SIEMENS

Data sheet

3RT1024-1AH00

Power contactor, AC-3 12 A, 5.5 kW / 400 V 48 V AC, 50 Hz, 3-pole Size S0 Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2 Preferred successor type is >>3RT2024-1AH00<<



Figure similar

Product brand name	SIRIUS
Product designation	power contactor
General technical data	
Size of contactor	SO
Degree of pollution	3
Protection class IP	
• on the front	IP20
• of the terminal	IP00
Mechanical service life (switching cycles)	
 of 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
Reference code acc. to DIN EN 81346-2	Q
Ambient conditions	
Installation altitude at height above sea level	

Maine circuit 3 Number of NO contacts for main contacts 0 Coperating current • at AC-1 at 400 V - at an binent temperature 40 °C rated value 40 A • at AC-1 - up to 690 V at ambient temperature 40 °C rated value 40 A - up to 690 V at ambient temperature 60 °C rated value 35 A - up to 690 V at ambient temperature 60 °C rated value 35 A - up to 690 V at ambient temperature 60 °C rated value 12 A - at 400 V rated value 12 A • at AC-3 - at 400 V rated value • at AC-4 at 400 V rated value 12 A • at AC-3 at 400 V rated value 12 A - at 10 V rated value 35 A - at 110 V rated value 35 A - at 24 V rated value	• maximum	2 000 m
Number of NC contacts for main contacts3Number of NC contacts for main contacts0Operating current0• at AC-1 at 400 V40 A• at AC-140 A• at AC-1 multiple for the perature 40 °C rated value40 A• at AC-1 multiple for the perature 60 °C rated value35 A- multiple for V at ambient temperature 60 °C rated value35 A• at AC-3 multiple for value12 A• at AC-4 at 400 V rated value12 A• at AC-4 at 400 V rated value12 A• at AC-4 at 400 V rated value35 A• at 10 V rated value35 A• at 110 V rated value35 A• at 24 V rated value35 A• at 12 v rated value35 A• at 24 V rated value35 A• at	Main circuit	
Number of NC contacts for main contacts 0 Operating current	Number of poles for main current circuit	3
Operating current at AC-1 at 400 V at ambient temperature 40 °C rated value at AC-1 up to 690 V at ambient temperature 40 °C at AC-1 up to 690 V at ambient temperature 60 °C at AC-3 at AC-3 at AC-3 at AC-3 at AC-4 at 400 V rated value 12.A at AC-4 at 400 V rated value 25.A Operating current at AC-4 at 400 V rated value 35.A at AC-4 at 400 V rated value 35.A at AC-4 at 400 V rated value 35.A at 10 V rated value 35.A at 24 V rated value 35.A at 10 V rated value 35.A at 110 V rated value 35.A at 24.V rated value 35.A at 24.V rated value 35.A at 24.V rated value 35.A at 10.V rated value 35.A at 10.V rated value 35.A at 24.V rated value 35.A at 10.V rated value 35.A at 24.V rated value 35.A at 10.V rated value 35.A at 10.V r	Number of NO contacts for main contacts	3
 • at AC-1 at 400 V - at ambient temperature 40 °C rated value • at AC-1 - up to 690 V at ambient temperature 40 °C rated value - up to 690 V at ambient temperature 60 °C rated value - at 400 V rated value • at AC-3 - at 400 V rated value 12 A • at AC-4 at 400 V rated value 12 A • at AC-4 at 400 V rated value 12 A • at AC-4 at 400 V rated value 12 A • at 400 V rated value 35 A - at 24 V rated value 35 A • at 10 V rated value 35 A - at 24 V rated value 35 A - at 110 V rated value - at 24 V rated value - at 24 V rated value - at 24 V rated value - at 110 V rated value - at 24 V rated value - at 24 V rated value - at 24 V rated value - at 110 V rated value - at 24 V rated value - at 110 V rated value - at 24 V rated value - at 110 V rated value - at 110 V rated value - a	Number of NC contacts for main contacts	0
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	— at ambient temperature 40 °C rated value	40 A
rated value	● at AC-1	
