

Contactor relay, 4 NO, 24 V DC, Size S00, Spring-type terminal



product brand name	SIRIUS
product designation	Auxiliary contactor
product type designation	3RH2
General technical data	
size of contactor	S00
product extension	
• auxiliary switch	Yes
insulation voltage	
• with degree of pollution 3 at AC rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 kV
shock resistance at rectangular impulse	
• at DC	10g / 5 ms, 5g / 10 ms
shock resistance with sine pulse	
• at DC	15g / 5 ms, 8g / 10 ms
mechanical service life (switching cycles)	
• of contactor typical	30 000 000
• of the contactor with added electronically optimized 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 IEC 81346-2	K

Ambient conditions

<ul style="list-style-type: none"> installation altitude at height above sea level 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

no-load switching frequency	
<ul style="list-style-type: none"> at AC 	10 000 1/h
<ul style="list-style-type: none"> at DC 	10 000 1/h

Control circuit/ Control

type of voltage of the control supply voltage	DC
control supply voltage at DC	
<ul style="list-style-type: none"> rated value 	24 V
operating range factor control supply voltage rated value of magnet coil at DC	
<ul style="list-style-type: none"> initial value 	0.8
<ul style="list-style-type: none"> full-scale value 	1.1
closing power of magnet coil at DC	4 W
holding power of magnet coil at DC	4 W
closing delay	
<ul style="list-style-type: none"> at DC 	30 ... 100 ms
opening delay	
<ul style="list-style-type: none"> at DC 	7 ... 13 ms
arcing time	10 ... 15 ms

Auxiliary circuit

number of NO contacts for auxiliary contacts	4
<ul style="list-style-type: none"> instantaneous contact 	4
identification number and letter for switching elements	40 E
operational current at AC-12 maximum	10 A
<ul style="list-style-type: none"> operational current at AC-15 at 230 V rated value 	10 A
<ul style="list-style-type: none"> operational current at AC-15 at 400 V rated value 	3 A
<ul style="list-style-type: none"> operational current at AC-15 at 500 V rated value 	2 A
<ul style="list-style-type: none"> operational current at AC-15 at 690 V rated value 	1 A

operational current at 1 current path at DC-12	
• at 24 V rated value	10 A
• at 110 V rated value	3 A
• at 220 V rated value	1 A
• at 440 V rated value	0.3 A
• at 600 V rated value	0.15 A
operational current with 2 current paths in series at DC-12	
• at 24 V rated value	10 A
• at 60 V rated value	10 A
• at 110 V rated value	4 A
• at 220 V rated value	2 A
• at 440 V rated value	1.3 A
• at 600 V rated value	0.65 A
operational current with 3 current paths in series at DC-12	
• at 24 V rated value	10 A
• at 60 V rated value	10 A
• at 110 V rated value	10 A
• at 220 V rated value	3.6 A
• at 440 V rated value	2.5 A
• at 600 V rated value	1.8 A
operating frequency at DC-12 maximum	1 000 1/h
operational current at 1 current path at DC-13	
• at 24 V rated value	10 A
• at 110 V rated value	1 A
• at 220 V rated value	0.3 A
• at 440 V rated value	0.14 A
• at 600 V rated value	0.1 A
operational current with 2 current paths in series at DC-13	
• at 24 V rated value	10 A
• at 60 V rated value	3.5 A
• at 110 V rated value	1.3 A
• at 220 V rated value	0.9 A
• at 440 V rated value	0.2 A
• at 600 V rated value	0.1 A
operational current with 3 current paths in series at DC-13	
• at 24 V rated value	10 A
• at 60 V rated value	4.7 A
• at 110 V rated value	3 A

