3RH2344-1AK20-0KA0

Data sheet



CONTACTOR RELAY, 4NO+4NC, AC 120V, 50/60 HZ, SIZE S00, SCREW TERMINAL, REMOVABLE AUX. SWITCH DIN EN 50005

product brand name	SIRIUS
product designation	Auxiliary contactor
product type designation	3RH2
General technical data	
size of contactor	S00
product extension auxiliary switch	No
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 AC	7,3g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,4g / 5 ms, 7,3g / 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	10 %
relative humidity at 55 °C according 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	AC
control supply voltage at AC	
 at 50 Hz rated value 	120 V
at 60 Hz rated value	120 V
control supply voltage frequency	
1 rated value	50 Hz
2 rated value	60 Hz
operating range factor control supply voltage rated value of magnet coil at AC	

* at 60 ltz		
apparent pick-up power of magnet coil at AC inductive power factor with closing power of the coil apparent holding power of magnet coil at AC inductive power factor with the holding power of the coil coloring daily and AC arcing time and AC arcing time 10 15 ms Auxillary circuit number of NC contacts for auxillary contacts installar power of the coil didentification number and letter for switching elements operational current at AC-15 auxillary contacts and adolor vised value and adolor vised value and adolor vised value and active vised val	● at 50 Hz	0.8 1.1
Apparent holding power factor with clasing power of the coil S	• at 60 Hz	0.85 1.1
apparent holdling power of magnet coil at AC 0.25	apparent pick-up power of magnet coil at AC	37 VA
Inductive power factor with the holding power of the coll	inductive power factor with closing power of the coil	0.8
colain delay	apparent holding power of magnet coil at AC	5.7 VA
Closing delay		0.25
Opening delay		8 33 ms
a ta AC arcing time Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact 4 indentification number and letter for switching elements operational current at AC-12 maximum operational current at AC-12 maximum operational current at AC-13 in at 200 v rated value in at 400 v rated value in at 400 v rated value in at 500 v rated value in at 110 v rated value in at 110 v rated value in at 110 v rated value in at 200 v rated value in a		
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number of NC contacts for auxiliary contacts		
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Instantaneous contact 4		
instantaneous contact dentification number and letter for switching dent		
Identification number and letter for switching elements 44 E		
Section Sect		
a t 230 V rated value	•	
** at 230 V rated value	operational current at AC-12 maximum	10 A
	operational current at AC-15	
	 at 230 V rated value 	6 A
• at 690 V rated value 1 A	 at 400 V rated value 	3 A
operational current at 1 current path at DC-12	 at 500 V rated value 	2 A
	at 690 V rated value	1 A
at 110 V rated value	operational current at 1 current path at DC-12	
at 220 V rated value at 440 V rated value at 600 V rated value operational current with 2 current paths in series at DC-12 at 24 V rated value at 600 V rated value at 600 V rated value at 600 V rated value at 110 V rated value at 220 V rated value at 440 V rated value at 440 V rated value at 4500 V rated value at 4600 V rated value at 4600 V rated value at 500 V rated value at 600 V rated value at 600 V rated value at 600 V rated value at 220 V rated value at 240 V rated value at 250 V rated value at 250 V rated value at 200 V rated value	 at 24 V rated value 	10 A
	 at 110 V rated value 	3 A
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Operational current with 2 current paths in series at DC-12	 at 440 V rated value 	0.3 A
DC-12 • at 24 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 440 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value Operational current with 3 current paths in series at DC-12 • at 24 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 220 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 24 V rated value • at 600 V rated value • at 24 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 24 V rated v	 at 600 V rated value 	0.15 A
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• at 600 V rated value operational current with 3 current paths in series at DC-12 • 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 600 V rated value • at 600 V rated value • at 220 V rated value • at 24 V rated value • at 600 V rated value operating frequency at DC-12 maximum operational current at 1 current path at DC-13 • at 24 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 440 V rated value • 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 110 V rated value • at 220 V rated value • at 60 V rated value • at 220 V rated value	 at 220 V rated value 	2 A
operational current with 3 current paths in series at DC-12 • 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 600 V rated value • at 600 V rated value operating frequency at DC-12 maximum operational current at 1 current path at DC-13 • at 24 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 440 V rated value • at 600 V rated value operational current with 2 current paths in series at DC-13 • at 24 V rated value • 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 220 V rated value	 at 440 V rated value 	1.3 A
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 at 600 V rated value operating frequency at DC-12 maximum 1 000 1/h operational current at 1 current path at DC-13 at 24 V rated value at 110 V rated value at 220 V rated value at 440 V rated value at 600 V rated value operational current with 2 current paths in series at DC-13 at 24 V rated value at 24 V rated value at 24 V rated value at 60 V rated value at 60 V rated value at 10 A at 110 V rated value at 220 V rated value 0.9 A 	• at 220 V rated value	3.6 A
operating frequency at DC-12 maximum operational current at 1 current path at DC-13 • at 24 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • at 600 V rated value operational current with 2 current paths in series at DC-13 • at 24 V rated value 10 A • at 60 V rated value at 60 V rated value 10 A • at 110 V rated value 3.5 A • at 110 V rated value • at 220 V rated value output 1.3 A • at 220 V rated value 0.9 A	 at 440 V rated value 	2.5 A
operational current at 1 current path at DC-13 • at 24 V rated value • at 110 V rated value • at 220 V rated value • at 440 V rated value • 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 20 V rated value	at 600 V rated value	
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 at 60 V rated value at 110 V rated value at 220 V rated value 0.9 A 	DC-13	
 at 110 V rated value at 220 V rated value 0.9 A 		
• at 220 V rated value 0.9 A		
• at 440 V rated value 0.2 A		
	• at 440 V rated value	0.2 A

at COO V rated value	0.4.4
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	C characteristic: 6 A; 0.4 kA
protection of the auxiliary circuit up to 230 V	
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	fuse gL/gG: 10 A
auxiliary switch required	
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	
with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
for grounded parts	C TITLE
— 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)
at AWG cables for auxiliary contacts	2x (20 16), 2x (18 14), 2x 12
Safety related data	(··· · · · · · · · · · · · · · · ·
	1,000,000: With 0,2 x lo
B10 value with high demand rate according to SN 31920	1 000 000; With 0.3 x le
proportion of dangerous failures	40.07
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920	73 %
failure rate [FIT] with low demand rate according to SN	100 FIT
31920	20 v
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	
- Transactor approvais	





Confirmation



<u>KC</u>



EMC

Declaration of Conformity

Test Certificates

Marine / Shipping







Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping













other

Railway

Confirmation



Vibration and Shock

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=3RH2344-1AK20-0KA0

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RH2344-1AK20-0KA0}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RH2344-1AK20-0KA0

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

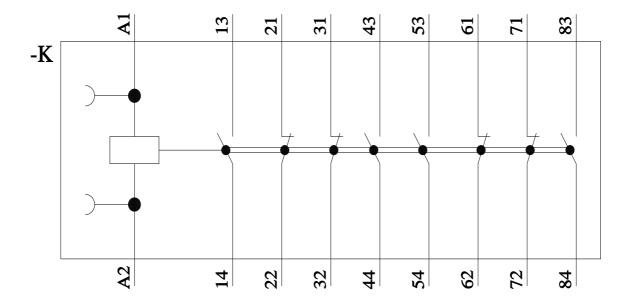
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2344-1AK20-0KA0\&lang=en}}$

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RH2344-1AK20-0KA0/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2344-1AK20-0KA0&objecttype=14&gridview=view1



last modified: 12/1/2021 🖸