SIEMENS

Data sheet 3RH2440-1BF40

Contactor relay, latched, 4 NO, 110 V DC, Size S00, screw 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
power loss [W] for rated value of the current without load current share typical	4 W
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 (operating cycles)	
 of contactor typical 	5 000 000
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000
 of the contactor with added auxiliary switch block typical 	5 000 000
reference code according to IEC 81346-2	K
Substance Prohibitance (Date)	10/01/2009
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 according to IEC 60068-2-30 maximum	95 %
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
Global Warming Potential [CO2 eq] total	137 kg
Global Warming Potential [CO2 eq] during manufacturing	2.44 kg
Global Warming Potential [CO2 eq] during operation	135 kg
Global Warming Potential [CO2 eq] after end of life	-0.49 kg
Main circuit	
no-load switching frequency	
• at AC	10 000 1/h
• at DC	10 000 1/h
Control circuit/ Control	

control supply voltage at DC rated value • 110 V operating range factor control supply voltage rated value of magnet coil at DC • initial value 0.8 • full-scale value 1.1 closing power of magnet coil at DC 4 W holding power of magnet coil at DC 4 W closing delay • at DC 30 100 ms opening delay • at DC 7 13 ms arcing time 10 15 ms	tune of voltage of the central cumply valters	DC .
e magnet col at DC magnet col at DC	type of voltage of the control supply voltage	DC
Special control supply voltage rated value of mignet col at 0 C		110 V
* full-calle value	operating range factor control supply voltage rated value of	110 V
Closing power of magnet coil at DC	_	0.8
Additing power of magnet coil at DC 100 ms	• full-scale value	1.1
Section Sect	closing power of magnet coil at DC	4 W
a IDC 30 a 100 ms opening delay 713 ms arcing time 1015 ms Notified yours Interface of NO contacts for auxiliary contacts 4 defentification number and lotter for switching elements 40 E operational current at AC-15 10 A a at 230 V rated value 10 A a at 650 V rated value 3A a at 650 V rated value 1A a 24 V rated value 1A a 22 V rated value 1A a 12 20 V rated value 3A a 12 20 V rated value 1A a 12 20 V rated value 3A a 12 20 V rated value 1A a 12 20 V rated value 1A a 12 4 V rated value 0.5A a 12 4 V rated value 10 A a 12 20 V rated value 10 A a 12 20 V rated value 10 A a 12 20 V rated value 10 A a 1	holding power of magnet coil at DC	4 W
a it DC	closing delay	
Acid DC	• at DC	30 100 ms
Auxiliary current	opening delay	
Auxiliary circuit number of NO contacts for auxiliary contacts instantaneous contact identification number and lotter for switching elements operational current at AC-12 maximum operational current at AC-16 i at 230 V rated value i at 400 V rated value i at 500 V rated value i at 600 V rated value i at 220 V rated value i at 600 V rated val	• at DC	7 13 ms
number of NO contacts for auxiliary contacts	arcing time	10 15 ms
mistantaneous contact 4	Auxiliary circuit	
Identification number and letter for switching elements 10 A	number of NO contacts for auxiliary contacts	4
operational current at AC-12 maximum 10 A operational current at AC-15 *** • at 230 V rated value 3 A • at 550 V rated value 1 A • at 550 V rated value 1 A • at 550 V rated value 1 A • at 220 V rated value 3 A • at 220 V rated value 3 A • at 400 V rated value 3 A • at 400 V rated value 3 A • at 400 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 10 V rated value 10 A • at 110 V rated value 2 A • at 400 V rated value 1.3 A • at 600 V rated value 0.85 A • at 600 V rated value 1.0 A • at 22 V rated value 1.0 A • at 24 V rated value 1.0 A • at 22 V rated value 3.6 A • at 60 V rated value 2.5 A • at 60 V rated value 1.0 A • at 22 V rated value	instantaneous contact	4
Operational current at AC-15	identification number and letter for switching elements	40 E
	operational current at AC-12 maximum	10 A
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operational current at 1 current path at DC-12 • at 24 V rated value • at 110 V rated value • at 220 V rated value • at 600 V rated valu		
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Operational current with 2 current paths in series at DC-12 at 24 V rated value		
• at 24 V rated value		0.15 A
at 60 V rated value at 110 V rated value 2 A at 220 V rated value 2 A at 440 V rated value 2 A at 600 V rated value 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 110 V rated value 10 A at 110 V rated value 10 A at 110 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 a current at 1 current path at DC-13 at 110 V rated value 1 A at 220 V rated value 1 A at 24 V rated value 1 A at 220 V rated value 1 A at 24 V rated value 1 A at 24 V rated value 1 A at 25 O V rated value 1 A at 20 V rated value 1 A at 40 V rated value 1 A at 40 V rated value 1 A at 600 V rated		40.4
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at 600 V rated value operational current with 2 current paths in series at DC-13 at 24 V rated value at 60 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	• at 220 V rated value	0.3 A
operational current with 2 current paths in series at DC-13 • 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 • at 24 V rated value • at 24 V rated value 10 A	• at 440 V rated value	0.14 A
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 at 440 V rated value 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 110 V rated value	1.3 A
at 600 V rated value operational current with 3 current paths in series at DC-13 at 24 V rated value 10 A	at 220 V rated value	0.9 A
operational current with 3 current paths in series at DC-13 • at 24 V rated value 10 A	• at 440 V rated value	
• at 24 V rated value 10 A		0.1 A
at 60 V rated value 4.7 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 DIN rail
height	57.5 mm
width	90 mm
depth	73 mm
required spacing	
with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
for grounded parts	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— 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	screw-type terminals
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid or 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 cables for auxiliary contacts	2x (20 16), 2x (18 14), 2x 12
Safety related data	
product function	
positively driven operation according to IEC 60947-5-1	Yes
suitable for safety function	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
proportion of dangerous failures	
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920	73 %
B10 value with high demand rate according to SN 31920	1 000 000; With 0.3 x le
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type A
Electrical Safety	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
protection class IP on the front according to IEC 60529	IP20
p. 5.500001 01000 II OII tilo HOIIt 000010HIIg to IEO 00025	=0

