SIEMENS

Data sheet 3RT1456-6NB36

CONTACTOR, 275A/AC-1



Figure similar

product brand name	SIRIUS
Product designation	power contactor

General technical data:	
Size of contactor	S6
Insulation voltage	
Rated value	1 000 V
Surge voltage resistance Rated value	8 kV
Protection class IP	
• on the front	IP00
• of the terminal	IP00
Degree of pollution	3
Mechanical service life (switching cycles)	
 of the contactor typical 	10 000 000
 of the contactor with added electronics- 	5 000 000
compatible auxiliary switch block typical	
 of the contactor with added auxiliary switch 	10 000 000
block typical	

Ambient conditions:		
Installation altitude at height above sea level	2 000 m	
maximum		
Ambient temperature		
during operation	-25 +55 °C	
during storage	-55 +80 °C	

Main circuit:	
Number of NO contacts for main contacts	3

Number of NC contacts for main contacts	0
Operating current	
● at AC-1 at 400 V	
— at ambient temperature 40 °C Rated value	275 A
• at AC-1 up to 690 V	
 at ambient temperature 40 °C Rated value 	275 A
— at ambient temperature 60 °C Rated value	250 A
• at AC-3	
— at 400 V Rated value	97 A
— at 690 V Rated value	97 A
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	95 mm²
• at 40 °C minimum permissible	95 mm²
Operating current	
with 1 current path at DC-1	
— at 24 V Rated value	250 A
— at 110 V Rated value	18 A
with 2 current paths in series at DC-1	
— at 24 V Rated value	250 A
— at 110 V Rated value	250 A
 with 3 current paths in series at DC-1 	
— at 24 V Rated value	250 A
— at 110 V Rated value	250 A
Operating current	
with 1 current path at DC-3 at DC-5	
— at 24 V Rated value	250 A
— at 110 V Rated value	2.5 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 110 V Rated value	250 A
— at 24 V Rated value	250 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 110 V Rated value	250 A
— at 24 V Rated value	250 A
Operating power	
• at AC-1	25.114
— at 230 V at 60 °C Rated value	95 kW
— at 400 V Rated value	165 kW
— at 690 V Rated value	285 kW
— at 690 V at 60 °C Rated value	285 kW
● at AC-2 at 400 V Rated value	55 kW
• at AC-3	

— at 230 V Rated value	30 kW
— at 400 V Rated value	55 kW
— at 500 V Rated value	55 kW
— at 690 V Rated value	90 kW
Thermal short-time current restricted to 10 s	1 480 A
Active power loss at AC-3 at 400 V for rated value of	20 W
the operating current per conductor	
No-load switching frequency	
• with AC	2 000 1/h
• for DC	2 000 1/h
Operating frequency	
• at AC-1 maximum	800 1/h

Control circuit/ Control:	
Type of voltage of the control supply voltage	AC/DC
Control supply voltage with AC	
● at 50 Hz Rated value	21 27.3 V
● at 60 Hz Rated value	21 27.3 V
Control supply voltage for DC	
Rated value	21 27.3 V
Rated value	40 Hz
Control supply voltage frequency 2 Rated value	60 Hz
Operating range factor control supply voltage rated	
value of the magnet coil with AC	
● at 50 Hz	0.8 1.1
● at 60 Hz	0.8 1.1
Operating range factor control supply voltage rated	0.8 1.1
value of the magnet coil for DC	
Design of the surge suppressor	with varistor
Apparent pick-up power of the magnet coil with AC	280 V·A
Inductive power factor with closing power of the coil	0.8
Apparent holding power of the magnet coil with AC	7 V·A
Inductive power factor with the holding power of the	0.4
coil	
Closing power of the magnet coil for DC	320 W
Holding power of the magnet coil for DC	2.8 W
Closing delay	
• with AC	35 75 ms
• for DC	35 75 ms
Arcing time	10 15 ms

Auxiliary circuit:

