

CONTACTOR RELAY, 3NO+1NC, DC 24V, SIZE S00, SCREW
TERMINAL



product brandname	SIRIUS
Product designation	contactor relay
Product type designation	3RH2
General technical data	
Size of contactor	S00
Product extension	Yes
<ul style="list-style-type: none"> Auxiliary switch 	
Insulation voltage	690 V
<ul style="list-style-type: none"> with degree of pollution 3 rated value 	
Degree of pollution	3
Surge voltage resistance rated value	6 kV
Protection class IP	IP20
<ul style="list-style-type: none"> on the front 	
Shock resistance	
<ul style="list-style-type: none"> at rectangular impulse <ul style="list-style-type: none"> — at DC 	10g / 5 ms, 5g / 10 ms
<ul style="list-style-type: none"> with sine pulse <ul style="list-style-type: none"> — at DC 	15g / 5 ms, 8g / 10 ms
Mechanical service life (switching cycles)	

<ul style="list-style-type: none"> • of contactor typical 	30 000 000
<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
Equipment marking	
<ul style="list-style-type: none"> • acc. to DIN EN 61346-2 	K
<ul style="list-style-type: none"> • acc. to DIN EN 81346-2 	K
Ambient conditions	
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	0.8 ... 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 NC contacts	
<ul style="list-style-type: none"> • for auxiliary contacts 	1
<ul style="list-style-type: none"> — instantaneous contact 	1
Number of NO contacts	
<ul style="list-style-type: none"> • for auxiliary contacts 	3
<ul style="list-style-type: none"> — 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
• at 600 V rated value	0.15 A
Operating 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
Operating 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
Operating 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
Operating 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

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 	<p>10 A</p> <p>4.7 A</p> <p>3 A</p> <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	
<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
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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	57.5 mm
Width	45 mm
Depth	73 mm
Required spacing	
<ul style="list-style-type: none"> • for grounded parts <ul style="list-style-type: none"> — at the side • for live parts <ul style="list-style-type: none"> — at the side 	<p>6 mm</p> <p>6 mm</p>

Connections/Terminals

Type of electrical connection	
<ul style="list-style-type: none"> • for auxiliary and control current circuit 	screw-type 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 — finely stranded with core end processing • at AWG conductors for auxiliary contacts 	<p>2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm²</p> <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14), 2x 12</p>





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 Ie
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	Functional Safety/Safety of Machinery	Declaration of Conformity
 CCC  CSA  UL  EAC	Baumusterbescheinigung  EG-Konf.	

Test Certificates	Shipping Approval
Typprüfbescheinigung/Werkszeugnis spezielle Prüfbescheinigung n sonstig	 ABS  BUREAU VERITAS  GL

Shipping Approval	other
 LRS  PRS  RINA  RMRS	Umweltbestätigung Bestätigungen

other
 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=3RH2131-1BB40>

Cax online generator

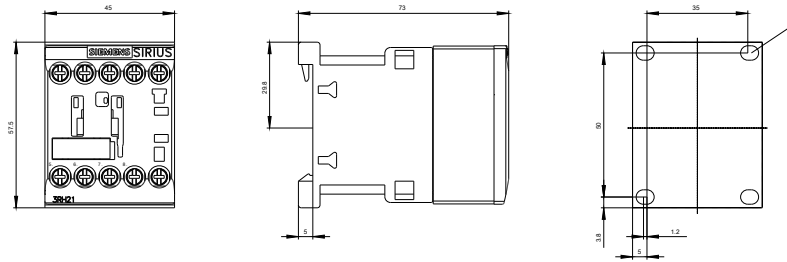
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2131-1BB40>

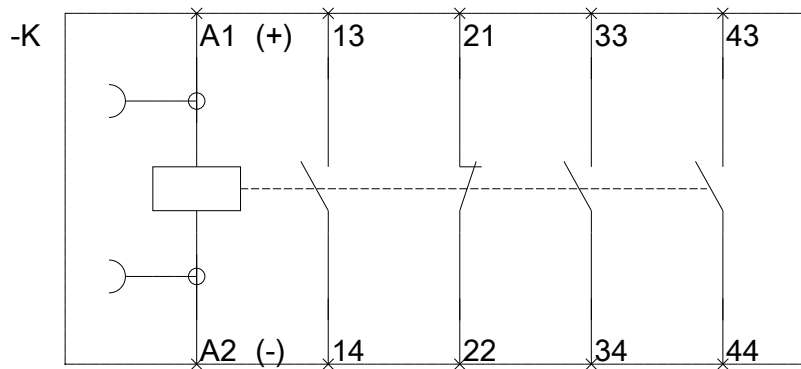
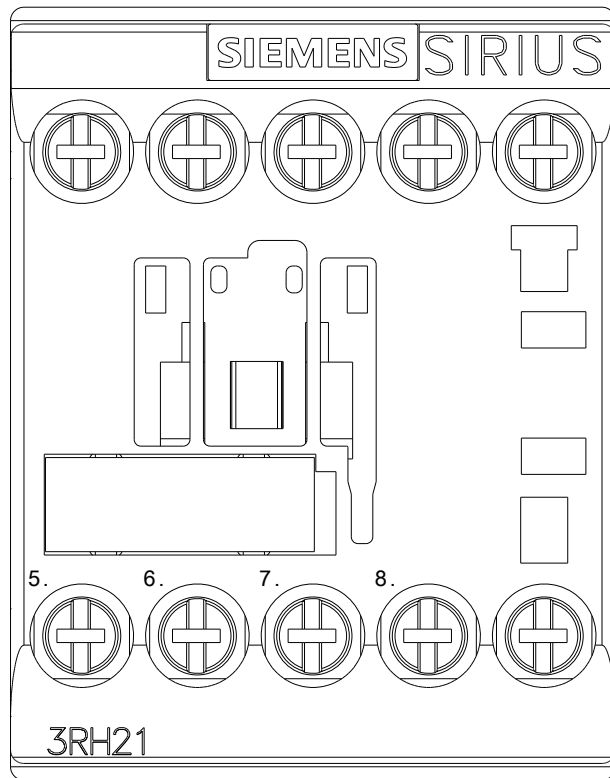
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2131-1BB40>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2131-1BB40&lang=en





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