SIEMENS

Data sheet 3RH2140-1BM40



Contactor relay, 4 NO, 220 V DC, Size S00, screw terminal

product type designation graduct type designation Size of contactor product extension auxiliary switch power loss [W] for rated value of the current without load current share typical insulation voltage with degree of pollution 3 at AC rated value degree of pollution surge voltage resistance rated value e at DC shock resistance with sine pulse e at DC shock resistance with sine pulse e at DC mechanical service life (operating cycles) of contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation allitude at height above sea level maximum e during operation e during operation e value (Sec 20068-2-30 e value) e value (Sec 20068-2-30 e value) size (Value) size (Va	product brand name	SIRIUS
Size of contactor S00	product designation	Auxiliary contactor
size of contactor product extension auxiliary switch power loss [W] for rated value of the current without load current share typical insulation voltage with degree of pollution 3 at AC rated value degree of pollution surge voltage resistance rated value • at DC shock resistance at rectangular impulse • at DC shock resistance with sine pulse • at DC shock resistance with sine pulse • at DC mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 K Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage reflative humidity minimum relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 95 %	product type designation	3RH2
product extension auxiliary switch power loss [W] for rated value of the current without load current share typical insulation voltage with degree of pollution 3 at AC rated value degree of pollution surge voltage resistance rated value shock resistance at rectangular impulse • at DC shock resistance with sine pulse • at DC 10g / 5 ms, 5g / 10 ms shock resistance with sine pulse • at DC shock resistance with sine pulse • at DC for contactor typical • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum	General technical data	
power loss [W] for rated value of the current without load current share typical insulation voltage with degree of pollution 3 at AC rated value 690 V degree of pollution 3 at AC rated value 6 kV shock 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 30 000 000 • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block 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 -55 +60 °C relative humidity minimum 10 % relative humidity minimum 10 % relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 %	size of contactor	S00
insulation voltage with degree of pollution 3 at AC rated value degree of pollution surge voltage resistance rated value of kV shock resistance at rectangular impulse of DC at DC a	product extension auxiliary switch	Yes
degree of pollution surge voltage resistance rated value • at DC shock resistance with sine pulse • 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 • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical **Output* Teference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 %		4 W
surge voltage resistance rated value shock resistance at rectangular impulse • at DC shock resistance with sine pulse • at DC 15g / 5 ms, 8g / 10 ms mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical •	insulation voltage with degree of pollution 3 at AC rated value	690 V
shock resistance at rectangular impulse • at DC shock resistance with sine pulse • at DC 15g / 5 ms, 8g / 10 ms mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical 10 000 000 K Substance Prohibitance (Date) 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 %	degree of pollution	3
at DC shock resistance with sine pulse at DC at DC mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical to 000 000 reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation during storage cube conditions relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 %	surge voltage resistance rated value	6 kV
shock resistance with sine pulse at DC mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical to 000 000 reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation cut in the problem of the contactor with added auxiliary switch block typical 10 000 000 The problem of the contactor with added auxiliary switch block typical 10 000 000 The problem of the contactor with added auxiliary switch block typical 10 000 000 The problem of the contactor with added auxiliary switch block typical 10 000 000 The problem of the contactor with added auxiliary switch block typical 10 000 000 The problem of the probl	shock resistance at rectangular impulse	
at DC mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation of the contactor with added auxiliary switch block typical 10 000 000 K 10/01/2009 Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation of the contactor with added electronically optimized 5 000 000 K 2 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 5 000 000 Total contactor with added electronically optimized 10 000 000 Total contactor with added electronically optimized 10 000 000 Total contactor with added electronically optimized 10 000 000 Total contactor with added electronically optimized 10 000 000 Total contactor with added electronically optimized 10 000 000 Total contactor with added electronically optimized 10 000 000 Total contactor with added electronically optimized 10 000 000 Tota	• at DC	10g / 5 ms, 5g / 10 ms
mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 K Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage -25 +60 °C • during storage relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 %	shock resistance with sine pulse	
of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature oduring operation oduring storage during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 95 %	• at DC	15g / 5 ms, 8g / 10 ms
of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature oldering operation -25 +60 °C oldering storage -55 +80 °C relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 %	mechanical service life (operating cycles)	
auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 K Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation during storage -25 +60 °C of during storage relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 %	of contactor typical	30 000 000
reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage -25 +60 °C • during storage relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 %		5 000 000
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 10/01/2009 2 000 m 2 000 m -25 +60 °C -55 +80 °C 95 %	of the contactor with added auxiliary switch block typical	10 000 000
Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 %	reference code according to IEC 81346-2	K
installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage -25 +60 °C -55 +80 °C relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 %	Substance Prohibitance (Date)	10/01/2009
ambient temperature	Ambient conditions	
 during operation -25 +60 °C during storage -55 +80 °C relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 95 % 	installation altitude at height above sea level maximum	2 000 m
● during storage -55 +80 °C relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 %	ambient temperature	
relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 %	during operation	-25 +60 °C
relative humidity at 55 °C according to IEC 60068-2-30 95 %	during storage	-55 +80 °C
	relative humidity minimum	10 %
		95 %
Environmental footprint	Environmental footprint	
Environmental Product Declaration(EPD) Yes	Environmental Product Declaration(EPD)	Yes
Global Warming Potential [CO2 eq] total 133 kg	Global Warming Potential [CO2 eq] total	133 kg
Global Warming Potential [CO2 eq] during manufacturing 1.3 kg	Global Warming Potential [CO2 eq] during manufacturing	1.3 kg
Global Warming Potential [CO2 eq] during operation 132 kg	Global Warming Potential [CO2 eq] during operation	132 kg
global warming potential [CO2 eq] after end of life -0.227 kg	global warming potential [CO2 eq] after end of life	-0.227 kg
Main circuit	Main circuit	
no-load switching frequency	no-load switching frequency	
• at AC 10 000 1/h	• at AC	10 000 1/h
• at DC 10 000 1/h	• at DC	10 000 1/h
Control circuit/ Control	Control circuit/ Control	

