

Coupling contactor relay, 4 NO, 24 V DC, 0.7 ... 1.25* US, Size S00, Spring-type terminal suitable for PLC outputs



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	
• Auxiliary switch	No
• Insulation voltage with degree of pollution 3 at AC rated value	690 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
• protection class IP on the front	IP20
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
Reference code acc. to DIN EN 81346-2	K

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	
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 	0.7
<ul style="list-style-type: none"> • Full-scale value 	1.25
Closing power of magnet coil at DC	2.8 W
Holding power of magnet coil at DC	2.8 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
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
<ul style="list-style-type: none"> • at 230 V rated value 	10 A
<ul style="list-style-type: none"> • at 400 V rated value 	3 A
<ul style="list-style-type: none"> • at 500 V rated value 	2 A
<ul style="list-style-type: none"> • at 690 V rated value 	1 A
Operating current at 1 current path at DC-12	
<ul style="list-style-type: none"> • at 24 V rated value 	10 A
<ul style="list-style-type: none"> • at 110 V rated value 	3 A
<ul style="list-style-type: none"> • at 220 V rated value 	1 A
<ul style="list-style-type: none"> • 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 	10 A
<ul style="list-style-type: none"> • at 60 V rated value 	10 A
<ul style="list-style-type: none"> • at 110 V rated value 	4 A
<ul style="list-style-type: none"> • at 220 V rated value 	2 A
<ul style="list-style-type: none"> • at 440 V rated value 	1.3 A
<ul style="list-style-type: none"> • at 600 V rated value 	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 	10 A
<ul style="list-style-type: none"> • at 60 V rated value 	10 A
<ul style="list-style-type: none"> • at 110 V rated value 	10 A
<ul style="list-style-type: none"> • at 220 V rated value 	3.6 A
<ul style="list-style-type: none"> • at 440 V rated value 	2.5 A
<ul style="list-style-type: none"> • at 600 V rated value 	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 	10 A
<ul style="list-style-type: none"> • at 110 V rated value 	1 A
<ul style="list-style-type: none"> • at 220 V rated value 	0.3 A
<ul style="list-style-type: none"> • at 440 V rated value 	0.14 A
<ul style="list-style-type: none"> • at 600 V rated value 	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 	10 A
<ul style="list-style-type: none"> • at 60 V rated value 	3.5 A
<ul style="list-style-type: none"> • at 110 V rated value 	1.3 A
<ul style="list-style-type: none"> • at 220 V rated value 	0.9 A
<ul style="list-style-type: none"> • at 440 V rated value 	0.2 A
<ul style="list-style-type: none"> • at 600 V rated value 	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 	10 A
<ul style="list-style-type: none"> • at 60 V rated value 	4.7 A
<ul style="list-style-type: none"> • at 110 V rated value 	3 A
<ul style="list-style-type: none"> • at 220 V rated value 	1.2 A
<ul style="list-style-type: none"> • at 440 V rated value 	0.5 A
<ul style="list-style-type: none"> • at 600 V rated value 	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	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> Type of electrical connection 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	
<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 	40 %
<ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 	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

Certificates/ approvals

General Product Approval	EMC
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[KC](#)



Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates	Marine / Shipping
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[Type Examination Certificate](#)



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping



other

[Confirmation](#)



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=3RH2140-2HB40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2140-2HB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-2HB40>

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

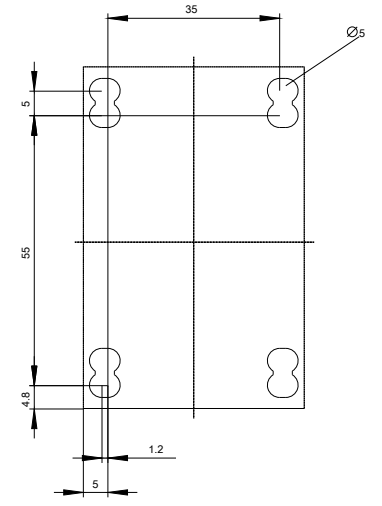
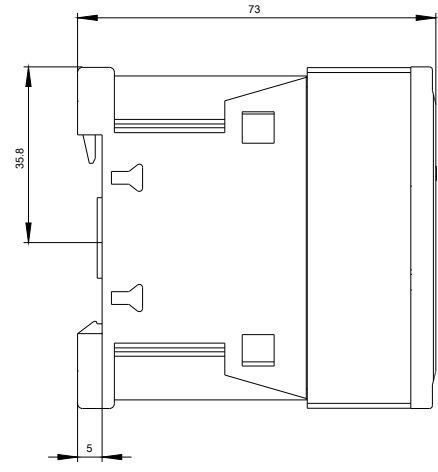
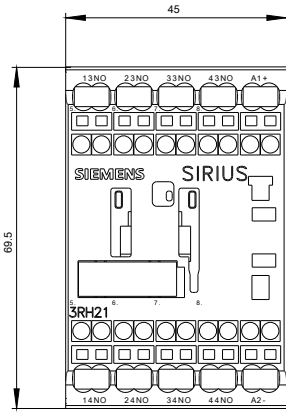
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2140-2HB40&lang=en

