



contactor relay, 7 NO + 1 NC, 110 V AC, 50 Hz / 120 V, 60 Hz, size S00, screw terminal, captive auxiliary switch

product brand name	SIRIUS
product designation	Auxiliary contactor
product type designation	3RH2
<b>General technical data</b>	
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 acc. to IEC 81346-2	K
Substance Prohibitance (Date)	01.10.2009
<b>Ambient conditions</b>	
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 %
<b>Main circuit</b>	
no-load switching frequency	
• at AC	10 000 1/h
• at DC	10 000 1/h
<b>Control circuit/ Control</b>	
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	

<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	0.8 ... 1.1
<ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>	0.85 ... 1.1
<b>apparent pick-up power of magnet coil at AC</b>	37 VA
<b>inductive power factor with closing power of the coil</b>	0.8
<b>apparent holding power of magnet coil at AC</b>	5.7 VA
<b>inductive power factor with the holding power of the coil</b>	0.25
<b>closing delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	8 ... 33 ms
<b>opening delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	4 ... 15 ms
<b>arcing time</b>	10 ... 15 ms
<b>Auxiliary circuit</b>	
<b>number of NC contacts for auxiliary contacts</b>	1
<ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul>	1
<b>number of NO contacts for auxiliary contacts</b>	7
<ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul>	7
<b>identification number and letter for switching elements</b>	71 E
operational current at AC-12 maximum	10 A
<b>operational current at AC-15</b>	
<ul style="list-style-type: none"> <li>• at 230 V rated value</li> </ul>	6 A
<ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>	3 A
<ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>	1 A
<b>operational current at 1 current path at DC-12</b>	
<ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>	10 A
<ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>	3 A
<ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>	1 A
<ul style="list-style-type: none"> <li>• at 440 V rated value</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>	0.15 A
<b>operational current with 2 current paths in series at DC-12</b>	
<ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>	10 A
<ul style="list-style-type: none"> <li>• at 60 V rated value</li> </ul>	10 A
<ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>	4 A
<ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>• at 440 V rated value</li> </ul>	1.3 A
<ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>	0.65 A
<b>operational current with 3 current paths in series at DC-12</b>	
<ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>	10 A
<ul style="list-style-type: none"> <li>• at 60 V rated value</li> </ul>	10 A
<ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>	10 A
<ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>	3.6 A
<ul style="list-style-type: none"> <li>• at 440 V rated value</li> </ul>	2.5 A
<ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>	1.8 A
<b>operating frequency at DC-12 maximum</b>	1 000 1/h
<b>operational current at 1 current path at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>	6 A
<ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>	1 A
<ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>• at 440 V rated value</li> </ul>	0.14 A
<ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>	0.1 A
<b>operational current with 2 current paths in series at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>	10 A
<ul style="list-style-type: none"> <li>• at 60 V rated value</li> </ul>	3.5 A
<ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>	1.3 A
<ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>	0.9 A
<ul style="list-style-type: none"> <li>• at 440 V rated value</li> </ul>	0.2 A

<ul style="list-style-type: none"> <li>at 600 V rated value</li> </ul>	0.1 A
<b>operational current with 3 current paths in series at DC-13</b>	
<ul style="list-style-type: none"> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> </ul>	10 A 4.7 A 3 A 1.2 A 0.5 A 0.26 A
<b>operating frequency at DC-13 maximum</b>	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
<b>contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)
<b>UL/CSA ratings</b>	
<b>contact rating of auxiliary contacts according to UL</b>	A600 / Q600
<b>Short-circuit protection</b>	
design of the fuse link for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
<b>fastening method</b>	screw and snap-on mounting onto 35 mm standard mounting rail
<b>height</b>	57.5 mm
<b>width</b>	45 mm
<b>depth</b>	117 mm
<b>required spacing</b>	
<ul style="list-style-type: none"> <li>with side-by-side mounting               <ul style="list-style-type: none"> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> </ul> </li> <li>for grounded parts               <ul style="list-style-type: none"> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> </ul> </li> <li>for live parts               <ul style="list-style-type: none"> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> </ul> </li> </ul>	10 mm 10 mm 10 mm 0 mm  10 mm 10 mm 6 mm 10 mm  10 mm 10 mm 10 mm 6 mm
<b>Connections/ Terminals</b>	
type of electrical connection for auxiliary and control circuit	screw-type terminals
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>for auxiliary contacts               <ul style="list-style-type: none"> <li>solid or stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG cables for auxiliary contacts</li> </ul>	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14), 2x 12
<b>Safety related data</b>	
B10 value with high demand rate acc. to SN 31920	1 000 000; With 0.3 x Ie
<b>proportion of dangerous failures</b>	
<ul style="list-style-type: none"> <li>with low demand rate acc. to SN 31920</li> <li>with high demand rate acc. to SN 31920</li> </ul>	40 % 73 %
failure rate [FIT] with low demand rate acc. to SN 31920	100 FIT
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y
<b>protection class IP on the front acc. to IEC 60529</b>	IP20
<b>touch protection on the front acc. to IEC 60529</b>	finger-safe, for vertical contact from the front
<b>Certificates/ approvals</b>	
<b>General Product Approval</b>	<b>EMC</b>



[KC](#)



Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates	Marine / Shipping
---------------------------------------	---------------------------	-------------------	-------------------

[Type Examination Certificate](#)

[UK Declaration of Conformity](#)



EG-Konf.