Approvals Certificates

General Product Approval



Confirmation









General Product Approval

EMV

Functional Saftey

Test Certificates

<u>KC</u>





Type Examination Certificate

Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping













Marine / Shipping

other

Special Test Certific-

Railway

Dangerous Good

Environment



Miscellaneous

Confirmation

Special Test Certific ate Transport Information



Environment

Environmental Confirmations

Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RH2440-1BF40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2440-1BF40

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

https://support.industry.siemens.com/cs/ww/en/ps/3RH2440-1BF40

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

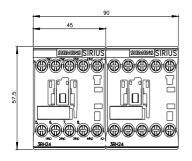
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2440-1BF40&lang=en

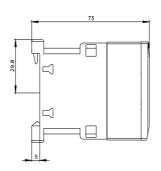
Characteristic: Tripping characteristics, I2t, Let-through current

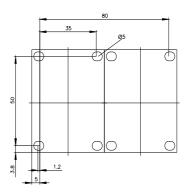
https://support.industry.siemens.com/cs/ww/en/ps/3RH2440-1BF40/char

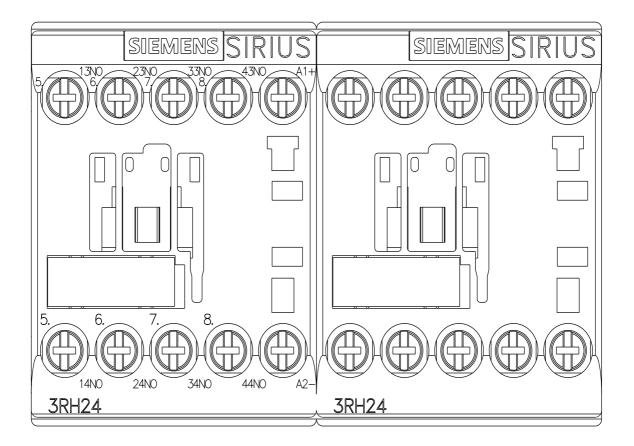
Further characteristics (e.g. electrical endurance, switching frequency)

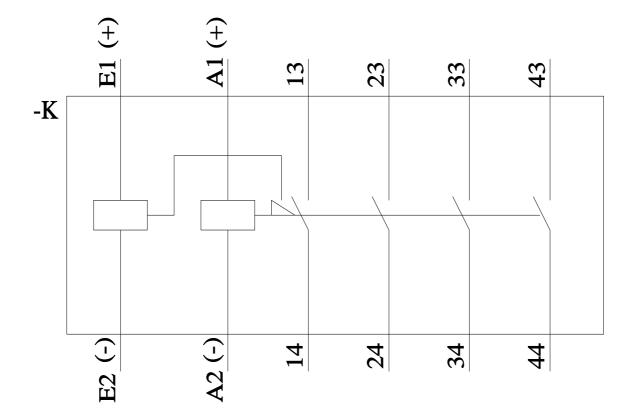
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2440-1BF40&objecttype=14&gridview=view1











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