# **SIEMENS**

Data sheet 3RH2244-1BF40



contactor relay, 4 NO + 4 NC, 110 V DC, size S00, screw terminal, captive auxiliary switch

product type designation product type designation  General technical data size of contactor product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value degree of pollution 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 reference code according to IEC 81346-2 K Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation during storage relative humidity minimum relative humidity minimum relative humidity minimum relative humidity frequency at AC at AC at D0 0000 1/h at DC 10 0000 1/h at DC 10 0000 1/h	product brand name	SIRIUS	
Size of contactor  product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value  degree of pollution surge voltage resistance rated value  shock resistance at rectangular impulse  • at DC  shock resistance with sine pulse  • at DC  tog / 5 ms, 5g / 10 ms  shock resistance with sine pulse  • at DC  tog / 5 ms, 8g / 10 ms  mechanical service life (switching cycles)  • of contactor typical reference code according to IEC 81346-2 K Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum relative humidity minimum relative humidity minimum relative humidity minimum no-load switching frequency • at AC • at DC  1000 1/h • at DC  1000 1/h  10 000 1/h	product designation	Auxiliary contactor	
size of contactor product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value  degree of pollution surge voltage resistance rated value  • at DC • at DC  shock resistance with sine pulse • at DC  at DC  to contactor typical reference code according to IEC 81346-2 Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum relative humidity minimum relative humidity minimum  main circuit  no-load switching frequency • at AC • at DC  100 V  vertical 690	product type designation	3RH2	
product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value  degree of pollution  surge voltage resistance rated value shock resistance at rectangular impulse • at DC  shock resistance with sine pulse • at DC  shock resistance with sine pulse • at DC  shock resistance with sine pulse • at DC  mechanical service life (switching cycles) • of contactor typical  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  ambient temperature • during operation • during storage -55 +60 °C  relative humidity minimum  10 %  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency • at AC • at DC  10 000 1/h  10 000 1/h  10 000 1/h	General technical data		
insulation voltage with degree of pollution 3 at AC rated value  degree of pollution  surge voltage resistance rated value  shock resistance at rectangular impulse  • at DC  shock resistance with sine pulse  • at DC  mechanical service life (switching cycles)  • of contactor typical  reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30  maximum  Main circuit  no-load switching frequency  • at AC  • at DC  e during frequency  • at AC  • at DC  10 000 1/h  6 kV  8 bV  10 000 1/h  10 000 1/h  6 kV  10 000 1/h  10 000 1/h  6 kV  10 000 1/h  10 000 1/h  6 kV  10 000 1/h  10 000 1/h	size of contactor	S00	
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 10 000 000 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 relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency • at AC 10 000 1/h • at DC 10 000 1/h	product extension auxiliary switch	No	
surge voltage resistance rated value shock resistance at rectangular impulse • at DC shock resistance with sine pulse • at DC shock resistance with sine pulse • at DC 15g / 5 ms, 8g / 10 ms mechanical service life (switching cycles) • of contactor typical reference code according to IEC 81346-2 Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency • at AC • at DC  10g / 5 ms, 5g / 10 ms 15g / 5 ms, 8g / 10 ms 16g / 6 ms, 9 ms, 9 / 10 ms 16g / 6 ms, 9 ms, 9 / 10 ms 16g / 6 ms, 9 ms, 9 ms, 9 / 10 ms 16g / 6 ms, 9 ms, 9 / 10 ms 16g / 6 ms, 9 ms, 9 / 10 ms 16g / 6 ms, 9 / 10		690 V	
shock resistance at rectangular impulse  • at DC  shock resistance with sine pulse  • at DC  at DC  to 15g / 5 ms, 8g / 10 ms  mechanical service life (switching cycles)  • of contactor typical  reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30  maximum  Main circuit  no-load switching frequency  • at AC  • at DC  10 000 1/h  10 000 1/h  10 000 1/h  10 000 1/h	degree of pollution	3	
● at DC  shock resistance with sine pulse  ● at DC  15g / 5 ms, 8g / 10 ms  mechanical service life (switching cycles)  ● of contactor typical  reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  ● during operation  ● during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency  ● at AC  ● at DC  15g / 5 ms, 8g / 10 ms  10 000 000  10 000 000  10 000 000  10 000 00	surge voltage resistance rated value	6 kV	