<ul style="list-style-type: none"> • at 220 V rated value • at 440 V rated value • at 600 V rated value 	<p>1.2 A</p> <p>0.5 A</p> <p>0.26 A</p>
operating frequency at DC-13 maximum	1 000 1/h
design of the miniature circuit breaker	C characteristic: 6 A; 0.4 kA
<ul style="list-style-type: none"> • for short-circuit protection of the auxiliary circuit up to 230 V 	
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	fuse gL/gG: 10 A
<ul style="list-style-type: none"> • for short-circuit protection of the auxiliary switch required 	

Installation/ mounting/ dimensions		
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface	
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail	
height	70 mm	
width	45 mm	
depth	73 mm	
required spacing		
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — upwards — downwards — at the side 		
<ul style="list-style-type: none"> • for grounded parts <ul style="list-style-type: none"> — forwards — upwards — at the side — downwards 		
<ul style="list-style-type: none"> • for live parts <ul style="list-style-type: none"> — forwards — upwards — downwards — at the side 		
		10 mm
		10 mm
		10 mm
		0 mm
		10 mm
		10 mm
		6 mm
		10 mm
		10 mm

Connections/ Terminals	
type of electrical connection	spring-loaded terminals
<ul style="list-style-type: none"> • for auxiliary and control circuit 	

- type of connectable conductor cross-sections for auxiliary contacts
 - solid or stranded
 - finely stranded with core end processing
 - finely stranded without core end processing
- type of connectable conductor cross-sections at AWG cables for auxiliary contacts

2x (0,5 ... 4 mm²)
 2x (0.5 ... 2.5 mm²)
 2x (0.5 ... 2.5 mm²)
 2x (20 ... 12)

Safety related data

B10 value	
<ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 	1 000 000; With 0.3 x I _e
proportion of dangerous failures	
<ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 	40 % 73 %
failure rate [FIT]	
<ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 	100 FIT
product function	
<ul style="list-style-type: none"> • positively driven operation acc. to IEC 60947-5-1 	Yes
T1 value for proof test interval or service life acc. to IEC 61508	20 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front

Certificates/ approvals

General Product Approval	EMC
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[KC](#)



Declaration of Conformity	Test Certificates	Marine / Shipping
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[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping	other
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[Confirmation](#)

other



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=3RH2140-2BB40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2140-2BB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-2BB40>

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

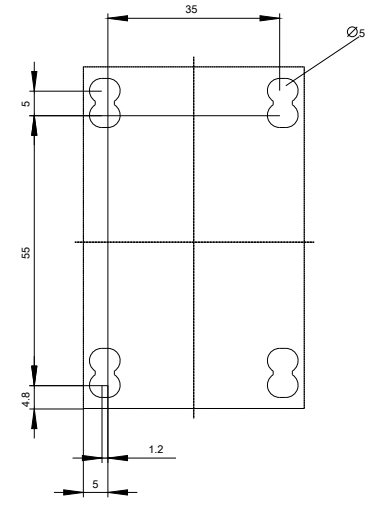
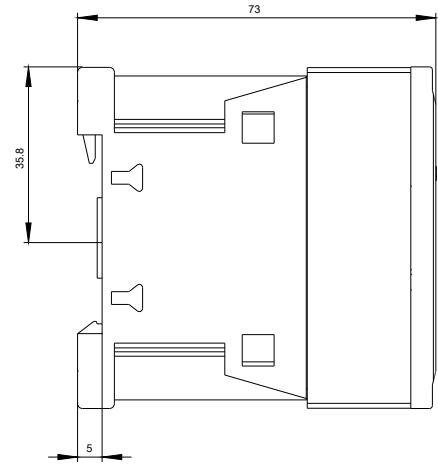
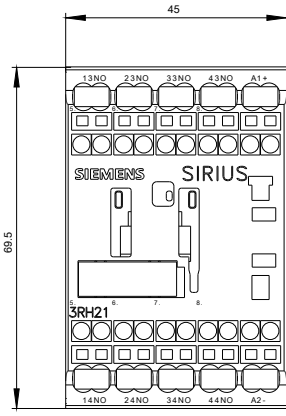
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2140-2BB40&lang=en

