Data sheet 3RT1054-6SF36-3PA0

0101110



power contactor, AC-3e/AC-3 115 A, 55 kW / 400 V, AC (50-60 Hz) / DC Uc: 96-127 V x (0.8-1.1) F-PLC input 24 V DC 3-pole, auxiliary contacts 2 NO + 2 NC permanently mounted drive: electronic main circuit: busbar control and auxiliary circuit: screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT1
General technical data	
size of contactor	S6
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 	21 W
 at AC in hot operating state per pole 	7 W
without load current share typical	2.8 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 %

ain 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 	160 A
• at AC-1	
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	160 A
— up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ rated value	140 A
— up to 1000 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	80 A
— up to 1000 V at ambient temperature 60 $^{\circ}\text{C}$ rated value	80 A
• at AC-3	
— at 400 V rated value	115 A
— at 500 V rated value	115 A
— at 690 V rated value	115 A
— at 1000 V rated value	53 A
• at AC-3e	
— at 400 V rated value	115 A
— at 500 V rated value	115 A
— at 690 V rated value	115 A
— at 1000 V rated value	53 A
• at AC-4 at 400 V rated value	97 A
• at AC-5a up to 690 V rated value	140 A
at AC-5b up to 400 V rated value	95 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	115 A
— up to 400 V for current peak value n=20 rated value	115 A
— up to 500 V for current peak value n=20 rated value	115 A
— up to 690 V for current peak value n=20 rated value	115 A
— up to 1000 V for current peak value n=20 rated	53 A
value	
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	98 A
— up to 400 V for current peak value n=30 rated value	98 A
— up to 500 V for current peak value n=30 rated value	98 A
— up to 690 V for current peak value n=30 rated value	98 A
up to 1000 V for current peak value n=30 rated value	53 A
minimum cross-section in main circuit at maximum AC-1 rated value	70 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	54 A
at 690 V rated value	48 A
operational current	
at 1 current path at DC-1	
— at 24 V rated value	160 A
— at 60 V rated value	160 A
— at 110 V rated value	18 A
— at 220 V rated value	3.4 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.5 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	160 A
— at 60 V rated value	160 A

— at 220 V rated value	20 A
— at 440 V rated value	3.2 A
— at 600 V rated value	1.6 A
 with 3 current paths in series at DC-1 	
— at 24 V rated value	160 A
— at 60 V rated value	160 A
— at 110 V rated value	160 A
— at 220 V rated value	160 A
— at 440 V rated value	11.5 A
— at 600 V rated value	4 A
at 1 current path at DC-3 at DC-5	
— at 24 V rated value	160 A
— at 60 V rated value	7.5 A
— at 110 V rated value	2.5 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.17 A
— at 600 V rated value	0.12 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	160 A
— at 60 V rated value	160 A
— at 110 V rated value	160 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	0.01 A
— at 24 V rated value	160 A
— at 60 V rated value	160 A
— at 110 V rated value	160 A
— at 220 V rated value	160 A
— at 440 V rated value	1.4 A
— at 600 V rated value	0.75 A
operating power	FF 144/
at AC-2 at 400 V rated value	55 kW
• at AC-3	
— at 230 V rated value	37 kW
— at 400 V rated value	55 kW
— at 500 V rated value	75 kW
— at 690 V rated value	110 kW
— at 1000 V rated value	75 kW
• at AC-3e	
— at 230 V rated value	37 kW
— at 400 V rated value	55 kW
— at 500 V rated value	75 kW
— at 690 V rated value	110 kW
— at 1000 V rated value	75 kW
operating power for approx. 200000 operating cycles at AC-	
4	20 NA
• at 400 V rated value	29 kW
at 690 V rated value	48 kW
operating apparent power at AC-6a	40,000 12/4
up to 230 V for current peak value n=20 rated value	40 000 kVA
• up to 400 V for current peak value n=20 rated value	80 000 VA
• up to 500 V for current peak value n=20 rated value	100 000 VA
• up to 690 V for current peak value n=20 rated value	130 000 VA
up to 1000 V for current peak value n=20 rated value	90 000 VA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	30 000 VA
• up to 400 V for current peak value n=30 rated value	60 000 VA
• up to 500 V for current peak value n=30 rated value	80 000 VA
• up to 690 V for current peak value n=30 rated value	110 000 VA
• up to 1000 V for current peak value n=30 rated value	90 000 VA