shock resistance with sine pulse  • at DC  mechanical service life (switching cycles)  • of contactor typical  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30  maximum  Main circuit  no-load switching frequency  • at AC  • at DC  15g / 5 ms, 8g / 10 ms  10 mos  10 000 000  10 000 000  K  C  C  C  C  C  C  C  C  C  C  C  C	shock resistance at rectangular impulse		
• at DC  mechanical service life (switching cycles)  • of contactor typical  reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30  maximum  Main circuit  no-load switching frequency  • at AC  • at DC  10 000 1/h  10 000 1/h  10 000 1/h	• at DC	10g / 5 ms, 5g / 10 ms	
mechanical service life (switching cycles)	shock resistance with sine pulse		
of contactor typical     reference code according to IEC 81346-2     Substance Prohibitance (Date)  Ambient conditions     installation altitude at height above sea level maximum     ambient temperature     oduring operation     during storage     relative humidity minimum     relative humidity at 55 °C according to IEC 60068-2-30     maximum  Main circuit  no-load switching frequency     at AC     at DC     10 000 1/h     at DC	• at DC	15g / 5 ms, 8g / 10 ms	
reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency • at AC • at DC  **Element Strate**  I 0 000 1/h  10 000 1/h  10 000 1/h	mechanical service life (switching cycles)		
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  relative humidity minimum  10 %  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency • at AC • at DC  10/01/2009  10/01/2009  10/01/2009  10/01/2009  10/00 m  10/00 m  10/00 m  10/00 m  10/00 m  10/00 1/h  10/000 1/h		10 000 000	
installation altitude at height above sea level maximum  ambient temperature  during operation during storage  relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency at AC at DC  ambient conditions 2 000 m  -25 +60 °C  -25 +80 °C  10 %  95 %  10 %  10 %  10 %  10 000 1/h  10 000 1/h	reference code according to IEC 81346-2	K	
installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency  • at AC  • at DC  • during operation  -25 +60 °C  -55 +80 °C  95 %  10 %  10 %	, ,	10/01/2009	
ambient temperature  • during operation • during storage • during storage -55 +80 °C  relative humidity minimum 10 %  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency • at AC • at DC  ambient temperature -25 +60 °C  -55 +80 °C  95 %  10 %  10 %  10 %  10 %  10 %  10 %  10 %  10 %  10 000 1/h  10 000 1/h	Ambient conditions		
<ul> <li>during operation</li> <li>during storage</li> <li>telative humidity minimum</li> <li>relative humidity at 55 °C according to IEC 60068-2-30 maximum</li> <li>Main circuit</li> <li>no-load switching frequency</li> <li>at AC</li> <li>at DC</li> <li>during operation</li> <li>-25 +60 °C</li> <li>-55 +80 °C</li> <li>95 %</li> <li>95 %</li> <li>10 %</li> <li>10 %</li> <li>10 000 1/h</li> <li>10 000 1/h</li> <li>10 000 1/h</li> </ul>	installation altitude at height above sea level maximum	2 000 m	
• during storage     relative humidity minimum     10 %  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency     • at AC     • at DC     10 000 1/h     10 000 1/h	ambient temperature		
relative humidity minimum  relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency  • at AC  • at DC  10 000 1/h  10 000 1/h	<ul><li>during operation</li></ul>	-25 +60 °C	
relative humidity at 55 °C according to IEC 60068-2-30 maximum  Main circuit  no-load switching frequency  • at AC  • at DC  10 000 1/h  10 000 1/h	during storage	-55 +80 °C	
maximum           Main circuit           no-load switching frequency           ● at AC         10 000 1/h           ● at DC         10 000 1/h	relative humidity minimum	10 %	
no-load switching frequency         ● at AC       10 000 1/h         ● at DC       10 000 1/h		95 %	
<ul> <li>at AC</li> <li>at DC</li> <li>10 000 1/h</li> <li>10 000 1/h</li> </ul>	Main circuit		
• at DC 10 000 1/h	no-load switching frequency		
10 000 1111	• at AC	10 000 1/h	
	• at DC	10 000 1/h	
Control circuit/ Control	Control circuit/ Control		
type of voltage of the control supply voltage DC	type of voltage of the control supply voltage	DC	
control supply voltage at DC	control supply voltage at DC		
• rated value 110 V	rated value	110 V	
operating range factor control supply voltage rated value of magnet coil at DC			
• initial value 0.8	• initial value	0.8	
• full-scale value 1.1	full-scale value	1.1	
closing power of magnet coil at DC 4 W	closing power of magnet coil at DC	4 W	
holding power of magnet coil at DC 4 W	holding power of magnet coil at DC	4 W	