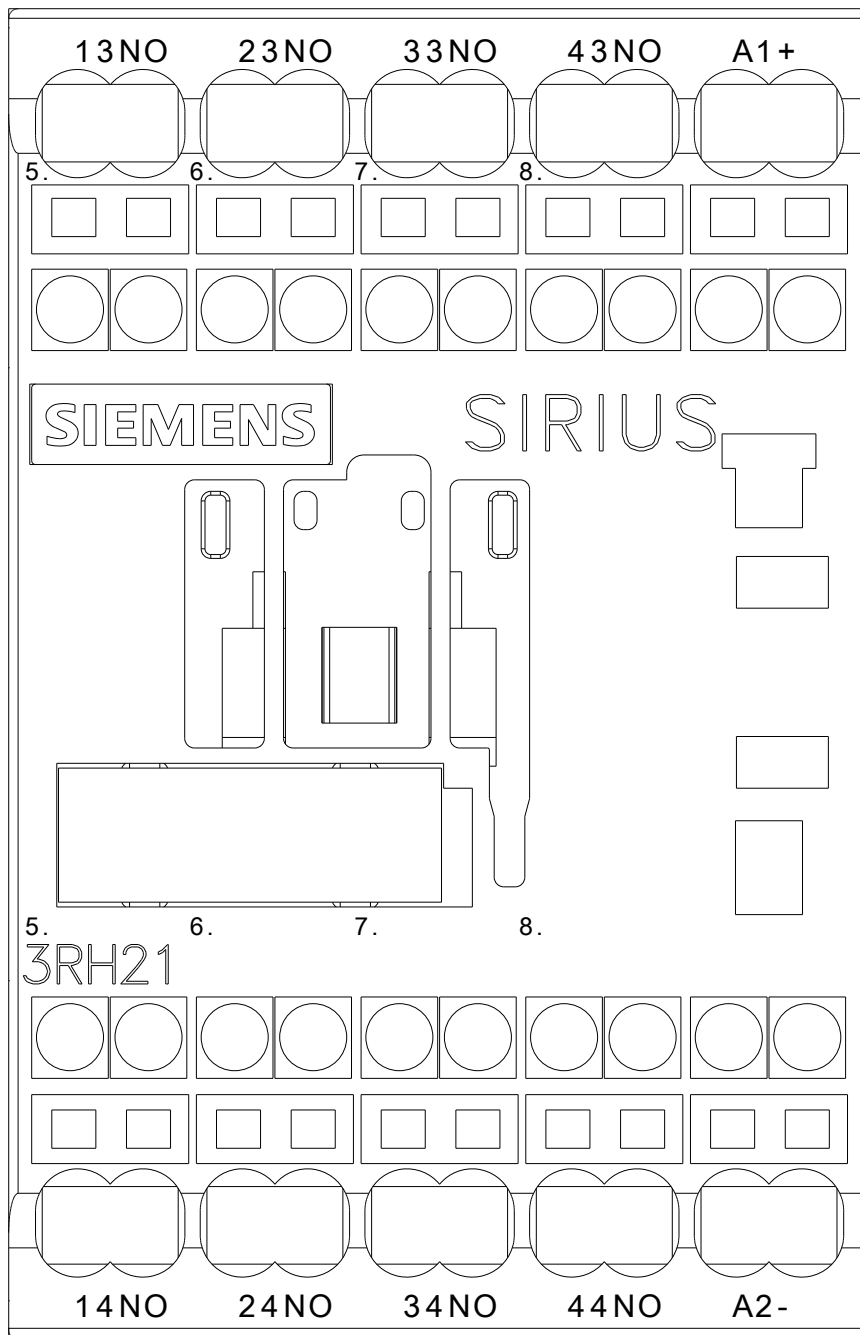
Characteristic: Tripping characteristics, I^t, Let-through current