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS

### Marine / Shipping



LRS



PRS



RINA



RMRS

### other

[Confirmation](#)



VDE

### 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=3RH2271-1AK60>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2271-1AK60>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2271-1AK60>

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

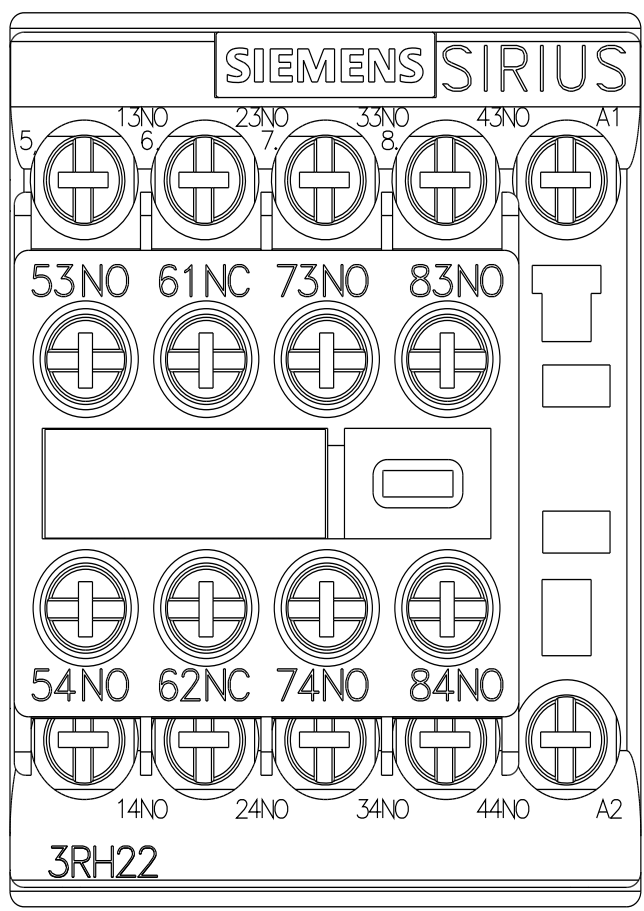
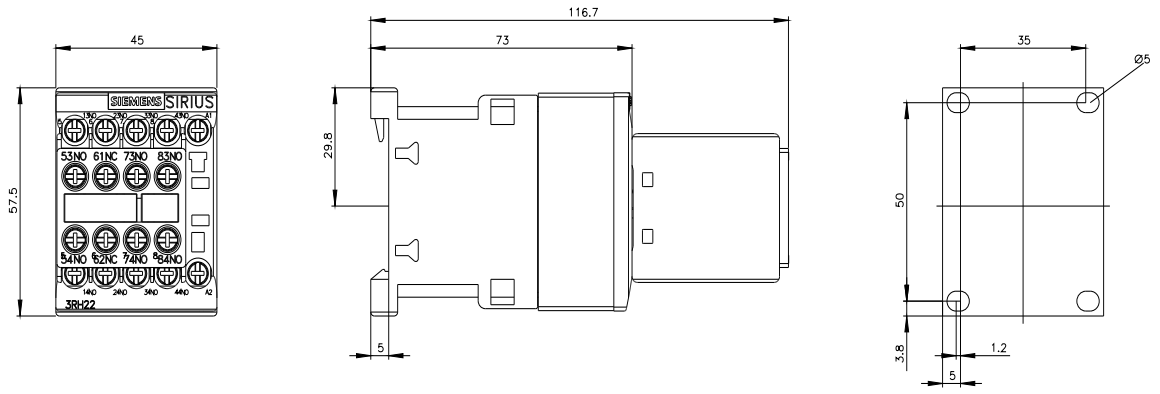
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RH2271-1AK60&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2271-1AK60&lang=en)

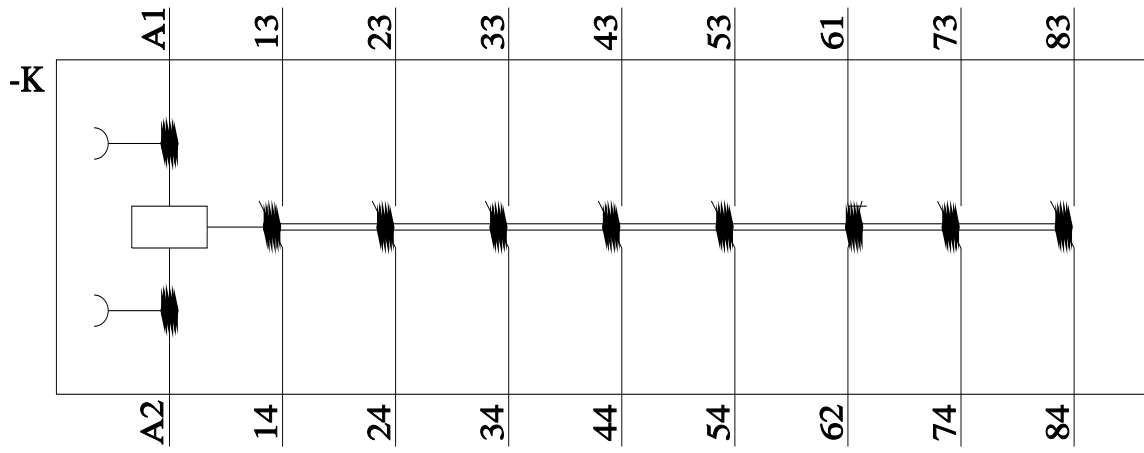
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RH2271-1AK60/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2271-1AK60&objecttype=14&gridview=view1>





last modified:

12/1/2021 