rated value • at AC-3 - at 400 V rated value • at AC-4 at 400 V rated value • at AC-4 at 400 V rated value • at 1 current path at DC-1 - at 24 V rated value • at 110 V rated value • at 24 V rated value • at 110 V rated value • at 24 V rated value • at 110 V rated value • at 110 V rated value • at 24 V rated value • at 110 V rated value • at AC-1 - at 400 V rated value • at AC-2 at 400 V rated value		40 A
- at 400 V rated value 12 A • at AC-4 at 400 V rated value 12.5 A Operating current - - at 1 current path at DC-1 - - at 24 V rated value 35 A - at 110 V rated value 4.5 A • with 2 current paths in series at DC-1 - - at 24 V rated value 35 A - at 110 V rated value 20 A - at 110 V rated value 20 A - at 110 V rated value 25 A - at 24 V rated value 25 A - at 24 V rated value 35 A - at 110 V rated value 35 A - at 24 V rated value 35 A - at 110 V rated value 35 A <t< td=""><td></td><td>35 A</td></t<>		35 A
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Operating current• at 1 current path at DC-1- at 24 V rated value- at 110 V rated value• with 2 current paths in series at DC-1- at 24 V rated value- at 110 V rated value- at 110 V rated value- at 110 V rated value- at 24 V rated value- at 110 V rated value- at 24 V rated value- at 110 V rated value- at 24 V rated value- at 110 V rated value- at 25 A- at 110 V rated value- at 40 V rated value <td< td=""><td>— at 400 V rated value</td><td>12 A</td></td<>	— at 400 V rated value	12 A
 e at 1 current path at DC-1 at 24 V rated value at 24 V rated value at 110 V rated value at 110 V rated value e at 110 V rated value at 24 V rated value at 24 V rated value at 24 V rated value at 110 V rated value at 24 V rated value at 10 V rated value at 20 A at 110 V rated value at 24 V rated value at 24 V rated value at 24 V rated value at 10 V rated value at 24 V rated value at 10 V rated value at 24 V rated value at 10 V rated value at 24 V rated value at 24 V rated value at 24 V rated value at 25 A 	• at AC-4 at 400 V rated value	12.5 A
- at 24 V rated value 35 Å - at 110 V rated value 4.5 Å - with 2 current paths in series at DC-1 - at 24 V rated value - at 24 V rated value 35 Å - at 110 V rated value 35 Å - at 24 V rated value 35 Å - at 110 V rated value 25 Å - at 24 V rated value 25 Å - at 110 V rated value 20 Å - at 24 V rated value 20 Å - at 110 V rated value 20 Å - at 110 V rated value 25 Å - at 24 V rated value 15 Å - at 24 V rated value 35 Å - at 110 V rated value 15 Å - at 24 V rated value 35 Å - at 110 V rated value 35 Å - at 100 V rated value 35 Å - at 400 V rated value 23 kW <t< td=""><td>Operating current</td><td></td></t<>	Operating current	
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- at 24 V rated value 35 A - at 110 V rated value 35 A • with 3 current paths in series at DC-1 - - at 24 V rated value 35 A - at 24 V rated value 35 A - at 10 V rated value 35 A - at 10 V rated value 25 A Operating current 20 A - at 24 V rated value 20 A - at 10 V rated value 25 A - at 24 V rated value 35 A - at 24 V rated value 25 A - at 24 V rated value 35 A - at 24 V rated value 35 A - at 24 V rated value 35 A - at 110 V rated value 35 A - at 24 V rated value 35 A - at 40 V rated value 25 A * at AC-1 23 kW - at 400 V rated value 23 kW - at 400 V rated value	— at 110 V rated value	4.5 A
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• with 3 current paths in series at DC-135 A- at 24 V rated value35 A- at 110 V rated value35 AOperating current-• at 1 current path at DC-3 at DC-5 at 24 V rated value20 A- at 24 V rated value2.5 A• with 2 current paths in series at DC-3 at DC-5 at 24 V rated value35 A- at 110 V rated value2.5 A• with 2 current paths in series at DC-3 at DC-5 at 24 V rated value35 A- at 24 V rated value35 A- at 24 V rated value35 A- at 110 V rated value35 A- at 110 V rated value35 A- at 24 V rated value35 A- at 24 V rated value35 A- at 24 V rated value35 A- at 110 V rated value23 KW- at 400 V rated value23 kW- at 400 V rated value5.5 kW	— at 24 V rated value	35 A
