

Contactor, AC-1, 140 A, 48 V AC, 50 / 60 Hz, 4-pole, Size S3, Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2



Figure similar

product brand name	SIRIUS
Product designation	power contactor
General technical data	
Size of contactor	S3
<ul style="list-style-type: none"> Insulation voltage rated value 	1 000 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
<ul style="list-style-type: none"> between coil and main contacts acc. to EN 60947-1 protection class IP on the front Protection class IP of the terminal 	690 V IP20; IP20 on the front with cover / box terminal IP00
Shock resistance at rectangular impulse	
<ul style="list-style-type: none"> at AC 	6,8g / 5 ms, 4g / 10 ms
Shock resistance with sine pulse	
<ul style="list-style-type: none"> at AC 	10,6g / 5 ms, 6,2g / 10 ms
Mechanical service life (switching cycles)	

<ul style="list-style-type: none"> • of contactor typical 	10 000 000
<ul style="list-style-type: none"> • of the contactor with added electronics-compatible auxiliary switch block typical 	5 000 000
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • maximum 	2 000 m
Ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> • during storage 	-55 ... +80 °C

Main circuit	
Number of poles for main current circuit	4
Number of NO contacts for main contacts	4
Number of NC contacts for main contacts	0
Operating current	
<ul style="list-style-type: none"> • at AC-1 at 400 V <ul style="list-style-type: none"> — at ambient temperature 40 °C rated value 	140 A
<ul style="list-style-type: none"> • at AC-1 <ul style="list-style-type: none"> — up to 690 V at ambient temperature 40 °C rated value 	140 A
<ul style="list-style-type: none"> — up to 690 V at ambient temperature 60 °C rated value 	120 A
Connectable conductor cross-section in main circuit at AC-1	
<ul style="list-style-type: none"> • at 60 °C minimum permissible 	35 mm ²
<ul style="list-style-type: none"> • at 40 °C minimum permissible 	50 mm ²
Operating current	
<ul style="list-style-type: none"> • at 1 current path at DC-1 <ul style="list-style-type: none"> — at 24 V rated value 	80 A
<ul style="list-style-type: none"> — at 110 V rated value 	9 A
<ul style="list-style-type: none"> • with 2 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value 	80 A
<ul style="list-style-type: none"> — at 110 V rated value 	80 A
<ul style="list-style-type: none"> • with 3 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value 	80 A
<ul style="list-style-type: none"> — at 110 V rated value 	80 A
Operating current	
<ul style="list-style-type: none"> • at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value 	20 A
<ul style="list-style-type: none"> — at 110 V rated value 	2.5 A

<ul style="list-style-type: none"> with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> at 24 V rated value at 110 V rated value with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> at 24 V rated value at 110 V rated value 	80 A 80 A 80 A 80 A
Operating power	
<ul style="list-style-type: none"> at AC-1 <ul style="list-style-type: none"> at 230 V at 60 °C rated value at 400 V rated value 	53 kW 92 kW
Thermal short-time current limited to 10 s	600 A
No-load switching frequency	
<ul style="list-style-type: none"> at AC 	5 000 1/h
Operating frequency	
<ul style="list-style-type: none"> at AC-1 maximum 	1 000 1/h

Control circuit/ Control	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
<ul style="list-style-type: none"> at 50 Hz rated value at 60 Hz rated value 	48 V 48 V
control supply voltage frequency	
<ul style="list-style-type: none"> 1 rated value 2 rated value 	50 Hz 60 Hz
Operating range factor control supply voltage rated value of magnet coil at AC	
<ul style="list-style-type: none"> at 50 Hz at 60 Hz 	0.8 ... 1.1 0.85 ... 1.1
Apparent pick-up power of magnet coil at AC	298 V·A
Inductive power factor with closing power of the coil	0.7
Apparent holding power of magnet coil at AC	27 V·A
Inductive power factor with the holding power of the coil	0.29
Closing delay	
<ul style="list-style-type: none"> at AC 	20 ... 50 ms
Opening delay	
<ul style="list-style-type: none"> at AC 	10 ... 25 ms
Arcing time	10 ... 15 ms

Auxiliary circuit	
Number of NC contacts for auxiliary contacts	
<ul style="list-style-type: none"> instantaneous contact 	0
Number of NO contacts for auxiliary contacts	
<ul style="list-style-type: none"> 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)

UL/CSA ratings

Contact rating of auxiliary contacts according to UL	A600 / Q600
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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: 250 A
— with type of assignment 2 required	fuse gL/gG: 160 A
• for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A

Installation/ mounting/ dimensions

Mounting type	screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail
• Side-by-side mounting	Yes
Height	146 mm
Width	93 mm
Depth	139 mm
Required spacing	
• for grounded parts	
— at the side	6 mm

Connections/ Terminals

• Type of electrical connection for main current circuit	screw-type terminals
• Type of electrical connection for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (2.5 ... 16 mm ²)

- stranded
- single or multi-stranded
- finely stranded with core end processing
- finely stranded without core end processing
- at AWG conductors for main contacts

2x (10 ... 50 mm²)
 2x (2,5 ... 16 mm²)
 2x (2.5 ... 35 mm²)
 2x (10 ... 35 mm²)
 2x (10 ... 1/0)





