SIEMENS

Data sheet 3RH2140-1AB00

CONTACTOR RELAY, 4NO, AC 24V, 50/60 HZ, SIZE S00, SCREW TERMINAL

product brand name	SIRIUS
Product designation	contactor relay

General technical data:	
Size of contactor	S00
Product expansion	
• Auxiliary switch	Yes
Insulation voltage	
• with degree of pollution 3 Rated value	690 V
Surge voltage resistance Rated value	6 kV
Protection class IP	
• on the front	IP20
Degree of pollution	3
Mechanical service life (switching cycles)	
• of the contactor typical	30 000 000
• 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
Equipment marking	
• acc. to DIN EN 61346-2	K
• acc. to DIN EN 81346-2	K

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:	
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	AC
Control supply voltage at AC	
• at 50 Hz Rated value	24 V
• at 60 Hz Rated value	24 V
• Rated value	50 Hz
Control supply voltage frequency 2 Rated value	60 Hz
Operating range factor control supply voltage rated value of the magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.85 ... 1.1
Apparent pick-up power of the magnet coil at AC	37 V·A
Inductive power factor with closing power of the coil	0.8
Apparent holding power of the magnet coil at AC	5.7 V·A
Inductive power factor with the holding power of the coil	0.25
Closing delay	
• at AC	8 ... 33 ms
Opening delay	
• at AC	4 ... 15 ms
Arcing time	10 ... 15 s

Auxiliary circuit:	
Number of NO contacts	
• for auxiliary contacts	4
— 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	
• 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 with 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 with 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	
• at 24 V Rated value	10 A
• at 60 V Rated value	4.7 A
• at 110 V Rated value	3 A
• at 220 V Rated value	1.2 A
• at 440 V Rated value	0.5 A

• at 600 V Rated value	0.26 A
Operating frequency at DC-13 maximum	1 000 1/h
Design of the miniature circuit breaker	
• for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 6 A; 0.4 kA
Contact reliability of the auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings:	
Contact rating of the auxiliary contacts acc. to UL	A600 / Q600

Short-circuit:	
Design of the fuse link	
• 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	
• for grounded parts	
— at the side	6 mm
• for live parts	
— at the side	6 mm

Connections/ Terminals:	
Type of electrical connection	
• for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-section	
• for auxiliary contacts	
— single or multi-stranded	2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm²
— finely stranded with core end processing	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
• for AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12

Safety related data:	
B10 value with high demand rate acc. to SN 31920	1 000 000; With 0.3 x Ie
Proportion of dangerous failures	
• with low demand rate acc. to SN 31920	40 %
• with high demand rate acc. to SN 31920	73 %
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	Declaration of Conformity	Test Certificates
CSA	EAC	UL	Baumusterbescheinigung	EG-Konf.	spezielle Prüfbescheinigungen

Test Certificates	Shipping Approval				
Typprüfbescheinigung/Werkszeugnis	ABS	BUREAU VERITAS	DNV	GL	LRS

Shipping Approval			other	
PRS	RINA	RMRS	Umweltbestätigung	VDE

Further information

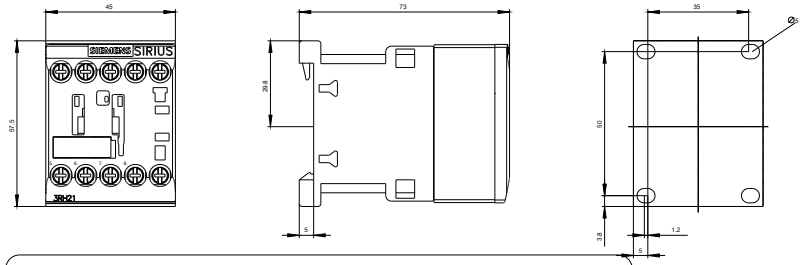
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

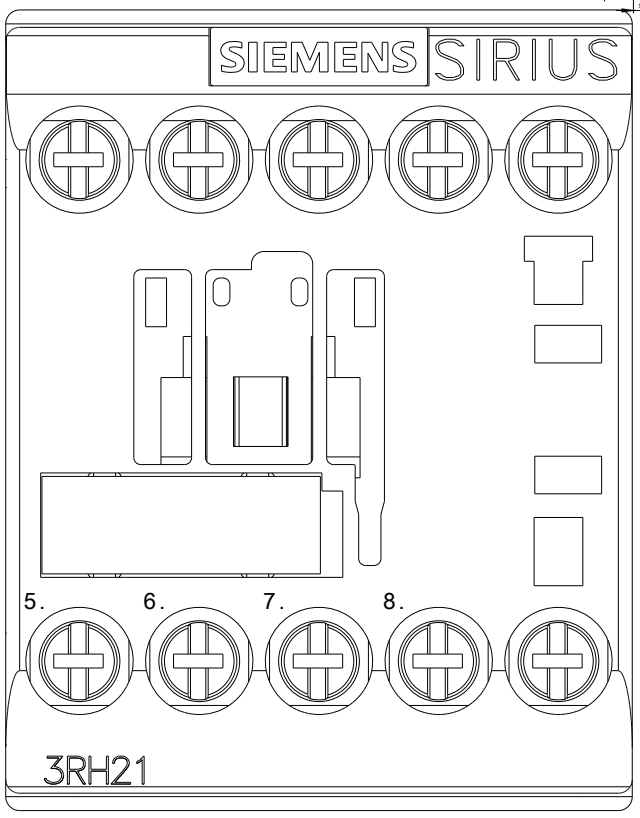
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

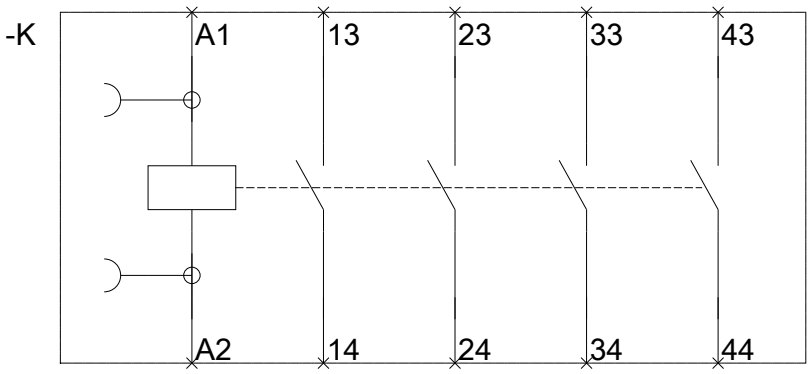
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH21401AB00

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RH21401AB00

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH21401AB00&lang=en







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