## SIEMENS

## Data sheet

## 3RT1076-6AP36



power contactor, AC-3 500 A, 250 kW / 400 V AC (50-60 Hz) / DC 220-240 V AC/DC auxiliary contacts 2 NO + 2 NC 3-pole, frame size S12 busbar connections drive: conventional screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT1
General technical data	
size of contactor	S12
product extension	
<ul> <li>function module for communication</li> </ul>	No
<ul> <li>auxiliary switch</li> </ul>	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	165 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	55 W
<ul> <li>without load current share typical</li> </ul>	10 W
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	1 000 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	500 V
surge voltage resistance	
<ul> <li>of main circuit rated value</li> </ul>	8 kV
<ul> <li>of auxiliary circuit rated value</li> </ul>	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)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	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	
<ul> <li>during operation</li> </ul>	-25 +60 °C

relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
lain 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
<ul> <li>at AC-3e rated value maximum</li> </ul>	1 000 V
operational current	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> <li>at AC-1</li> </ul>	610 A
up to 690 V at ambient temperature 40 °C rated value	610 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-3e	
— 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
<ul> <li>at AC-4 at 400 V rated value</li> </ul>	430 A
<ul> <li>at AC-5a up to 690 V rated value</li> </ul>	536 A
<ul> <li>at AC-5b up to 400 V rated value</li> </ul>	415 A
● at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	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
<ul> <li>up to 1000 V for current peak value n=20 rated value</li> <li>at AC-6a</li> </ul>	180 A
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	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 up to 1000 V for current peak value n=30 rated	276 A
— up to 1000 V for current peak value n=30 rated value minimum cross-section in main circuit at maximum AC-1	180 A 
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 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
<ul> <li>with 2 current paths in series at DC-1</li> </ul>	
— 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
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— 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
	5.2 A
at 1 current path at DC-3 at DC-5	400 A
— at 24 V rated value	400 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	
— at 24 V rated value	400 A
— at 110 V rated value	400 A
— at 220 V rated value	2.5 A
— at 440 V rated value	0.65 A
— at 600 V rated value	0.37 A
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— 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
• at AC-3e	
— 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 kVA
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	280 000 VA
• up to 500 V for current peak value n=20 rated value	350 000 VA
• up to 690 V for current peak value n=20 rated value	490 000 VA
• up to 1000 V for current peak value n=20 rated	310 000 VA
value	
operating apparent power at AC-6a	
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	110 000 VA
up to 400 V for current peak value n=30 rated value	190 000 VA

<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	230 000 VA
<ul> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	330 000 VA
<ul> <li>up to 1000 V for current peak value n=30 rated value</li> </ul>	310 000 VA
short-time withstand current in cold operating state up to 40 °C	
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	7 484 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	7 484 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	5 978 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	3 765 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	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-3e 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	220 240 1/
at 50 Hz rated value	220 240 V
at 60 Hz rated value	220 240 V
control supply voltage at DC	
rated value	220 240 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 VA
• at 60 Hz	830 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.9
• at 60 Hz	0.9
apparent holding power of magnet coil at AC	
• at 50 Hz	9.2 VA
• at 60 Hz	9.2 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.9
• at 60 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 400 V rated value	3 A
at 500 V rated value	2 A
at 690 V rated value	1A
operational current at DC-12	
at 24 V rated value	10 A
at 24 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	1A
at 600 V rated value	0.15 A
operational current at DC-13	0.10 A
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 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	
<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
— 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
51	V, 50 kA)
<ul> <li>for short-circuit protection of the auxiliary switch</li> </ul>	gG: 10 A (500 V, 1 kA)
required	
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	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