short-time withstand current in cold operating state up to 40 °C	
Ilmited to 1 s switching at zero current maximum	2 565 A; Use minimum cross-section acc. to AC-1 rated value
-	1 654 A: Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum 	1 170 A: Use minimum cross-section acc. to AC-1 rated value
Ilmited to 10's switching at zero current maximum Ilmited to 30's switching at zero current maximum	729 A; Use minimum cross-section acc. to AC-1 rated value
Ilimited to 60 s switching at zero current maximum Personal auditables from an auditable from a local audita	572 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	4 000 4 %
• at AC	1 000 1/h
• at DC	1 000 1/h
operating frequency	750.4/1-
• at AC-1 maximum	750 1/h
at AC-2 maximum	400 1/h
at AC-3 maximum	750 1/h
at AC-3e maximum	750 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	96 127 V
at 60 Hz rated value	96 127 V
control supply voltage at DC	
rated value	96 127 V
operating range factor control supply voltage rated value of	
magnet coil at DC	0.0
• 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	280 VA
● at 60 Hz	280 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	4.8 VA
• at 60 Hz	4.8 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.6
• at 60 Hz	0.6
closing power of magnet coil at DC	320 W
holding power of magnet coil at DC	2.8 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
or the contacto for duralitary contacts installations	-

contact number of NO contacts for auxiliary contacts instantaneous contact 2 operational current at AC-12 maximum 10 / Operational current at AC-15 • at 230 V rated value 6 A • at 400 V rated value 3 A • at 690 V rated value 1 A operational current at DC-12 1 A • at 24 V rated value 10 / Operational current at DC-12 • 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	A A A
contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value 6 A • at 400 V rated value 3 A • at 500 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	A A A
operational current at AC-15	A A A
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value at 24 V rated value at 24 V rated value at 48 V rated value at 60 V rated value at 10 V rated value at 34 V rated value 34 A V rated value 	A A A
 at 400 V rated value at 500 V rated value at 690 V rated value 1 A operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value at 10 V rated value at 110 V rated value 3 A 	A A A
 at 500 V rated value at 690 V rated value 1 A operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 110 V rated value 	A.
 at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value 3 A 	
operational current at DC-12 • at 24 V rated value 10 / 2 • at 48 V rated value 6 A • at 60 V rated value 6 A • at 110 V rated value 3 A	
 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value 3 A 	A
 at 48 V rated value at 60 V rated value at 110 V rated value 3 A 	A
 at 60 V rated value at 110 V rated value 3 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	5 A
operational current at DC-13	
• at 24 V rated value	
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	
• at 220 V rated value 0.3	
• at 600 V rated value 0.1	
· · · · ·	aulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	4.0
• at 480 V rated value	
• at 600 V rated value 125	5 A
yielded mechanical performance [hp]	
for single-phase AC motor — at 230 V rated value 25 I	hn
• for 3-phase AC motor	пр
— at 200/208 V rated value 40 I	hn
— at 220/230 V rated value 50 I	
	0 hp
	5 hp
	00 / P600
Short-circuit protection	
design of the fuse link	
for short-circuit protection of the main circuit	
·	i: 355 A (690 V, 100 kA)
	:: 250 A (690 V, 100 kA), aM: 200 A (690 V, 50 kA), BS88: 250 A (415 V, 50
kA)	
	: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
	h vertical mounting surface +/-90° rotatable, with vertical mounting surface 22.5° tiltable to the front and back
fastening method scree	rew fixing
• side-by-side mounting Yes	s
height 172	2 mm
width 120	0 mm
depth 170	0 mm
required spacing	
with side-by-side mounting	
— forwards 20 r	mm
— upwards 10 r	mm
— downwards 10 r	mm
— at the side 0 m	nm
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	
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	17 mm
thickness of connection bar	3 mm
diameter of holes	9 mm
number of holes	1
connectable conductor cross-section for main contacts	
• stranded	25 120 mm²
connectable conductor cross-section for auxiliary contacts	
 solid or stranded 	0.5 4 mm ²
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)
 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	Type B
B10 value with high demand rate according to SN 31920	1 000 000
Safety Integrity Level (SIL) according to SIV 31920	2
SIL Claim Limit (subsystem) according to EN ISO 13940.1	2
performance level (PL) according to EN ISO 13849-1	C
category according to EN ISO 13849-1	2
	0
stop category according to EN 60204-1	
Safe failure fraction (SFF)	93 %
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920	93 % 100 FIT
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061	93 % 100 FIT 4.5E-7 1/h
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061 PFDavg with low demand rate according to IEC 61508	93 % 100 FIT 4.5E-7 1/h 0.007
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061 PFDavg with low demand rate according to IEC 61508 MTBF	93 % 100 FIT 4.5E-7 1/h 0.007 75 a
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061 PFDavg with low demand rate according to IEC 61508	93 % 100 FIT 4.5E-7 1/h 0.007
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061 PFDavg with low demand rate according to IEC 61508 MTBF	93 % 100 FIT 4.5E-7 1/h 0.007 75 a
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061 PFDavg with low demand rate according to IEC 61508 MTBF hardware fault tolerance according to IEC 61508 T1 value for proof test interval or service life according to IEC	93 % 100 FIT 4.5E-7 1/h 0.007 75 a
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061 PFDavg with low demand rate according to IEC 61508 MTBF hardware fault tolerance according to IEC 61508 T1 value for proof test interval or service life according to IEC 61508	93 % 100 FIT 4.5E-7 1/h 0.007 75 a 0 20 a
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061 PFDavg with low demand rate according to IEC 61508 MTBF hardware fault tolerance according to IEC 61508 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529	93 % 100 FIT 4.5E-7 1/h 0.007 75 a 0 20 a IP00; IP20 with box terminal/cover
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061 PFDavg with low demand rate according to IEC 61508 MTBF hardware fault tolerance according to IEC 61508 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529	93 % 100 FIT 4.5E-7 1/h 0.007 75 a 0 20 a IP00; IP20 with box terminal/cover
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061 PFDavg with low demand rate according to IEC 61508 MTBF hardware fault tolerance according to IEC 61508 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 suitability for use	93 % 100 FIT 4.5E-7 1/h 0.007 75 a 0 20 a IP00; IP20 with box terminal/cover finger-safe, for vertical contact from the front with box terminal/cover
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061 PFDavg with low demand rate according to IEC 61508 MTBF hardware fault tolerance according to IEC 61508 T1 value for proof test interval or service life according to IEC 61508 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 on	93 % 100 FIT 4.5E-7 1/h 0.007 75 a 0 20 a IP00; IP20 with box terminal/cover finger-safe, for vertical contact from the front with box terminal/cover
Safe failure fraction (SFF) failure rate [FIT] with low demand rate according to SN 31920 PFHD with high demand rate according to EN 62061 PFDavg with low demand rate according to IEC 61508 MTBF hardware fault tolerance according to IEC 61508 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 suitability for use	93 % 100 FIT 4.5E-7 1/h 0.007 75 a 0 20 a IP00; IP20 with box terminal/cover finger-safe, for vertical contact from the front with box terminal/cover



