

Contactor, AC-1, 140 A / 400 V, 125 V DC, 3-pole, Size S3, Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2



product brand name	SIRIUS
Product designation	power contactor
General technical data	
Size of contactor	S3
• Insulation voltage rated value	1 000 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
• between coil and main contacts acc. to EN 60947-1	690 V
• protection class IP on the front	IP20; IP20 on the front with cover / box terminal
• Protection class IP of the terminal	IP00
Shock resistance at rectangular impulse	
• at DC	6,8g / 5 ms, 4g / 10 ms
Shock resistance with sine pulse	
• at DC	10,6g / 5 ms, 6,2g / 10 ms
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	
• maximum	2 000 m
Ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C

Main circuit

Number of poles for main current circuit	3
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	140 A
• 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	140 A 130 A
• at AC-3 — at 400 V rated value — at 690 V rated value	44 A 44 A
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	35 mm ²
• at 40 °C minimum permissible	50 mm ²
Operating current	
• at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value	130 A 12 A
• with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value	130 A 130 A
• with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value	130 A 130 A
Operating current	
• at 1 current path at DC-3 at DC-5	

— at 24 V rated value	6 A
— at 110 V rated value	1.25 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	130 A
— at 110 V rated value	130 A
• with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	130 A
— at 110 V rated value	130 A
Operating power	
• at AC-1	
— at 230 V at 60 °C rated value	50 kW
— at 400 V rated value	86 kW
— at 690 V rated value	148 kW
— at 690 V at 60 °C rated value	148 kW
• at AC-2 at 400 V rated value	22 kW
• at AC-3	
— at 230 V rated value	12.7 kW
— at 400 V rated value	22 kW
— at 500 V rated value	29.9 kW
— at 690 V rated value	38.2 kW
Thermal short-time current limited to 10 s	600 A
No-load switching frequency	
• at DC	1 000 1/h
Operating frequency	
• at AC-1 maximum	650 1/h

Control circuit/ Control

Type of voltage of the control supply voltage	DC
Control supply voltage at DC	
• rated value	125 V
Operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
• Full-scale value	1.1
Closing power of magnet coil at DC	15 W
Holding power of magnet coil at DC	15 W
Closing delay	
• at DC	90 ... 230 ms
Opening delay	
• at DC	14 ... 20 ms
Arcing time	10 ... 15 ms

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)

UL/CSA ratings

Contact rating of auxiliary contacts according to UL	A600 / Q600
---	-------------

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 gR: 250 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	70 mm
Depth	152 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 — stranded — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing • at AWG conductors for main contacts	2x (2.5 ... 16 mm ²) 2x (10 ... 50 mm ²) 2x (2,5 ... 16 mm ²) 2x (2.5 ... 35 mm ²) 2x (10 ... 35 mm ²) 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 mm ²), 2x (0.75 ... 2.5 mm ²), max. 2x (0.75 ... 4 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 1x 12

Certificates/ approvals

General Product Approval			EMC	Functional Safety/Safety of Machinery
 CCC	 CSA	 UL	 EAC	 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=3RT1446-1BG40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1446-1BG40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1446-1BG40>

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

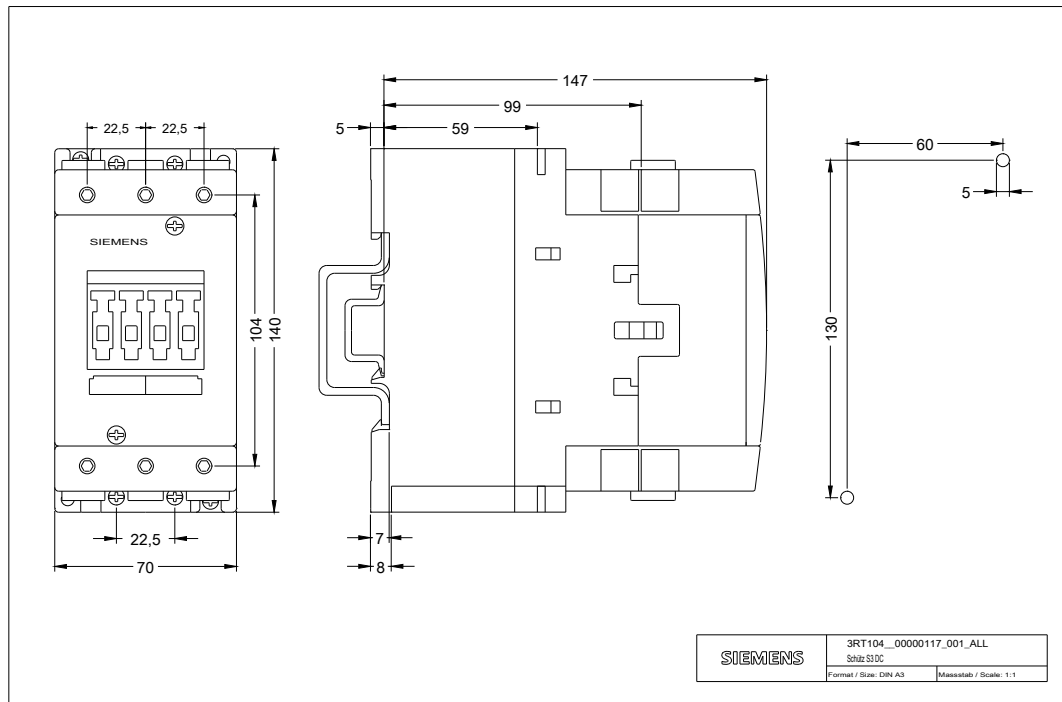
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1446-1BG40&lang=en