Type of connectable conductor cross-sections


- for auxiliary contacts
 - solid
 - finely stranded with core end processing
- at 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			EMC	Functional Safety/Safety of Machinery
 CCC	 CSA	 UL		 RCM
				Type Examination Certificate

Declaration of Conformity	Test Certificates	Marine / Shipping		
 EG-Konf.	Miscellaneous Special Test Certificate	 ABS	 LRS	 RINA

Marine / Shipping	other	Railway	
 RMRS	Confirmation	Miscellaneous	Special Test Certificate

Further information

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=3RT1346-1AH20>

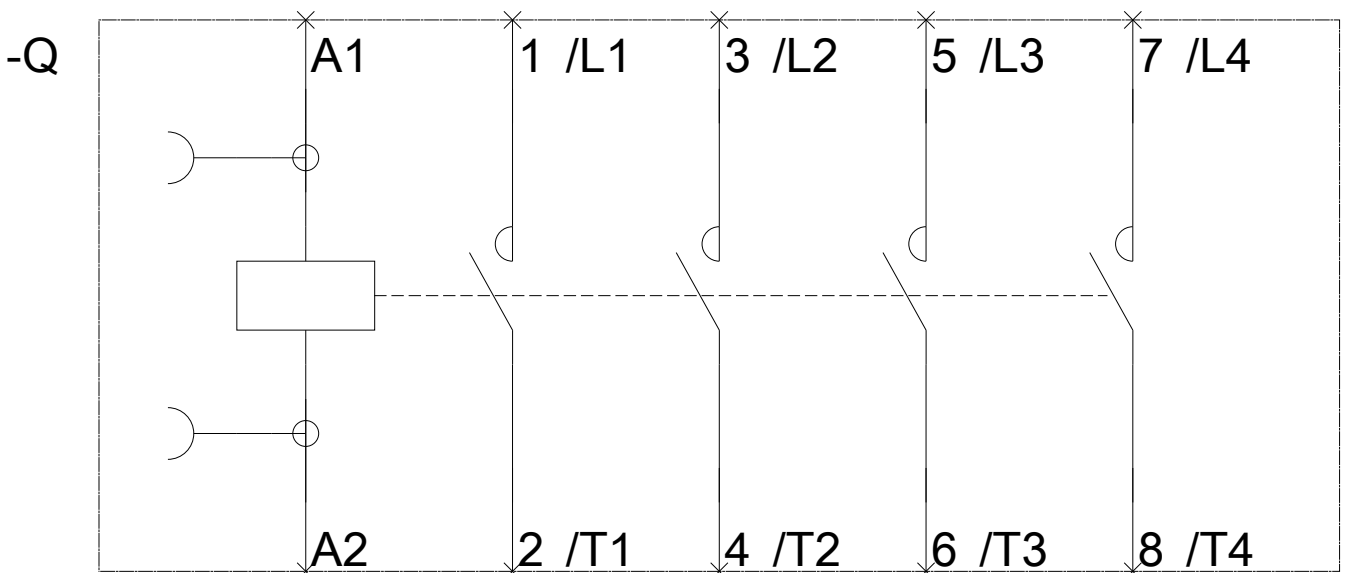
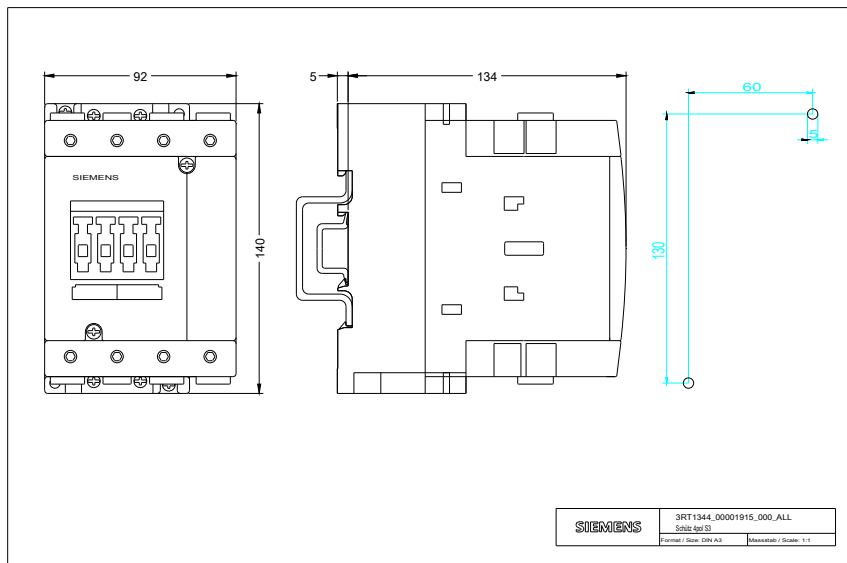
Cax online generator
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1346-1AH20>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1346-1AH20>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1346-1AH20&lang=en

Characteristic: Tripping characteristics, I^2t , Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1346-1AH20/char>

Further characteristics (e.g. electrical endurance, switching frequency)
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1346-1AH20&objecttype=14&gridview=view1>



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