards — downwards — at the side — downwards — at the side — downwards	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 10 mm 20 mm 10 mm 20 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — oforwards — at the side — ownwards — at the side — ownwards — at the side — forwards — the side — forwards — lownwards — at the side — forwards — the side — for upwards — at the side — for upwards — with side — forwards — the side — downwards • for live parts	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 10 mm 10 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — oforwards — at the side — forwards — at the side — forwards — ownwards — ownwards — for live parts — forwards • for live parts — forwards	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 10 mm 20 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — at the side • for grounded parts — forwards — at the side — forwards — at the side — forwards — at the side — downwards • for live parts — forwards • for live parts — upwards — upwards	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — ownwards — forwards — upwards — ownwards — ownwards — ownwards — downwards — downwards • for live parts — forwards — upwards — downwards • for live parts — downwards — upwards — downwards	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 10 mm 20 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side - downwards - for live parts - forwards - upwards - forwards - a the side - downwards - at the side	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side • for grounded parts - forwards - at the side - downwards - forwards - upwards - at the side - downwards - at the side Connections/ Terminals	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side - forwards - at the side - downwards - at the side Connections/ Terminals width of connection bar	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 20 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side - downwards - for live parts - forwards - upwards - at the side Connections/ Terminals width of connection bar thickness of connection bar	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 20 mm 10 mm 10 mm
mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - at the side - forwards - at the side - downwards - at the side Connections/ Terminals width of connection bar	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm 20 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 20 mm

type of electrical co					
 for main current 			Connection bar		
 for auxiliary an 			screw-type terminals		
	r auxiliary contacts		Screw-type terminals		
of magnet coil			Screw-type terminals		
	e conductor cross-secti	ons			
at AWG cables for main contacts connectable conductor cross-section for main		2/0 500 kcmil			
	ictor cross-section for n	nain			
contacts			70 040 mm²		
stranded	ator aroas section for a	uvilian	70 240 mm²		
contacts	ictor cross-section for a	luxillary			
 solid or strand 	ed		0.5 4 mm²		
	with core end processing	a	0.5 2.5 mm ²		
-	e conductor cross-secti	•			
 for auxiliary co 		0110			
— solid			2x (0.5 1.5 mm²), 2x (0.7	75 2.5 mm²) max 2x	$(0.75 - 4 \text{ mm}^2)$
— solid or si	tranded		2x (0,5 1,5 mm²), 2x (0,7		
	anded with core end proce	essing	2x (0,5 1,5 mm ²), 2x (0,7 2x (0.5 1.5 mm ²), 2x (0.7		. (0,70 + mm)
	s for auxiliary contacts	Joonig	2x (0.5 1.5 min), 2x (0.7 2x (20 16), 2x (18 14)		
	,			, 1/1/2	
	as coded connectable co auxiliary contacts	nductor	18 14		
afety related data					
310 value with high	demand rate acc. to SN 3	31920	1 000 000		
product function					
 mirror contact 	acc. to IEC 60947-4-1		Yes		
 positively drive 	en operation acc. to IEC 6	0947-5-1	No		
protection class IP	on the front acc. to IEC	60529	IP00; IP20 with box termination	al/cover	
ouch protection or	n the front acc. to IEC 6	0529	finger-safe, for vertical con	tact from the front with	box terminal/cover
			inger-sale, for vertical con	tact nonit the nonit with	
	fety-related switching OFI		Yes	lact from the from with	
	fety-related switching OFF				
suitability for use saf	fety-related switching OFF als			EMC	Declaration of Conformity
suitability for use saf ertificates/ approva	fety-related switching OFF als			_	Declaration of
suitability for use saf ertificates/ approva	fety-related switching OFF als			_	Declaration of Conformity
suitability for use saf ertificates/ approva	rety-related switching OFF als pproval			_	Declaration of Conformity
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suitability for use saf ertificates/ approva General Product A ESA Declaration of Conformity	rety-related switching OFF als spproval Test Certificates <u>Type Test</u> <u>Certificates/Test</u>	- U U Special Tes	Yes EAC	EMC EC	Declaration of Conformity
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Suitability for use safertificates/ approva General Product A Second Product A Second Product A Second Product A Second Product A	rety-related switching OFF als pproval Test Certificates Certificates/Test Report other	Special Tes Certificate	Yes EAC t <u>Miscellaneous</u>	EMC EMC RCM Marine / Shipping ABS	Declaration of Conformity Miscellaneous Miscellaneous Example Example Railway

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Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1076-6AB36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1076-6AB36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6AB36

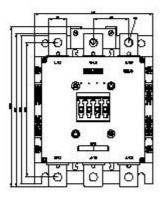
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1076-6AB36&lang=en

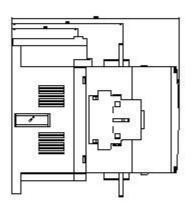
Characteristic: Tripping characteristics, I²t, Let-through current

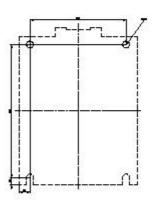
https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6AB36/char

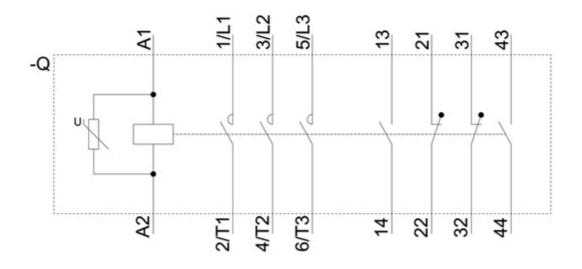
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1076-6AB36&objecttype=14&gridview=view1









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