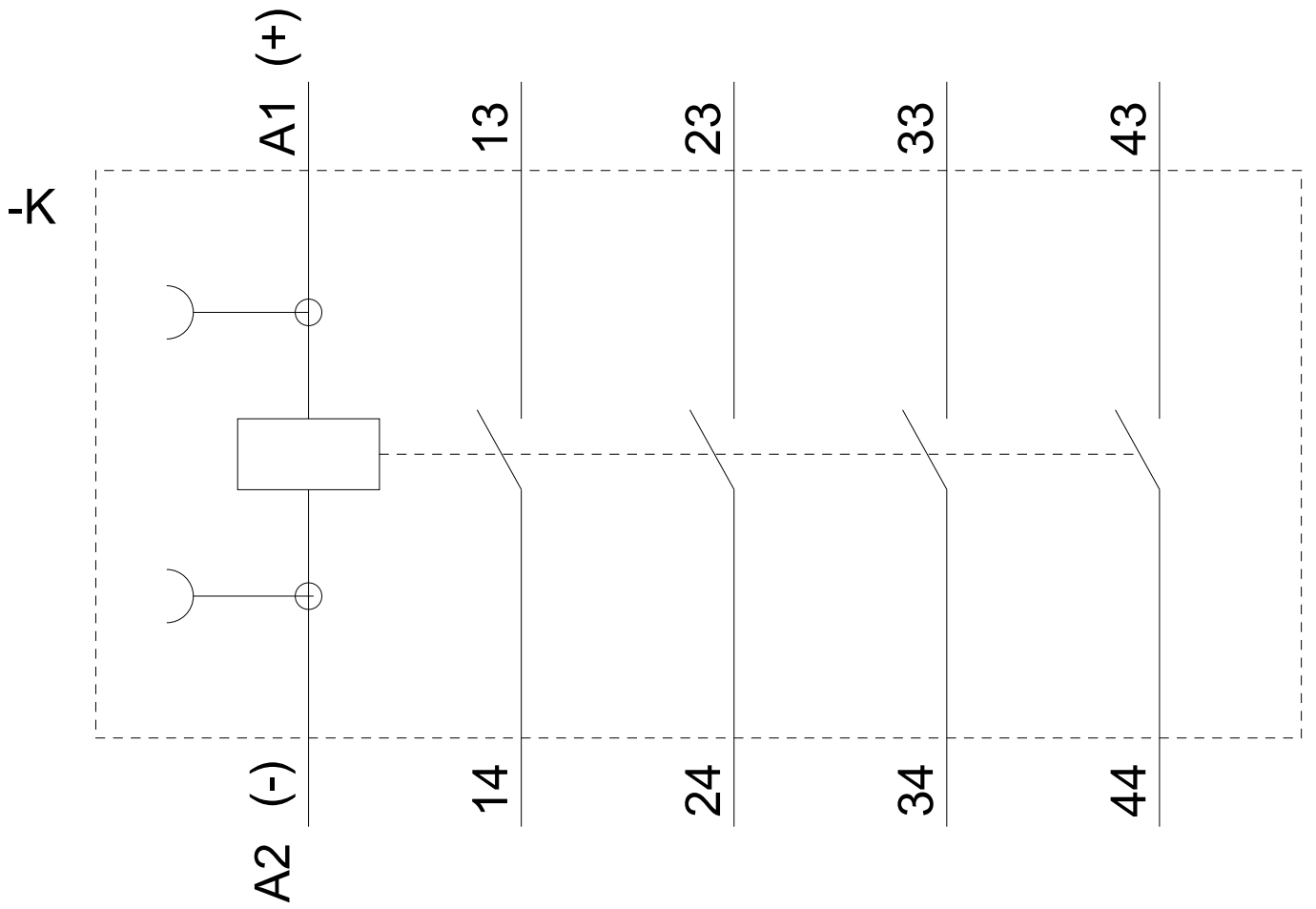
<https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-2BB40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2140-2BB40&objecttype=14&gridview=view1>







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