SIEMENS

Data sheet

3RH2431-1UW80

Contactor relay, latched, 3 NO + 1 NC, 32 V DC, Integrated varistor, 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 DC	10g / 5 ms, 5g / 10 ms
shock resistance with sine pulse	
• at DC	15g / 5 ms, 8g / 10 ms
mechanical service life (operating 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	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 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	DC
control supply voltage at DC	
rated value	32 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
• full-scale value	1.1
design of the surge suppressor	with varistor

closing newsy of magnet soil at DC	4 18/
closing power of magnet coil at DC	4 W
holding power of magnet coil at DC	4 W
closing delay	22 422
• at DC	30 100 ms
opening delay	
• at DC	7 13 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	30
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	1 A
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 at 220 V rated value	1A
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	40.4
• 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	
• 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 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)			
JL/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 auxiliary switch required	fuse gL/gG: 10 A			
nstallation/ 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	57.5 mm			
width	90 mm			
depth				
required spacing				
with side-by-side mounting				
- forwards	10 mm			
— upwards	10 mm			
— downwards	10 mm			
— at the side	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	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 mm ²), 2x (0.75 2.5 mm ²)			
 for AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14), 2x 12			
Safety related data	$\chi^{(1)} = \rho - \chi^{(2)} = \rho$			
product function positively driven operation according to IEC	Yes			
60947-5-1				
B10 value with high demand rate according to SN 31920	1 000 000; With 0.3 x le			
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	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				
Functional				

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RCM	<u>Type Examination Cer-</u> tificate	CE EG-Konf.	UK CA	<u>Special Test Certific-</u> ate	<u>Type Test Certific-</u> ates/Test Report		
Marine / Shipping							
ABS	BUREAU VERITAS		Lloyd's Register	PRS	RINA		
Marine / Shipping	other		Railway	Dangerous Good			
RANKS	<u>Confirmation</u>		<u>Vibration and Shock</u>	Transport Information			
Further information							
Siemens has decided to exit the Russian market (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business							
Siemens is working on the renewal of the current EAC certificates. Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus). Information on the packaging							
https://support.industry.siemens.com/cs/ww/en/view/109813875							
Information- and Dow https://www.siemens.c	vnloadcenter (Catalogs, Bro om/ic10	ochures,)					

https://www.siemens.com/ic10 Industry Mall (Online ordering system)

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Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2431-1UW80

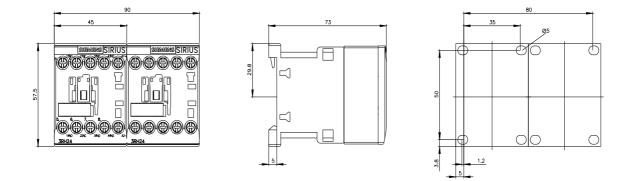
Service&Support industry siemens.com/cs/ww/en/ps/3RH2431-1UW80 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

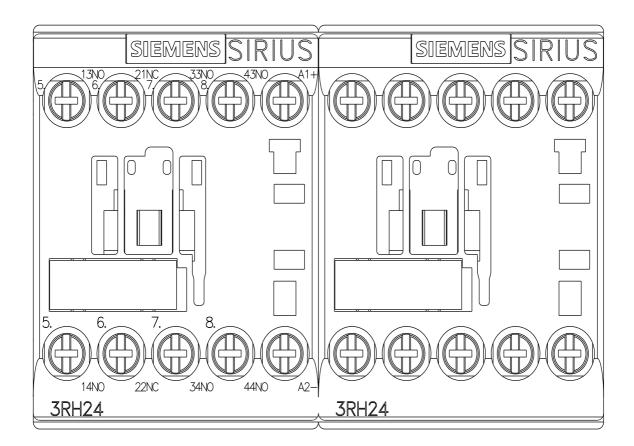
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2431-1UW80&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

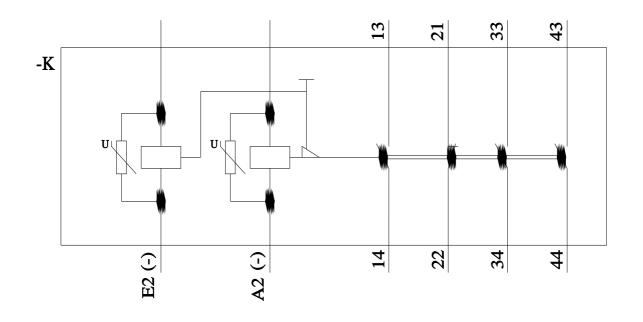
https://support.industry.siemens.com/cs/ww/en/ps/3RH2431-1UW80/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2431-1UW80&objecttype=14&gridview=view1





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