ologing dalay	
closing delay	20 100 mg
• at DC	30 100 ms
opening delay  • at DC	7 13 ms
arcing time	7 13 ms
Auxiliary circuit	10 10 1110
	4
number of NC contacts for auxiliary contacts  • instantaneous contact	4
number of NO contacts for auxiliary contacts	4
instantaneous contact	4
identification number and letter for switching	44 E
elements	
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	6 A
<ul> <li>at 400 V rated value</li> </ul>	3 A
<ul> <li>at 500 V rated value</li> </ul>	2 A
at 690 V rated value	1 A
operational current at 1 current path at DC-12	40.4
at 24 V rated value     at 110 V rated value	10 A 3 A
at 110 V rated value	
at 220 V rated value at 440 V rated value	1 A 0.3 A
<ul><li>at 440 V rated value</li><li>at 600 V rated value</li></ul>	0.15 A
operational current with 2 current paths in series at	0.1071
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	
at 24 V rated value	6 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
operational 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
operational current with 3 current paths in series at	
DC-13	40.4
at 24 V rated value	10 A
• at 60 V rated value	4.7 A
at 110 V rated value     at 220 V rated value	3 A
• at 220 V rated value	1.2 A

at 440 V rated value	0.5.4
• at 440 V rated value	0.5 A
at 600 V rated value	0.26 A
operating frequency at DC-13 maximum  design of the miniature circuit breaker for short-circuit	1 000 1/h C characteristic: 6 A; 0.4 kA
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	7,000 7 4000
design of the fuse link for short-circuit protection of the	fuse gL/gG: 10 A
auxiliary switch required	iuse gibyo. 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	57.5 mm
width	45 mm
depth	117 mm
required spacing	
<ul> <li>with side-by-side mounting</li> </ul>	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
<ul> <li>for grounded parts</li> </ul>	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
<ul> <li>for live parts</li> </ul>	
— 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	
<ul> <li>for auxiliary contacts</li> </ul>	
<ul><li>— solid or stranded</li></ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
at AWG cables for auxiliary contacts	2x (20 16), 2x (18 14), 2x 12
Safety related data	
B10 value with high demand rate according to SN 31920	1 000 000; With 0.3 x le
proportion of dangerous failures	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %
with high demand rate according to SN 31920	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
T1 value for proof test interval or service life according to IEC 61508	20 y
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Certificates/ approvals	
General Product Approval	
PP -	



Confirmation





<u>KC</u>



**EMC** 

**Functional** Safety/Safety of Machinery

## **Declaration of Conformity**

#### **Test Certificates**



**Type Examination Certificate** 





Type Test Certificates/Test Report

**Special Test Certific-**<u>ate</u>

#### Marine / Shipping













Marine / Shipping

other

**Dangerous Good** 



Confirmation



Transport Information

### **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=3RH2244-1BF40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2244-1BF40

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

https://support.industry.siemens.com/cs/ww/en/ps/3RH2244-1BF40

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RH2244-1BF40&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RH2244-1BF40/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2244-1BF40&objecttype=14&gridview=view1

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