- at 24 V rated value35 A- at 110 V rated value35 AOperating current35 A• at 1 current path at DC-3 at DC-520 A- at 24 V rated value20 A- at 110 V rated value2.5 A• with 2 current paths in series at DC-3 at DC-535 A- at 24 V rated value35 A- at 24 V rated value35 A- at 24 V rated value35 A- at 110 V rated value15 A- at 24 V rated value35 A- at 110 V rated value35 A- at 24 V rated value35 A- at 24 V rated value35 A- at 24 V rated value35 A- at 400 V rated value23 kW- at 400 V rated value23 kW	— at 110 V rated value	35 A
at 110 V rated value35 AOperating current	 with 3 current paths in series at DC-1 	
Operating current• at 1 current path at DC-3 at DC-5- at 24 V rated value20 A- at 110 V rated value2.5 A• with 2 current paths in series at DC-3 at DC-5- at 24 V rated value35 A- at 110 V rated value15 A• with 3 current paths in series at DC-3 at DC-5- at 24 V rated value15 A• with 3 current paths in series at DC-3 at DC-5- at 24 V rated value15 A• with 3 current paths in series at DC-3 at DC-5- at 24 V rated value35 A- at 110 V rated value35 A- at 110 V rated value20 A• at AC-1- at 400 V rated value23 kW• at AC-2 at 400 V rated value5.5 kW	— at 24 V rated value	35 A
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- at 24 V rated value20 A- at 24 V rated value2.5 A- with 2 current paths in series at DC-3 at DC-535 A- at 24 V rated value35 A- at 110 V rated value15 A- at 24 V rated value35 A- at 110 V rated value35 A- at 110 V rated value23 KW- at 400 V rated value55 KW	Operating current	
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 with 2 current paths in series at DC-3 at DC-5 at 24 V rated value at 24 V rated value at 110 V rated value b A with 3 current paths in series at DC-3 at DC-5 at 24 V rated value 35 A at 24 V rated value 35 A operating power at AC-1 at 400 V rated value 23 kW at AC-2 at 400 V rated value 55 kW 	— at 24 V rated value	20 A
- at 24 V rated value35 A- at 110 V rated value15 A• with 3 current paths in series at DC-3 at DC-5 at 24 V rated value35 A- at 110 V rated value35 A- at 110 V rated value35 A- at 10 V rated value23 kW- at 400 V rated value23 kW• at AC-2 at 400 V rated value5.5 kW	— at 110 V rated value	2.5 A
 at 110 V rated value at 110 V rated value with 3 current paths in series at DC-3 at DC-5 at 24 V rated value 35 A 35 A 35 A 36 A 37 A 38 A 39 A 30 A 	 with 2 current paths in series at DC-3 at DC-5 	
 with 3 current paths in series at DC-3 at DC-5 at 24 V rated value 35 A at 110 V rated value 35 A Operating power at AC-1 at 400 V rated value 23 kW at AC-2 at 400 V rated value 5.5 kW 	— at 24 V rated value	35 A
- at 24 V rated value 35 A - at 110 V rated value 35 A Operating power - at AC-1 - at 400 V rated value 23 kW • at AC-2 at 400 V rated value 5.5 kW	— at 110 V rated value	15 A
- at 110 V rated value 35 A Operating power - • at AC-1 - - at 400 V rated value 23 kW • at AC-2 at 400 V rated value 5.5 kW	 with 3 current paths in series at DC-3 at DC-5 	
Operating power Image: Comparison of the second s	— at 24 V rated value	35 A
 at AC-1 at 400 V rated value at AC-2 at 400 V rated value 5.5 kW 	— at 110 V rated value	35 A
at 400 V rated value23 kW• at AC-2 at 400 V rated value5.5 kW	Operating power	
• at AC-2 at 400 V rated value 5.5 kW	• at AC-1	
	— at 400 V rated value	23 kW
• at AC-3	• at AC-2 at 400 V rated value	5.5 kW
	• at AC-3	

