

Coupling contactor relay, 3 NO + 1 NC, 24 V DC, 0.85 ... 1.85* US, with integrated diode, Size S00, Spring-type terminal



Product brand name	SIRIUS
Product designation	Coupling relay for switching auxiliary circuits
Product type designation	3RH2
General technical data	
Size of contactor	S00
Product extension	No
• Auxiliary switch	
Degree of pollution	3
Surge voltage resistance rated value	6 kV
Protection class IP	IP20
• on the front	
Shock resistance at rectangular impulse	10g / 5 ms, 5g / 10 ms
• at DC	
Shock resistance with sine pulse	15g / 5 ms, 8g / 10 ms
• at DC	
Mechanical service life (switching cycles)	30 000 000
• of contactor typical	
Reference code acc. to DIN EN 81346-2	K
Reference code acc. to DIN EN 61346-2	K

Ambient conditions

Installation altitude at height above sea level

- maximum 2 000 m

Main circuit

No-load switching frequency

- at AC 10 000 1/h
- at DC 10 000 1/h

Control circuit/ Control

Type of voltage of the control supply voltage

DC

Control supply voltage at DC

- rated value 24 V

Operating range factor control supply voltage rated value of magnet coil at DC

- initial value 0.85
- Full-scale value 1.85

Design of the surge suppressor

with diode

Closing power of magnet coil at DC

1.6 W

Holding power of magnet coil at DC

1.6 W

Closing delay

- at DC 30 ... 100 ms

Opening delay

- at DC 7 ... 13 ms

Arcing time

10 ... 15 ms

Auxiliary circuit

Number of NC contacts for auxiliary contacts

1

- instantaneous contact 1

Number of NO contacts for auxiliary contacts

3

- instantaneous contact 3

Identification number and letter for switching elements

31 E

Operating current at AC-12 maximum

10 A

Operating current at AC-15

- at 230 V rated value 10 A
- at 400 V rated value 3 A
- at 500 V rated value 2 A
- at 690 V rated value 1 A

Operating 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

<ul style="list-style-type: none"> • at 600 V rated value 	0.15 A
Operating current with 2 current paths in series at DC-12	
<ul style="list-style-type: none"> • at 24 V rated value • at 60 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value 	10 A 10 A 4 A 2 A 1.3 A 0.65 A
Operating current with 3 current paths in series at DC-12	
<ul style="list-style-type: none"> • at 24 V rated value • at 60 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value 	10 A 10 A 10 A 3.6 A 2.5 A 1.8 A
Operating frequency at DC-12 maximum	1 000 1/h
Operating current at 1 current path at DC-13	
<ul style="list-style-type: none"> • at 24 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value 	10 A 1 A 0.3 A 0.14 A 0.1 A
Operating current with 2 current paths in series at DC-13	
<ul style="list-style-type: none"> • at 24 V rated value • at 60 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value 	10 A 3.5 A 1.3 A 0.9 A 0.2 A 0.1 A
Operating current with 3 current paths in series at DC-13	
<ul style="list-style-type: none"> • at 24 V rated value • at 60 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value 	10 A 4.7 A 3 A 1.2 A 0.5 A 0.26 A
Operating frequency at DC-13 maximum	1 000 1/h
Design of the miniature circuit breaker	

<ul style="list-style-type: none"> for short-circuit protection of the auxiliary circuit up to 230 V 	C characteristic: 6 A; 0.4 kA
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 <ul style="list-style-type: none"> for short-circuit protection of the auxiliary switch required 	fuse gL/gG: 10 A
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
Mounting type	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 10 mm — upwards 10 mm — downwards 10 mm — at the side 0 mm for grounded parts <ul style="list-style-type: none"> — forwards 10 mm — upwards 10 mm — at the side 6 mm — downwards 10 mm for live parts <ul style="list-style-type: none"> — forwards 10 mm — upwards 10 mm — downwards 10 mm — at the side 6 mm 	
Connections/Terminals	
Type of electrical connection <ul style="list-style-type: none"> for auxiliary and control current circuit 	spring-loaded terminals
Type of connectable conductor cross-sections <ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> — single or multi-stranded 2x (0,5 ... 4 mm²) — finely stranded with core end processing 2x (0.5 ... 2.5 mm²) 	

- finely stranded without core end processing
- at AWG conductors for auxiliary contacts

2x (0.5 ... 2.5 mm²)

2x (20 ... 12)

Safety related data

B10 value	
• with high demand rate acc. to SN 31920	1 000 000; With 0.3 x I _e
Proportion of dangerous failures	
• with low demand rate acc. to SN 31920	40 %
• with high demand rate acc. to SN 31920	73 %
Failure rate [FIT]	
• with low demand rate acc. to SN 31920	100 FIT
Product function	
• 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

Certificates/approvals

General Product Approval

Functional Safety/Safety of Machinery



CCC



CSA



UL

[KC](#)



[Type Examination Certificate](#)

Declaration of Conformity

Test Certificates

Marine / Shipping



EG-Konf.

