SIEMENS

Data sheet

3RT1075-6SP36



power contactor, AC-3e/AC-3 400 A, 200 kW / 400 V AC (50-60 Hz) / DC 200-277 V x (0.8-1.1) F-PLC input 24 V DC 3-pole, auxiliary contacts 2 NO + 2 NC drive: electronic main circuit: busbar control and auxiliary circuit: screw terminal

product brand name	SIRIUS
	01100
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 	105 W
 at AC in hot operating state per pole 	35 W
 without load current share typical 	3.6 W
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	1 000 V
 of auxiliary circuit with degree of pollution 3 rated value 	500 V
surge voltage resistance	
 of main circuit rated value 	8 kV
 of auxiliary circuit rated value 	6 kV
maximum permissible voltage for protective separation 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 (operating 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 according to IEC 81346-2	Q
Substance Prohibitance (Date)	03/01/2017
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 according to IEC 60068-2-30 maximum	95 %

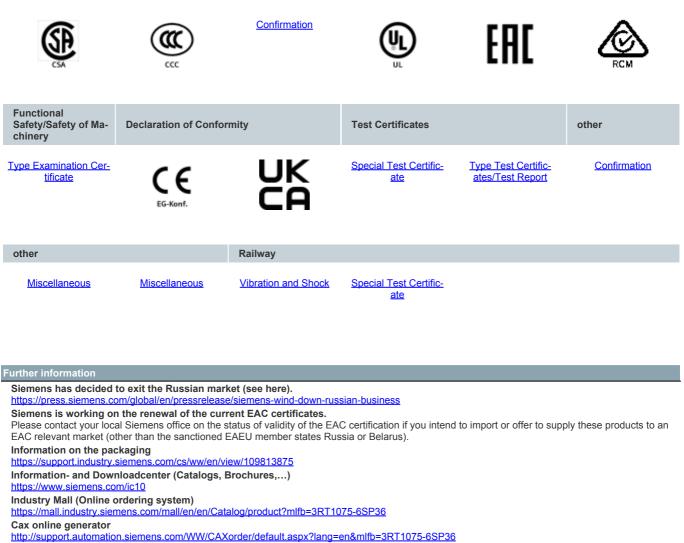
fain circuit		
number of poles for main current circuit	3	
number of NO contacts for main contacts	3	
operating voltage		
• at AC-3 rated value maximum	1 000 V	
 at AC-3e rated value maximum 	1 000 V	
operational current		
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	430 A	
• at AC-1		
— up to 690 V at ambient temperature 40 °C rated value	430 A	
— up to 690 V at ambient temperature 60 °C rated value	400 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	400 A	
— at 500 V rated value	400 A	
— at 690 V rated value	400 A	
— at 1000 V rated value	180 A	
• at AC-3e		
— at 400 V rated value	400 A	
— at 500 V rated value	400 A	
— at 690 V rated value	400 A	
— at 1000 V rated value	180 A	
• at AC-4 at 400 V rated value	350 A	
 at AC-5a up to 690 V rated value 	378 A	
• at AC-5b up to 400 V rated value	332 A	
● at AC-6a		
— up to 230 V for current peak value n=20 rated value	395 A	
— up to 400 V for current peak value n=20 rated value	395 A	
— up to 500 V for current peak value n=20 rated value	395 A	
— up to 690 V for current peak value n=20 rated value	395 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 	264 A	
 — up to 400 V for current peak value n=30 rated value 	264 A	
 — up to 500 V for current peak value n=30 rated value 	264 A	
— up to 690 V for current peak value n=30 rated value	264 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	300 mm²	
operational current for approx. 200000 operating cycles at AC-4		
• at 400 V rated value	150 A	
• at 690 V rated value	135 A	
operational current		
 at 1 current path at DC-1 		
— at 24 V rated value	400 A	
— at 60 V rated value	330 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 60 V rated value	400 A	
— at 110 V rated value	400 A	

	400.4
— 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 60 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
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	400 A
— at 60 V rated value	11 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 60 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 	
— at 24 V rated value	400 A
— at 60 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-2 at 400 V rated value	200 kW
• at AC-3	
— at 230 V rated value	132 kW
— at 400 V rated value	200 kW
— at 500 V rated value	250 kW
— at 690 V rated value	400 kW
— at 1000 V rated value	250 kW
• at AC-3e	
— at 230 V rated value	132 kW
— at 400 V rated value	200 kW
— at 500 V rated value	250 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	85 kW
at 690 V rated value	133 kW
operating apparent power at AC-6a	
up to 230 V for current peak value n=20 rated value	150 000 kVA
• up to 400 V for current peak value n=20 rated value	270 000 VA
• up to 500 V for current peak value n=20 rated value	340 000 VA
• up to 690 V for current peak value n=20 rated value	470 000 VA
• up to 1000 V for current peak value n=20 rated value	310 000 VA
operating apparent power at AC-6a	
up to 230 V for current peak value n=30 rated value	100 000 VA
• up to 400 V for current peak value n=30 rated value	180 000 VA
• up to 500 V for current peak value n=30 rated value	220 000 VA
• up to 690 V for current peak value n=30 rated value	310 000 VA
• up to 1000 V for current peak value n=30 rated value	310 000 VA

