SIEMENS

Data sheet 3RH2140-2FB40



Contactor relay, 4 NO, 24 V DC, with integrated diode, 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
 of the contactor with added auxiliary switch block typical 	10 000 000
reference code acc. to IEC 81346-2	K
Substance Prohibitance (Date)	01.10.2009
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
relative humidity minimum	10 %
relative humidity at 55 °C acc. to IEC 60068-2-30 maximum	95 %
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	0.8
Initial value full-scale value	1.1
design of the surge suppressor	diode
closing power of magnet coil at DC	4 W
holding power of magnet coil at DC	4 W
closing delay	7 **
• at DC	30 100 ms
opening delay	30 100 HIS
• at DC	38 65 ms
arcing time	10 15 ms
Auxiliary circuit	
number of NO contacts for auxiliary contacts	4
instantaneous contact	4
identification number and letter for switching	40 E
elements	
operational current at AC-12 maximum	10 A
operational 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
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	40.4
at 24 V rated value at 110 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 at 600 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	40.4
• 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
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 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 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
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail
height	70 mm
width	45 mm
depth	73 mm
required spacing	
with side-by-side mounting	40
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
• for grounded parts	40
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	40
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection for auxiliary and control circuit	spring-loaded terminals
type of connectable conductor cross-sections	
for auxiliary contacts	2), (0 E
— solid or stranded	2x (0,5 4 mm²)
— finely stranded with core end processing	2x (0.5 2.5 mm²)
— finely stranded without core end processing	2x (0.5 2.5 mm²)
at AWG cables for auxiliary contacts	2x (20 12)
Safety related data	
B10 value with high demand rate acc. to SN 31920	1 000 000; With 0.3 x le
proportion of dangerous failures	40.07
with low demand rate acc. to SN 31920 with high degrees darks acc. to SN 34920 With high degrees darks acc. to SN 34920	40 %
with high demand rate acc. to SN 31920	73 %
failure rate [FIT] with low demand rate acc. to SN 31920	100 FIT
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
.,	











Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates

<u>KC</u>

Marine / Shipping

Type Examination Certificate



UK Declaration of Conformity Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping













other

Dangerous Good

Confirmation



<u>Transport Information</u>

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=3RH2140-2FB40

Cax online generator

 $\underline{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RH2140-2FB40}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-2FB40

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

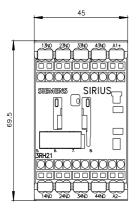
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2140-2FB40&lang=en

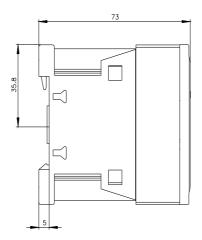
Characteristic: Tripping characteristics, I2t, Let-through current

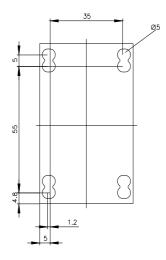
https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-2FB40/char

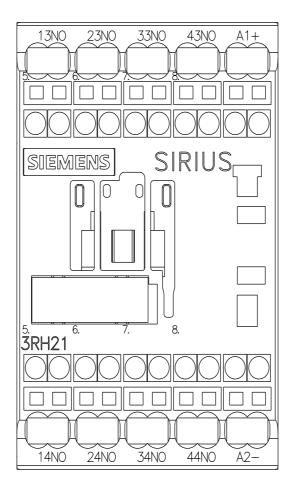
Further characteristics (e.g. electrical endurance, switching frequency)

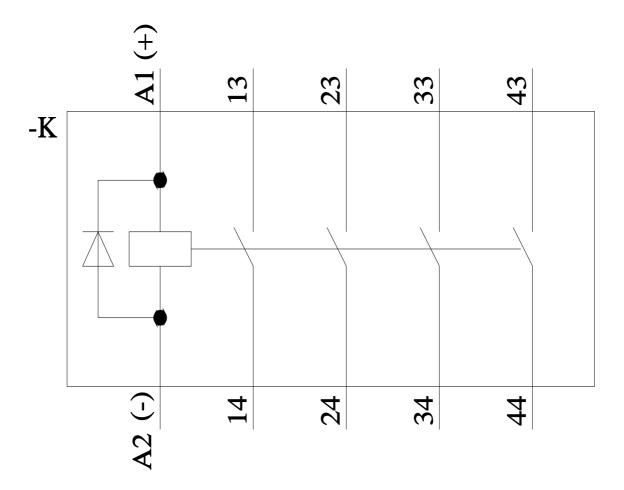
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2140-2FB40&objecttype=14&gridview=view1











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