[Miscellaneous](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS



LRS

Marine / Shipping

other



PRS



RINA



RMRS



DNV-GL
DNVGL.COM/AF

[Confirmation](#)



VDE

Further information

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=3RH2131-2VB40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2131-2VB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2131-2VB40>

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

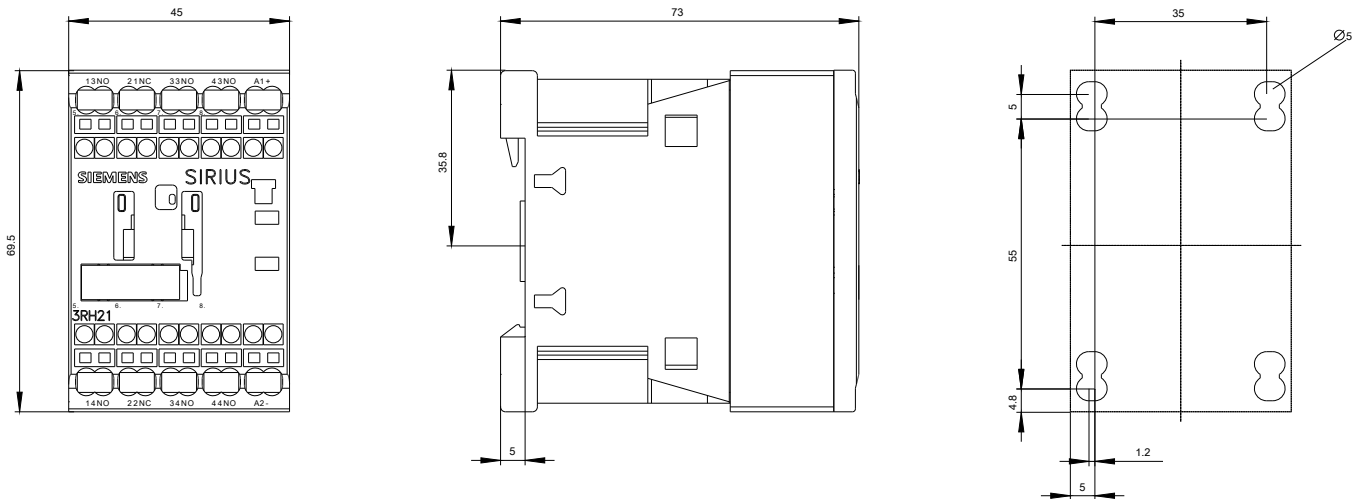
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2131-2VB40&lang=en

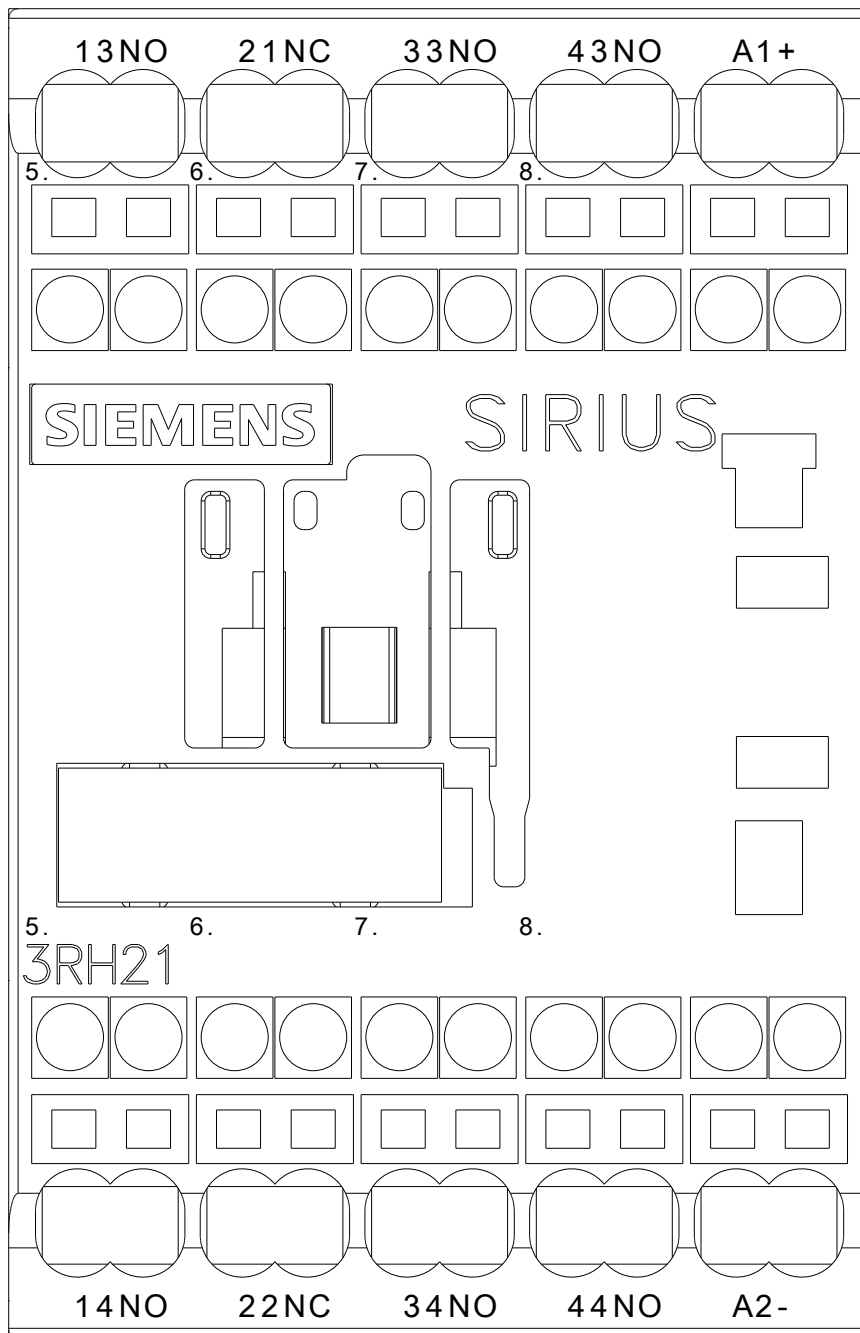
Characteristic: Tripping characteristics, I²t, Let-through current