short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	6 600 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	5 761 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 0 s switching at zero current maximum 	4 143 A; Use minimum cross-section acc. to AC-1 rated value
Imited to 10 s switching at zero current maximum	2 635 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum 	2 088 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	500 1/h
• at DC	500 1/h
	500 1/11
operating frequency	200.4/b
• at AC-1 maximum	200 1/h
• at AC-2 maximum	200 1/h
• at AC-3 maximum	200 1/h
• at AC-3e maximum	200 1/h
at AC-4 maximum	130 1/h
Control circuit/ Control	10/00
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	200 277.1/
at 50 Hz rated value	200 277 V
at 60 Hz rated value	200 277 V
control supply voltage at DC	000 077.1/
rated value	200 277 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
type of PLC-control input according to IEC 60947-1	Type 1
consumed current at PLC-control input according to IEC 60947-1 maximum	14 mA
voltage at PLC-control input rated value	24 V
operating range factor of the voltage at PLC-control input	0.8 1.1
design of the surge suppressor	with varistor
apparent pick-up power of magnet coil at AC	
• at 50 Hz	750 VA
• at 60 Hz	750 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.8
• at 60 Hz	0.8
apparent holding power of magnet coil at AC	
• at 50 Hz	9 VA
• at 60 Hz	9 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.4
• at 60 Hz	0.4
closing power of magnet coil at DC	800 W
holding power of magnet coil at DC	3.6 W
closing delay	
• at AC	60 75 ms
• at DC	60 75 ms
opening delay	
• at AC	115 130 ms
• at DC	115 130 ms
recovery time after power failure typical	2 s
arcing time	10 15 ms
control version of the switch operating mechanism	Fail-safe PLC input (F-PLC-IN)
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous	2
-	

contact	
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	004.4
at 480 V rated value	361 A
at 600 V rated value	382 A
yielded mechanical performance [hp] • for 3-phase AC motor	
- at 200/208 V rated value	125 hp
— at 220/230 V rated value	150 hp
— at 460/480 V rated value	300 hp
— at 575/600 V rated value	400 hp
contact rating of auxiliary contacts according to UL	A600 / P600
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: 400 A (690 V, 50 kA), BS88: 450 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	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
— upwards	10 mm

	10
— 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	
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
width of connection bar	25 mm
thickness of connection bar	6 mm
diameter of holes	11 mm
number of holes	1
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 4 mm ²
	0.5 2.5 mm
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid	2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²), max. 2x (0.75 4 mm ²)
— solid or stranded	2x (0,5 1,5 mm ²), 2x (0,75 2,5 mm ²), max. 2x (0,75 4 mm ²)
 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
for 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	
product function	
 mirror contact according to IEC 60947-4-1 	Yes
 positively driven operation according to IEC 60947-5-1 	No
safety device type according to IEC 61508-2	Туре В
B10 value with high demand rate according to SN 31920	1 000 000
Safety Integrity Level (SIL) according to IEC 61508	2
SIL Claim Limit (subsystem) according to EN 62061	2
performance level (PL) according to EN ISO 13849-1	c
category according to EN ISO 13849-1	2
stop category according to EN 60204-1	0
Safe failure fraction (SFF)	93 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
PFHD with high demand rate according to EN 62061	4.5E-7 1/h
PFDavg with low demand rate according to IEC 61508	0.007
MTBF	75 a
	0
hardware fault tolerance according to IEC 61508	
T1 value for proof test interval or service life according to IEC 61508	20 a
protection class IP on the front according to IEC 60529	IP00; IP20 with box terminal/cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with box terminal/cover
suitability for use	
 safety-related switching on 	No
 safety-related switching OFF 	Yes
Certificates/ approvals	
General Product Approval	EMC



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

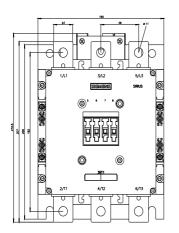
https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6SP36 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

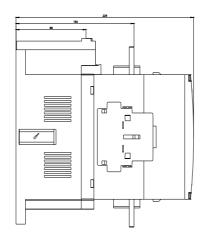
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1075-6SP36&lang=en

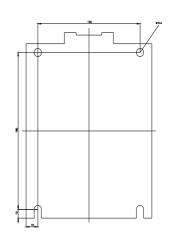
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6SP36/char

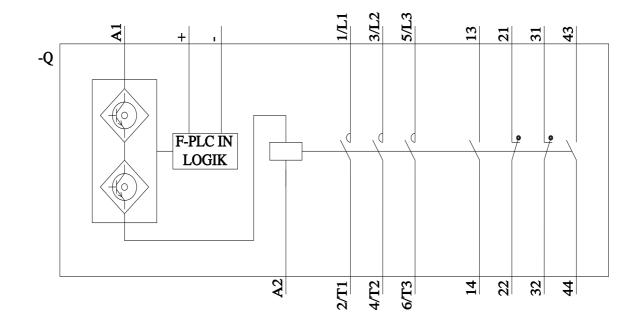
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1075-6SP36&objecttype=14&gridview=view1









2/10/2023 🖸

7/10/2023