SIEMENS

Data sheet 3RT1076-6AS36



Power contactor, AC-3 500 A, 250 kW / 400 V AC (50-60 Hz) / DC 500-550 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
Substance Prohibitance (Date)	01.05.2012 00:00:00
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
operating voltage at AC-3 rated value maximum	1 000 V
operational current	1 000 V
at AC-1 at 400 V at ambient temperature 40 °C rated value	610 A
• at AC-1	
 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	A
— 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	414 A
value — 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 180 A
— up to 1000 V for current peak value n=30 rated value minimum cross-section in main circuit at maximum AC-1	370 mm ²
rated value	OT O THILL
operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value	175 A
at 400 V rated value at 690 V rated value	150 A
operational current	IVV A
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	0.071
— 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 1770 v rated value	

— 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	
• 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 	
— 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
 with 3 current paths in series at DC-3 at DC-5 	v.o. A
— at 24 V rated value	400 A
— at 24 v rated value — at 110 V rated value	400 A 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	400 1114
— 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 400 V rated value at 690 V rated value	148 kW
operating apparent power at AC-6a	140 KW
• up to 230 V for current peak value n=20 rated value	160 000 kV·A
 up to 230 V for current peak value n=20 rated value 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 up to 1000 V for current peak value n=20 rated.	490 000 V·A
 up to 1000 V for current peak value n=20 rated value 	310 000 V·A
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 up to 1000 V for current peak value n=30 rated	310 000 V A
value	0.0000 7.1
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
Iimited 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	2 33. 7., 333 minimum 5.333 3000011 abo. to 710 1 fated value

• 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	500 550 V
at 60 Hz rated value	500 550 V
control supply voltage at DC	
 rated value 	500 550 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 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

1000 // 1 1	4.0
at 220 V rated value	1 A
at 600 V rated value	0.15 A
operational current at DC-13	40.4
• 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: 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 	gG: 10 A (500 V, 1 kA)
required	
required	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
required Installation/ mounting/ dimensions	
required Installation/ mounting/ dimensions mounting position	surface +/- 22.5° tiltable to the front and back
required Installation/ mounting/ dimensions mounting position fastening method	surface +/- 22.5° tiltable to the front and back screw fixing
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting	surface +/- 22.5° tiltable to the front and back screw fixing Yes
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm
required Installation/ mounting/ dimensions 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
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm
required Installation/ mounting/ dimensions mounting position fastening method	surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm
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www.how.of.holoo	4
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 mm²
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
product function	
 mirror contact acc. to IEC 60947-4-1 	Yes
 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 safety-related switching OFF	Yes
Certificates/ approvals	

General Product Approval

EMC

Declaration of Conformity









Miscellaneous



Test Certificates Marine / Shipping other

Special Test Certificate Type Test
Certificates/Test
Report





Certificate



Confirmation

 other
 Railway

 Miscellaneous
 Confirmation
 Miscellaneous
 Special Test

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=3RT1076-6AS36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1076-6AS36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6AS36

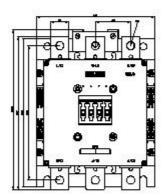
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1076-6AS36&lang=en

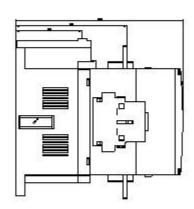
Characteristic: Tripping characteristics, I²t, Let-through current

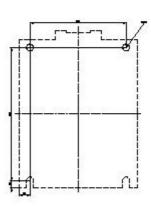
https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6AS36/char

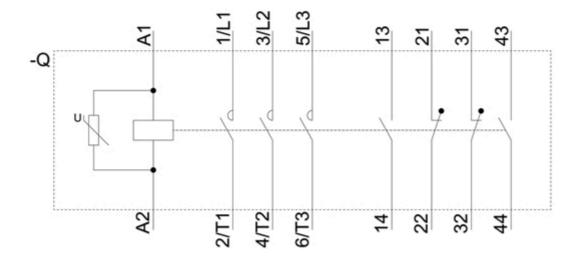
Further characteristics (e.g. electrical endurance, switching frequency)

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