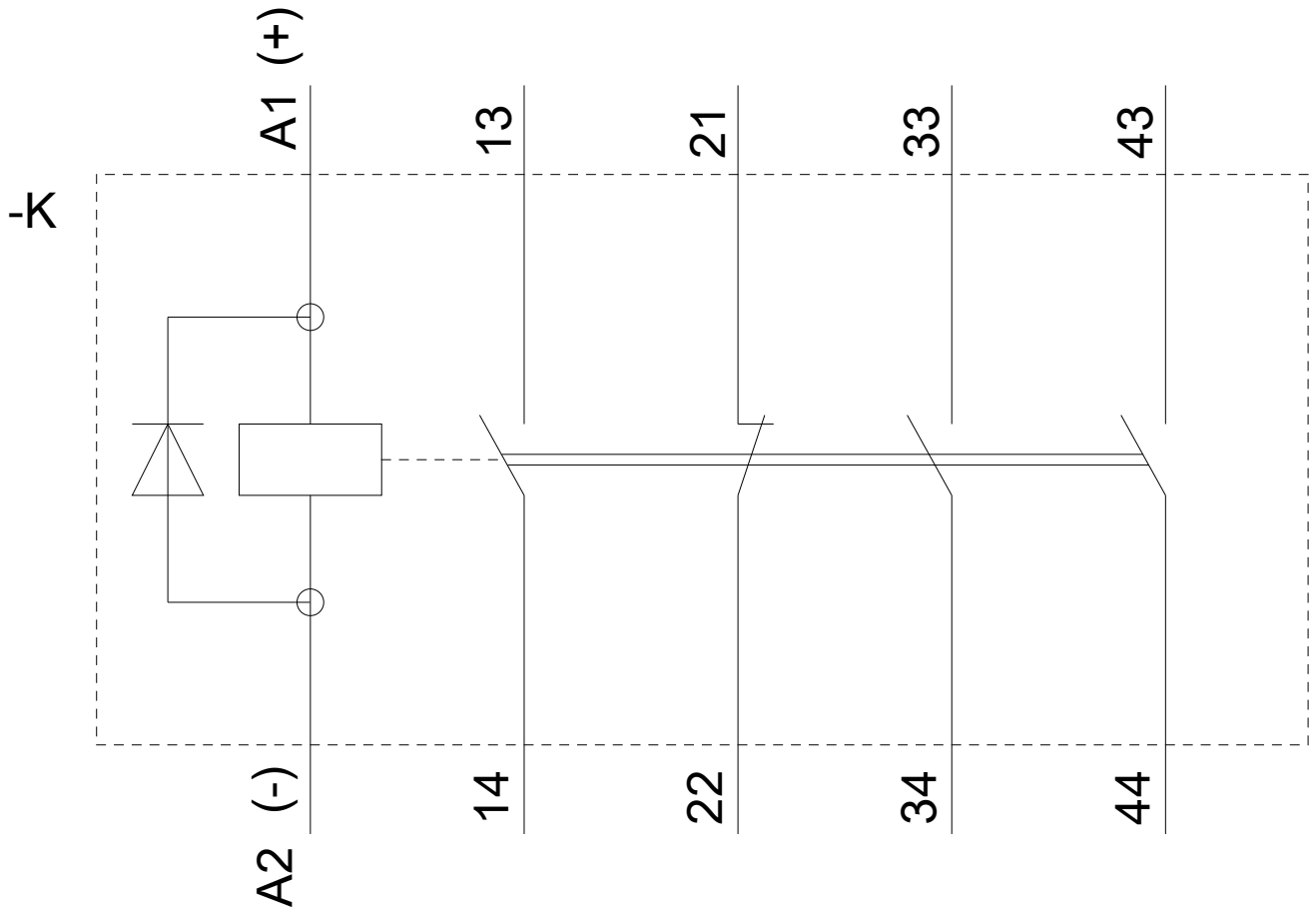
<https://support.industry.siemens.com/cs/ww/en/ps/3RH2131-2VB40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2131-2VB40&objecttype=14&gridview=view1>







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