Confirmation





<u>KC</u>



Functional

EMC Safety/Safety of Machinery

Declaration of Conformity

Test Certificates



Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

other

Railway

Confirmation

Miscellaneous

Miscellaneous

Special Test Certific-

ate

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RT1054-6SF36-3PA0

Cax online generator

 $\underline{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT1054-6SF36-3PA0}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1054-6SF36-3PA0

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

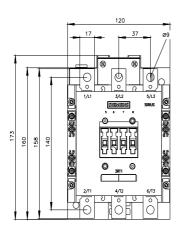
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1054-6SF36-3PA0&lang=en

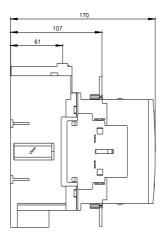
Characteristic: Tripping characteristics, I2t, Let-through current

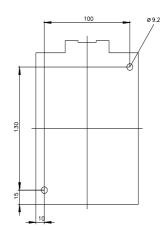
https://support.industry.siemens.com/cs/ww/en/ps/3RT1054-6SF36-3PA0/char

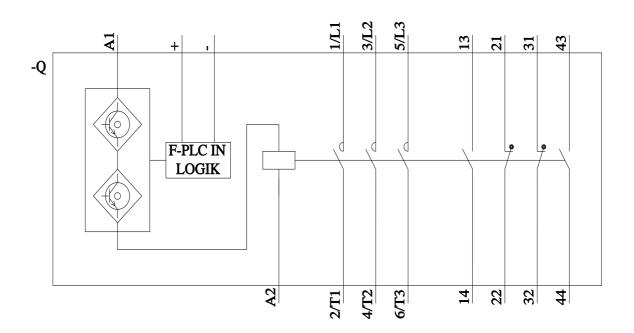
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1054-6SF36-3PA0&objecttype=14&gridview=view1









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