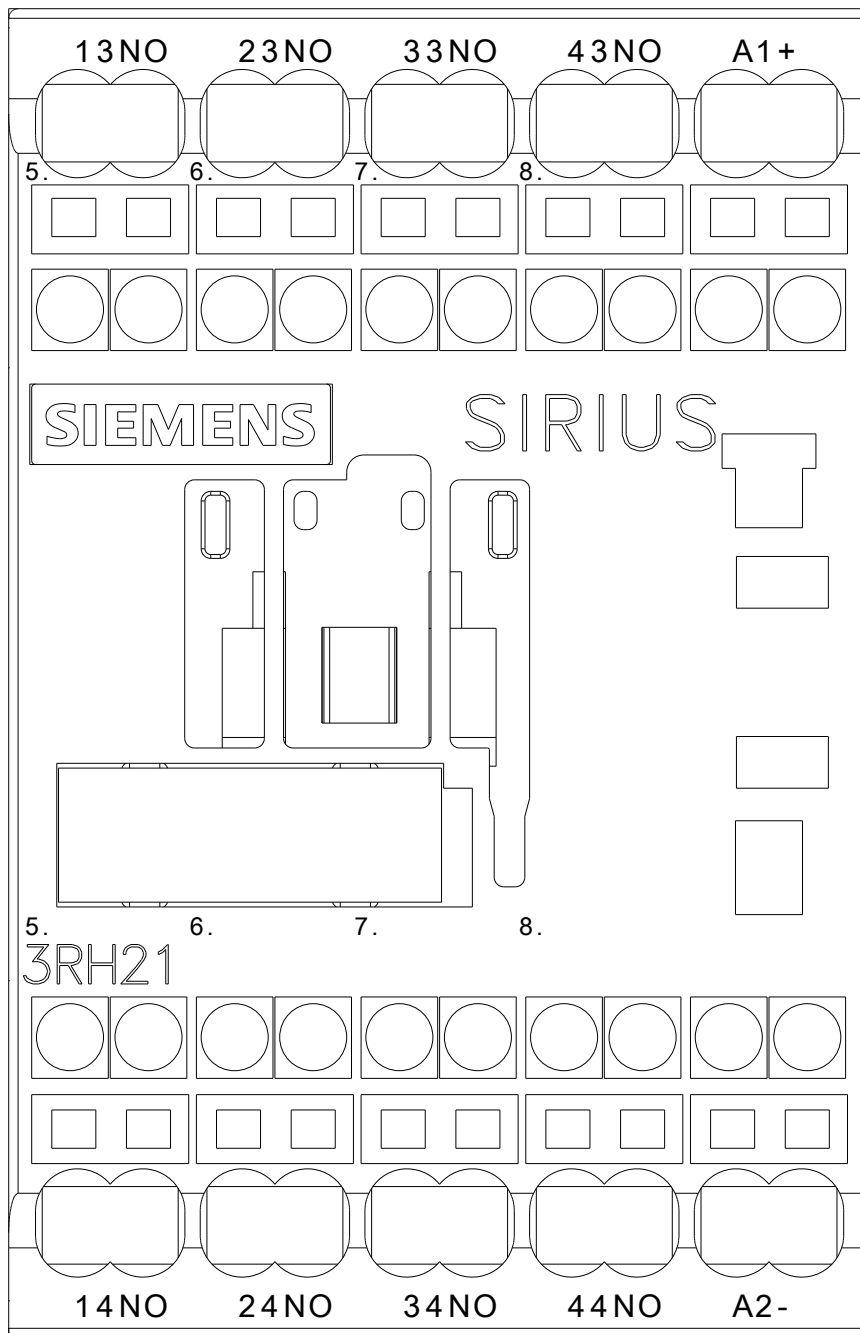
Characteristic: Tripping characteristics, I²t, Let-through current

