SIEMENS

product brand name

Data sheet 3RH2431-1AK60

SIRIUS

Contactor relay, latched, 3 NO + 1 NC, 110 V AC, 50 Hz, 120 V, 60 Hz, 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
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 	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 %
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	110 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 50 Hz	0.8 1.1
● at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	37 VA
inductive power factor with closing power of the coil	0.8
apparent holding power of magnet coil at AC	5.7 VA
inductive power factor with the holding power of the	0.25
coil	
closing delay	0. 00
• at AC	8 33 ms
opening delay	4 45
• at AC	4 15 ms
arcing time	10 15 ms
Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
• instantaneous contact	1
number of NO contacts for auxiliary contacts	3
instantaneous contact	3
identification number and letter for switching elements	31 E
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	1A
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	
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
operational current with 2 current paths in series at DC-13	
at 24 V rated value	10 A

at 10 V traited value at 120 V rated value at 220 V rated value at 220 V rated value at 240 V rated value at 260 V rated value at 270	100.1/	0.5.4
and 220 V rated value and 400 V rated value bordational current with 3 current paths in series at constant accurrent with 3 current paths in series at constant accurrent with 3 current paths in series at constant accurrent with 3 current paths in series at constant rating of auxiliary contacts but 60 V rated value at 400 V rated value beging of the minister circuit breast for short-circuit protection of the auxiliary circuit up to 230 V contact rating for auxiliary contacts but 600 V rated value contact rating for auxiliary contacts but 600 V rated value beging of the minister circuit breast for short-circuit protection of the auxiliary contacts but 600 V rated value beging of the minister circuit breast for short-circuit protection of the auxiliary contacts according to UL but 600 V rated value but 600 V rated value beging of the size link for short-circuit protection of the auxiliary contacts according to UL but 600 V rated value but 600 V rated value contact rating of auxiliary contacts but 600 V rated value contact rating of auxiliary contacts but 600 V rated value contact rating of auxiliary contacts contact rating of auxiliary contacts but 600 V rated value contact rating of auxiliary contacts contact rating of auxiliar	• at 60 V rated value	3.5 A
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o at 24 V rated value at 60 V rated value at 61 V rated value at 61 V rated value at 61 V rated value at 62 V rated value at 64 V rated value at 65 V		0.1 A
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 — solid or stranded — finely stranded with core end processing — at AWG cables for auxiliary contacts Eat a AWG cables for auxiliary contacts <		
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proportion of dangerous failures ■ 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 31920 T1 value for proof test interval or service life according to 20 y		1,000,000: With 0,2 x lo
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 with high demand rate according to SN 31920 failure rate [FIT] with low demand rate according to SN 31920 T1 value for proof test interval or service life according to 20 y 		40 %
failure rate [FIT] with low demand rate according to SN 31920 T1 value for proof test interval or service life according to 20 y		
T1 value for proof test interval or service life according to 20 y	failure rate [FIT] with low demand rate according to SN	
	T1 value for proof test interval or service life according to	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



Confirmation





<u>KC</u>



EMC

Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates



Type Examination
Certificate





Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping













Marine / Shipping

othe

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=3RH2431-1AK60

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2431-1AK60

 ${\bf Service \& Support \ (Manuals, \ Certificates, \ Characteristics, \ FAQs, ...)}$

https://support.industry.siemens.com/cs/ww/en/ps/3RH2431-1AK60

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

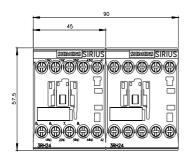
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2431-1AK60&lang=en

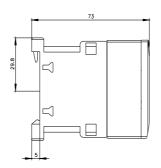
Characteristic: Tripping characteristics, I2t, Let-through current

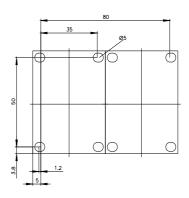
https://support.industry.siemens.com/cs/ww/en/ps/3RH2431-1AK60/char

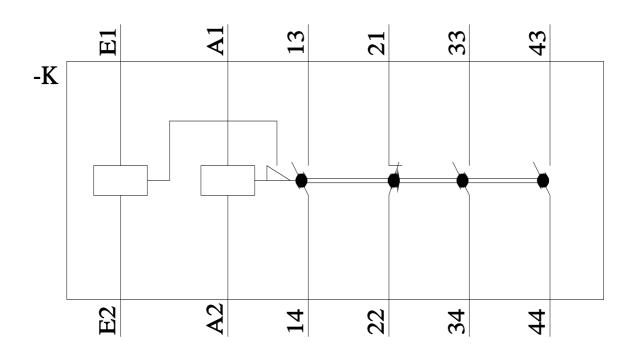
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2431-1AK60&objecttype=14&gridview=view1









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