Number of NC contacts

• for auxiliary contacts

 instantaneous contact 	2
Number of NO contacts	
 for auxiliary contacts 	
 instantaneous contact 	2
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
● at 230 V Rated value	6 A
• at 400 V Rated value	3 A
Operating current at DC-12	
● at 60 V Rated value	6 A
• at 110 V Rated value	3 A
• at 220 V Rated value	1 A
Operating current at DC-13	
• at 24 V Rated value	10 A
• at 60 V Rated value	2 A
• at 110 V Rated value	1 A
• at 220 V Rated value	0.3 A
III /CCA metio me	
UL/CSA ratings: Contact rating of the auxiliary contacts acc. to UL	A600 / Q600
Contact rating of the advinary contacts acc. to de	7,000 / Q000
Short-circuit:	
Design of the fuse link	
Design of the fuse link • for short-circuit protection of the main circuit	
•	fuse gL/gG: 355 A
• for short-circuit protection of the main circuit	fuse gL/gG: 355 A fuse gL/gG: 350 A
 for short-circuit protection of the main circuit — with type of assignment 1 required 	
 for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required for short-circuit protection of the auxiliary switch 	fuse gL/gG: 350 A
 for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required for short-circuit protection of the auxiliary switch required 	fuse gL/gG: 350 A
 for short-circuit protection of the main circuit with type of assignment 1 required with type of assignment 2 required for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions:	fuse gL/gG: 350 A fuse gL/gG: 10 A
for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: Mounting type	fuse gL/gG: 350 A fuse gL/gG: 10 A screw fixing
for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: Mounting type • Side-by-side mounting	fuse gL/gG: 350 A fuse gL/gG: 10 A screw fixing Yes
for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: Mounting type • Side-by-side mounting Height	fuse gL/gG: 350 A fuse gL/gG: 10 A screw fixing Yes 172 mm
for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: Mounting type • Side-by-side mounting Height Width	fuse gL/gG: 350 A fuse gL/gG: 10 A screw fixing Yes 172 mm 120 mm
for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: Mounting type • Side-by-side mounting Height Width Depth	fuse gL/gG: 350 A fuse gL/gG: 10 A screw fixing Yes 172 mm 120 mm
• for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: Mounting type • Side-by-side mounting Height Width Depth Required spacing	fuse gL/gG: 350 A fuse gL/gG: 10 A screw fixing Yes 172 mm 120 mm
for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: Mounting type • Side-by-side mounting Height Width Depth Required spacing • for grounded parts	fuse gL/gG: 350 A fuse gL/gG: 10 A screw fixing Yes 172 mm 120 mm 170 mm
• for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: Mounting type • Side-by-side mounting Height Width Depth Required spacing • for grounded parts — at the side	fuse gL/gG: 350 A fuse gL/gG: 10 A screw fixing Yes 172 mm 120 mm 170 mm
• for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: Mounting type • Side-by-side mounting Height Width Depth Required spacing • for grounded parts — at the side Connections/ Terminals:	fuse gL/gG: 350 A fuse gL/gG: 10 A screw fixing Yes 172 mm 120 mm 170 mm
• for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: Mounting type • Side-by-side mounting Height Width Depth Required spacing • for grounded parts — at the side Connections/ Terminals: Type of electrical connection	fuse gL/gG: 350 A fuse gL/gG: 10 A screw fixing Yes 172 mm 120 mm 170 mm
• for short-circuit protection of the main circuit — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions: Mounting type • Side-by-side mounting Height Width Depth Required spacing • for grounded parts — at the side Connections/ Terminals: Type of electrical connection • for main current circuit	fuse gL/gG: 350 A fuse gL/gG: 10 A screw fixing Yes 172 mm 120 mm 170 mm 10 mm

Type of connectable conductor cross-section

- for auxiliary contacts
 - solid
 - finely stranded with core end processing
- for AWG conductors for auxiliary contacts

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

2x (20 ... 16), 2x (18 ... 14), 1x 12

Certificates/ approvals:

General Product Approval	Functional	Declaration of	Test
	Safety/Safety	Conformity	Certificates
	of Machinery		







Type Examination



other

Special Test Certificate

Shipping Approval







GL



Environmental Confirmations

other

other

Confirmation

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

http://www.siemens.com/industrymall

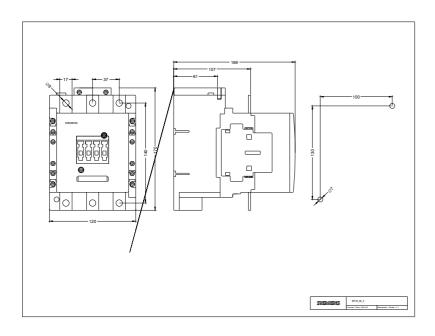
Cax online generator

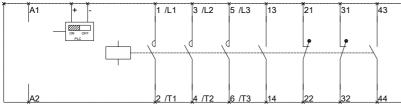
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT14566NB36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT14566NB36

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT14566NB36&lang=en





last modified: 16.06.2015