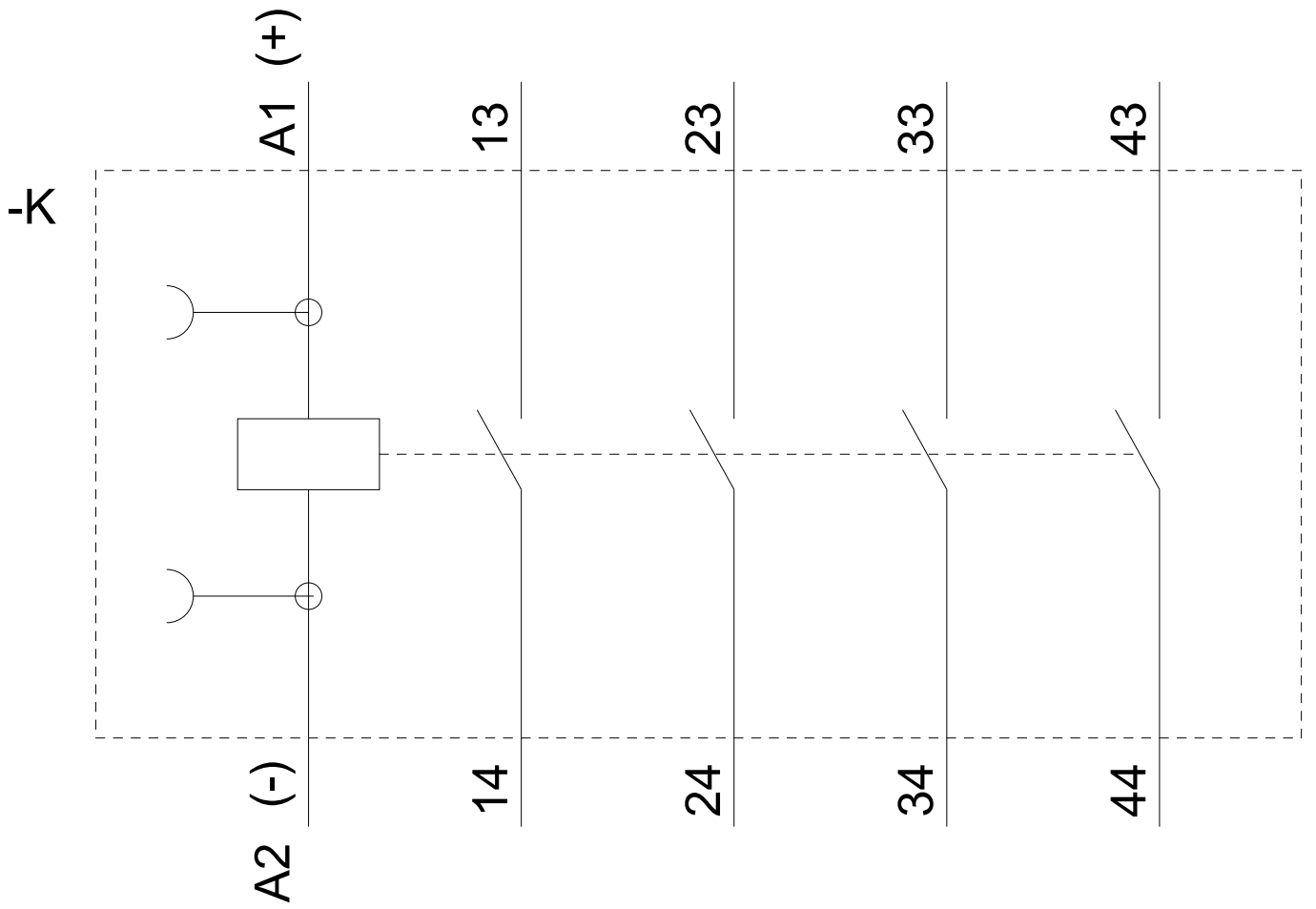
<https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-2HB40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2140-2HB40&objecttype=14&gridview=view1>







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