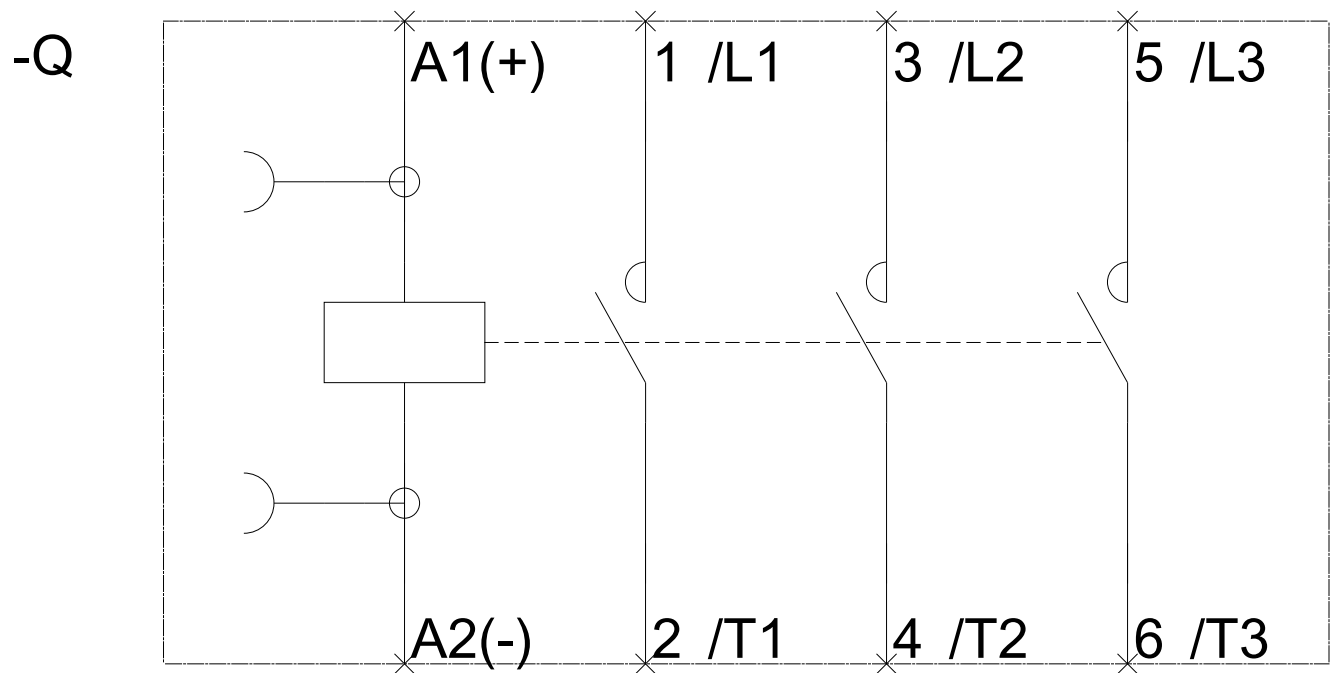
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1446-1BG40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1446-1BG40&objecttype=14&gridview=view1>





last modified:

08/13/2020