SIEMENS

Data sheet 3RT1456-6NF36

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-compatible auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000

Ambient conditions:	
Installation altitude at height above sea level maximum	2 000 m
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	
— 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 the operating current per conductor	20 W
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	96 ... 127 V
• at 60 Hz Rated value	96 ... 127 V
Control supply voltage for DC	
• Rated value	96 ... 127 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 value of the magnet coil for DC	0.8 ... 1.1
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 coil	0.4
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

UL/CSA ratings:	
Contact rating of the auxiliary contacts acc. to UL	A600 / Q600

Short-circuit:	
Design of the fuse link	
• for short-circuit protection of the main circuit	
— with type of assignment 1 required	fuse gL/gG: 355 A
— with type of assignment 2 required	fuse gL/gG: 350 A
• for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A

Installation/ mounting/ dimensions:	
Mounting type	screw fixing
• Side-by-side mounting	Yes
Height	172 mm
Width	120 mm
Depth	170 mm
Required spacing	
• for grounded parts	
— at the side	10 mm

Connections/ Terminals:	
Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-section	
• for AWG conductors for main contacts	4 ... 250 kcmil

Type of connectable conductor cross-section	
• for auxiliary contacts	
— solid	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 conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 1x 12

Certificates/ approvals:

General Product Approval			Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
CSA	UL	EAC	Type Examination	EG-Konf.	Special Test Certificate

Shipping Approval				other	
ABS	DNV	GL	RMRS	Confirmation	Environmental Confirmations

other

other

Further information

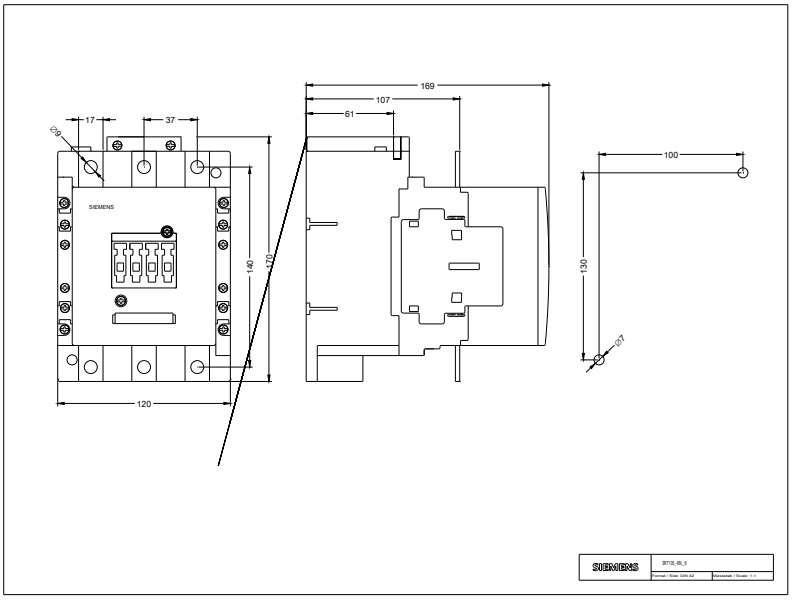
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

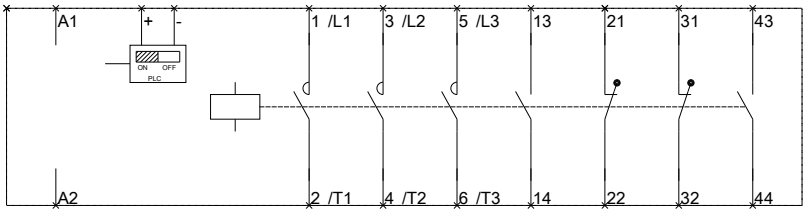
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT14566NF36

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT14566NF36

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT14566NF36&lang=en





last modified: 16.06.2015