SIEMENS

Data sheet

3RH2131-2AK60



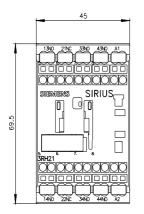
Contactor relay, 3 NO + 1 NC, 110 V AC, 50 Hz, 120 V, 60 Hz, Size S00, Spring-type terminal

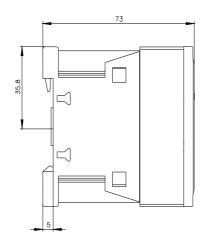
product brand name	SIRIUS
product designation	Auxiliary contactor
product type designation	3RH2
General technical data	
size of contactor	S00
product extension auxiliary switch	Yes
insulation voltage with degree of pollution 3 at AC rated value	690 V
degree of pollution	3
surge voltage resistance rated 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 (operating cycles)	
 of contactor typical 	30 000 000
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000
 of the contactor with added auxiliary switch block typical 	10 000 000
reference code according to IEC 81346-2	К
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	95 %
maximum	
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

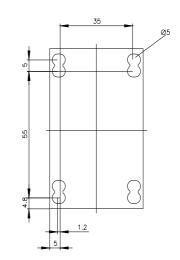
value of magnet coil at AC 0.8 11 • at 50 Hz 0.8 1.1 • at 50 Hz 0.85 1.1 • at 50 Hz 0.85 1.1 • at 60 Hz 0.74 Inductive power factor with claig power of the coil 0.8 • at AC 5	operating range factor control supply voltage rated	
• at 60 hz 0.85 1.1 apparent pick up power formagnet coil at AC 37 VA inductive power factor with closing power of the coil 0.8 apparent holding power of apparent coil at AC 5.7 VA inductive power factor with the holding power of the coil 0.25 closing delay		
apparent pick-up power of magnet coll at AC37 VAinductive power factor with colling power of the coll0.5coll0.25coll0.25coll0.15 mscoll0.15 msarcing time1015 msarcing time1015 msarcing time1number of NC contacts for auxiliary contacts1number of NC contacts for auxiliary contacts3instantaneous contact1number of NC contacts for auxiliary contacts3instantaneous contact1arcing time10 Aoperational current at AC-12 maximum operational current at AC-12 maximum at a 300 V rated value10 Aoperational current at AC-12 maximum at a 300 V rated value10 Aoperational current at AC-12 maximum at a 300 V rated value10 Aoperational current at AC-12 maximum at a 300 V rated value10 Aoperational current at AC-12 maximum at a 300 V rated value10 Aoperational current at AC-12 maximum at a 30 V rated value10 Aoperational current at AC-12 maximum at a 30 V rated value10 Aoperational current at at Current path at DC-12Imageneous contactat 3100 V rated value10 Aat 310 V rated value10 A	• at 50 Hz	0.8 1.1
Inductive power factor with closing power of the coll apparent holding power of apparent coll at A sparent holding power factor with the holding power of the coll closing delay • at AC • At	• at 60 Hz	0.85 1.1
apparent holding power of magnet coil at AC 5.7 VA Inductive power factor with the holding power of the coll 0.25 closing delay 833 ms • at AC 833 ms opening delay •15 ms • at AC 115 ms Auxiliary circuit 1 number of NC contacts for auxiliary contacts 1 • instainancess contact 3 identification number and latter for switching 31 E eitements 10 A operational current at AC-12 maximum 10 A operational current at AC-12 maximum 10 A operational current at 1 current path at DC-12 • • at 300 V rated value 2A • at 300 V rated value 3A • at 300 V rated value 3A • at 400 V rated value 0A • at 400 V rated value 0A • at 400 V rated value 10A	apparent pick-up power of magnet coil at AC	37 VA
Inductive power factor with the holding power of the coll0.25closing delay al ACB- al AC al AC1- instantaneous contact1- instantaneous contact3- instantaneous contact3- instantaneous contact3- instantaneous contact3- instantaneous contact10 A- operational current at AC-12 maximum10 A- ot 22 V rated value10 A- ot 22 V rated value<	inductive power factor with closing power of the coil	0.8
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• et AC 4 33 ms opening delay 4 15 ms arcing time 0.10 15 ms Auxiliary contacts for auxiliary contacts 1 number of NC contacts for auxiliary contacts 3 • instantaneous contact 1 number of NC contacts for auxiliary contacts 3 • instantaneous contact 3 instantaneous contact 3 instantaneous contact 3 instantaneous contact 3 identification number and letter for switching 31 E elements 3 operational current at AC-12 maximum 10 A operational current at AC-12 maximum 20 A at 3500 V rated value 20 A at 3500 V rated value 20 A at 360 V rated value 3A at 320 V rated	coil	0.25
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operational current with 2 current paths in series at DC-13Image: DC-13• at 24 V rated value10 A• at 60 V rated value3.5 A• at 10 V rated value1.3 A• at 220 V rated value0.9 A• at 440 V rated value0.2 A• at 600 V rated value0.1 A		
DC-13• at 24 V rated value10 A• at 60 V rated value3.5 A• at 110 V rated value1.3 A• at 220 V rated value0.9 A• at 440 V rated value0.2 A• at 600 V rated value0.1 A		0.1 A
• at 60 V rated value3.5 A• at 110 V rated value1.3 A• at 220 V rated value0.9 A• at 440 V rated value0.2 A• at 600 V rated value0.1 A		
• at 110 V rated value1.3 A• at 220 V rated value0.9 A• at 440 V rated value0.2 A• at 600 V rated value0.1 A		10 A
• at 220 V rated value0.9 A• at 440 V rated value0.2 A• at 600 V rated value0.1 A	• at 60 V rated value	3.5 A
 at 440 V rated value at 600 V rated value 0.1 A 	• at 110 V rated value	1.3 A
• at 600 V rated value 0.1 A	• at 220 V rated value	0.9 A
	• at 440 V rated value	0.2 A
operational current with 3 current paths in series at	• at 600 V rated value	0.1 A
	operational current with 3 current paths in series at	