upwarda	10 mm		
— upwards	10 mm		
— at the side	10 mm		
— downwards	10 mm		
<ul> <li>for live parts</li> </ul>			
— 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		
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals		
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Screw-type terminals		
<ul> <li>of magnet coil</li> </ul>	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	2/0 500 komil		
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		
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm <sup>2</sup>		
type of connectable conductor cross-sections			
for auxiliary contacts			
- solid	$2x (0.5 \pm 1.5 \text{ mm}^2) 2x (0.75 \pm 2.5 \text{ mm}^2) \text{ max} 2x (0.75 \pm 4 \text{ mm}^2)$		
	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> ), max. 2x (0.75 4 mm <sup>2</sup> )		
— solid or stranded	2x (0,5 1,5 mm <sup>2</sup> ), 2x (0,75 2,5 mm <sup>2</sup> ), max. 2x (0,75 4 mm <sup>2</sup> )		
— finely stranded with core end processing	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )		
at AWG cables for auxiliary contacts	2x (20 16), 2x (18 14), 1x 12		
AWG number as coded connectable conductor cross section			
3661011	40 44		
e for auxiliary contacts	10 17		
for auxiliary contacts	18 14		
Safety related data	18 14		
Safety related data product function			
Safety related data product function • mirror contact according to IEC 60947-4-1	Yes		
Safety related data product function • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947-			
Safety related data product function • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947- 5-1	Yes No		
Safety related data product function • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947- 5-1 B10 value with high demand rate according to SN 31920	Yes No 1 000 000		
Safety related data         product function         • mirror contact according to IEC 60947-4-1         • positively driven operation according to IEC 60947- 5-1         B10 value with high demand rate according to SN 31920         protection class IP on the front according to IEC	Yes No		
Safety related data         product function         • mirror contact according to IEC 60947-4-1         • positively driven operation according to IEC 60947- 5-1         B10 value with high demand rate according to SN 31920         protection class IP on the front according to IEC 60529	Yes No 1 000 000 IP00; IP20 with box terminal/cover		
Safety related data         product function         • mirror contact according to IEC 60947-4-1         • positively driven operation according to IEC 60947- 5-1         B10 value with high demand rate according to SN 31920         protection class IP on the front according to IEC 60529         touch protection on the front according to IEC 60529	Yes No 1 000 000		
Safety related data         product function         • mirror contact according to IEC 60947-4-1         • positively driven operation according to IEC 60947- 5-1         B10 value with high demand rate according to SN 31920         protection class IP on the front according to IEC 60529         touch protection on the front according to IEC 60529         suitability for use	Yes No 1 000 000 IP00; IP20 with box terminal/cover finger-safe, for vertical contact from the front with box terminal/cover		
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Safety related data         product function         • mirror contact according to IEC 60947-4-1         • positively driven operation according to IEC 60947- 5-1         B10 value with high demand rate according to SN 31920         protection class IP on the front according to IEC 60529         touch protection on the front according to IEC 60529         suitability for use         • safety-related switching OFF         Certificates/ approvals         General Product Approval	Yes No 1 000 000 IP00; IP20 with box terminal/cover finger-safe, for vertical contact from the front with box terminal/cover Yes		
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Safety related data         product function         • mirror contact according to IEC 60947-4-1         • positively driven operation according to IEC 60947-5-1         B10 value with high demand rate according to SN 31920         protection class IP on the front according to IEC 60529         touch protection on the front according to IEC 60529         suitability for use         • safety-related switching OFF         Certificates/ approvals         General Product Approval         Image: Confirmation         Functional	Yes No 1 000 000 IP00; IP20 with box terminal/cover finger-safe, for vertical contact from the front with box terminal/cover Yes           EMC           Upper         EMC		

<u>Type Examination</u> <u>Certificate</u>	CE EG-Konf.	UK CA	<u>Special Test Certific-</u> <u>ate</u>	<u>Type Test Certific-</u> ates/Test Report	<u>Miscellaneous</u>
Marine / Shipping					other
ABS	Lloyd's Kegister uis	PRS	RMRS		<u>Confirmation</u>
other			Railway		
<u>Miscellaneous</u>	<u>Miscellaneous</u>	Confirmation	Vibration and Shock	Special Test Certific- ate	

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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=3RT1076-6AP36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1076-6AP36

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

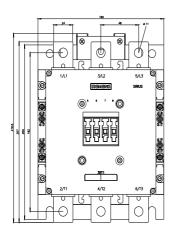
https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6AP36

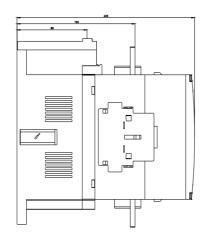
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT1076-6AP36&lang=en

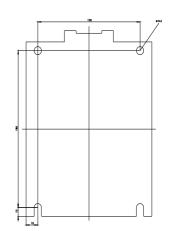
Characteristic: Tripping characteristics, I2t, Let-through current

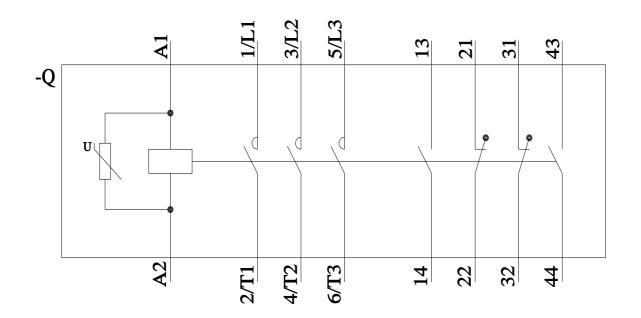
https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6AP36/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1076-6AP36&objecttype=14&gridview=view1









6/25/2022 🖸