— at 400 V rated value — at 500 V rated value	5.5 kW 7.5 kW
— at 690 V rated value	7.5 kW
Power loss [W] at AC-3 at 400 V for rated value of	0.5 W
the operating current per conductor	

Control circuit/ Control	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz rated value	48 V
Control supply voltage frequency	
• 1 rated value	50 Hz
Operating range factor control supply voltage rated	
value of magnet coil at AC	
● at 50 Hz	0.8 1.1
Apparent pick-up power of magnet coil at AC	61 V·A
Inductive power factor with closing power of the coil	0.82
Apparent holding power of magnet coil at AC	7.8 V·A
Inductive power factor with the holding power of the coil	0.24

Auxiliary circuit

Auxiliary circuit	
Number of NC contacts for auxiliary contacts	
 instantaneous contact 	0
Number of NO contacts for auxiliary contacts	
 instantaneous contact 	0
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
Contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

Short-circuit protection

Design of the fuse link

• for short-circuit protection of the main circuit

- with type of coordination 1 required	fuse gL/gG: 63 A
— with type of assignment 2 required	fuse gL/gG: 25 A
 for short-circuit protection of the auxiliary switch 	fuse gL/gG: 10 A
required	
Installation/ mounting/ dimensions	
• (mounting type)	screw and snap-on mounting onto 35 mm standard mounting rail
	according to DIN EN 50022
 Mounting type Side-by-side mounting 	Yes
(height)	85 mm
Width	45 mm
Depth	91 mm
Required spacing	
 for grounded parts 	
— at the side	6 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-sections	
 for main contacts 	
— solid	2x (1 2.5 mm²), 2x (2.5 6 mm²), max. 2x 10 mm²
— single or multi-stranded	2x (1 2,5 mm²), 2x (2,5 6 mm²), max. 2x 10 mm²
 finely stranded with core end processing 	2x (1 2.5 mm²), 2x (2.5 6 mm²)
 at AWG conductors for main contacts 	2x (16 12), 2x (14 10), 1x 8
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)
3014	
 — finely stranded with core end processing 	2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²)
 finely stranded with core end processing 	2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²)

General Produc	t Approval			Functional Safety/Safety of Machinery	Declaration of Conformity
	CSA		EHC	Type Examination Certificate	EG-Konf.
Declaration of	ation of Test Certificates		Marine / Shipping		
Conformity					
<u>Miscellaneous</u>	Special Test Certi- ficate	Type Test Certific- ates/Test Report	ABS	Lloyd's Register	

Marine / Ship	ping	other		Railway	
RMES	DNV-GL	Miscellaneous	Confirmation	Special Test Certi- ficate	

Further information

RMRS

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

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1024-1AH00

Cax online generator

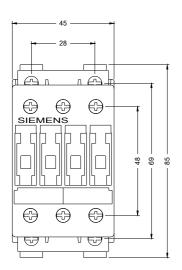
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1024-1AH00

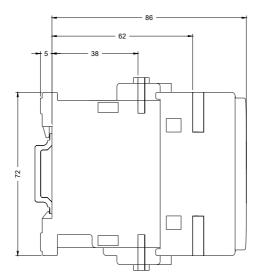
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT1024-1AH00

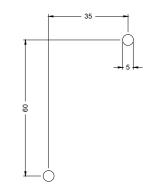
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1024-1AH00&lang=en

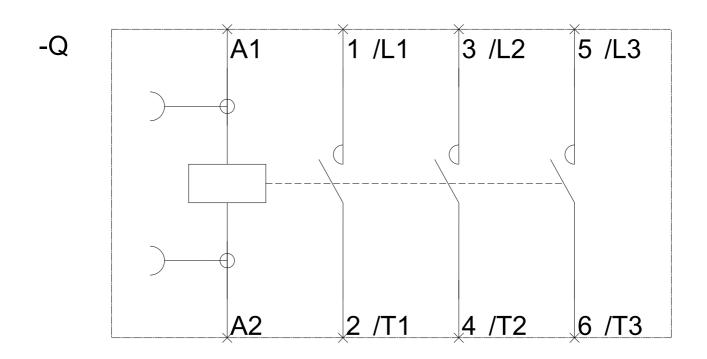
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT1024-1AH00/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1024-1AH00&objecttype=14&gridview=view1









last modified:

04/30/2019