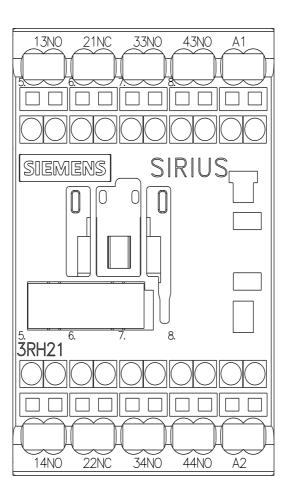
DC-13				
at 24 V rated value	10 A			
• at 60 V rated value	4.7 A			
at 110 V rated value	3 A			
at 220 V rated value	1.2 A			
at 440 V rated value	0.5 A			
at 600 V rated value	0.26 A			
operating frequency at DC-13 maximum	1 000 1/h			
design of the miniature circuit breaker for short-circuit	C characteristic: 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 DIN rail			
height	70 mm			
width	45 mm			
depth	73 mm			
required spacing				
with side-by-side mounting forwards	10 mm			
— forwards	10 mm			
— upwards — downwards	10 mm			
— at the side	0 mm			
for grounded parts	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	spring-loaded terminals			
type of connectable conductor cross-sections				
 for auxiliary contacts 				
— solid or stranded	2x (0,5 4 mm²)			
 — finely stranded with core end processing 	2x (0.5 2.5 mm ²)			
 finely stranded without core end processing 	2x (0.5 2.5 mm²)			
 at AWG cables for auxiliary contacts 	2x (20 12)			
Safety related data				
product function positively driven operation according to IEC 60947-5-1	Yes			
B10 value with high demand rate according to SN 31920 proportion of dangerous failures	1 000 000; With 0.3 x le			
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	100 FIT			
T1 value for proof test interval or service life according to IEC 61508	20 a			
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				

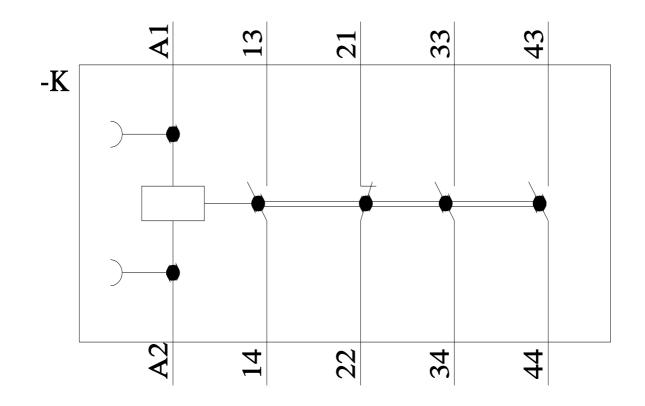
		<u>Confirmation</u>	(UL) UL	<u>KC</u>	EHC	
EMC	Functional Safety/Safety of Machinery	Declaration of Conformity		Test Certificates		
RCM	<u>Type Examination</u> <u>Certificate</u>	CE EG-Konf.	UK CA	<u>Special Test Certific-</u> <u>ate</u>	<u>Type Test Certific-</u> ates/Test Report	
Marine / Shipping						
ABS	B UREAU VERITAS		Lloyd's Register uts	PRS	RINA	
Marine / Shipping	other		Railway			
RMRS	<u>Confirmation</u>		Vibration and Shock			
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=3RH2131-2AK60 Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2131-2AK60 Service&Support (Manuals, Certificates, Characteristics, FAQs,) https://support.industry.siemens.com/cs/ww/en/ps/3RH2131-2AK60 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,) http://www.automation.siemens.com/cs/ww/en/ps/3RH2131-2AK60⟨=en Characteristic: Tripping characteristics, I ² t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RH2131-2AK60/char Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2131-2AK60&logiecttype=14&gridview=view1						











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