time of voltage of the acceptant country.	DC
type of voltage of the control supply voltage	DC
control supply voltage at DC	220 V
rated value operating range factor control supply voltage rated value of magnet coil at DC	220 V
• initial value	0.8
• full-scale value	1.1
closing power of magnet coil at DC	4 W
holding power of magnet coil at DC	4 W
closing delay	
• at DC	30 100 ms
opening delay	
• at DC	7 13 ms
arcing time	10 15 ms
Auxiliary circuit	
number of NO contacts for auxiliary contacts	4
• instantaneous contact	4
identification number and letter for switching elements	40 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	1 A
operational current at 1 current path at DC-12	40.4
at 24 V rated value at 440 V rated value	10 A
at 110 V rated value at 220 V rated value	3 A
at 220 V rated value at 440 V rated value	1 A 0.3 A
at 440 V rated valueat 600 V rated value	0.3 A 0.15 A
operational current with 2 current paths in series at DC-12	V.IVA
at 24 V rated value	10 A
at 60 V rated value	10 A
at 100 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	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 at 60 V rated value	10 A
at 60 V rated value at 110 V rated value	3.5 A
at 110 V rated value at 220 V rated value	1.3 A 0.9 A
at 220 V rated value at 440 V rated value	0.9 A 0.2 A
at 440 V rated value at 600 V rated value	0.2 A 0.1 A
operational current with 3 current paths in series at DC-13	W.I.A.
at 24 V rated value	10 A
at 60 V rated value	4.7 A
- at oo v rated value	III 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)	
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 auxiliary switch required	fuse gL/gG: 10 A	
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	57.5 mm	
width	45 mm	
depth	73 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		
— 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	person type terminals	
type of connectable conductor cross-sections	screw-type terminals	
 for auxiliary contacts — solid or stranded 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²	
Solid of stranded finely stranded with core end processing	2x (0.5 1.5 min-), 2x (0.75 2.5 min-), 2x 4 min- 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	
Innerly stranded with core end processing for AWG cables for auxiliary contacts	2x (0.5 1.5 min-), 2x (0.75 2.5 min-) 2x (20 16), 2x (18 14), 2x 12	
Safety related data	کہ رکن ۱۵٫ کہ ران ۱۶٫ کہ اک	
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	
Approvals Certificates		
General Product Approval		
.,		





Confirmation





<u>KC</u>



General Product Approval

EMC

Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates





Type Examination Certificate





Type Test Certificates/Test Report

Test Certificates

Marine / Shipping

Special Test Certificate











Marine / Shipping

other

Railway

Dangerous Good





Household and similar appliances

Confirmation

Vibration and Shock

Transport Information

Environment

Environmental Confirmations

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 Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RH2140-1BM40

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RH2140-1BM40}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-1BM40

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RH2140-1BM40&lang=en

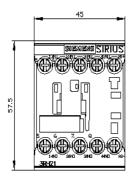
Characteristic: Tripping characteristics, I2t, Let-through current

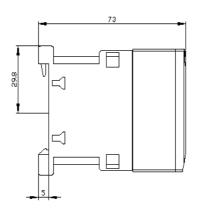
https://support.industry.siemens.com/cs/ww/en/ps/3RH2140-1BM40/char

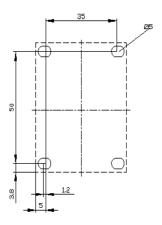
Further characteristics (e.g. electrical endurance, switching frequency)

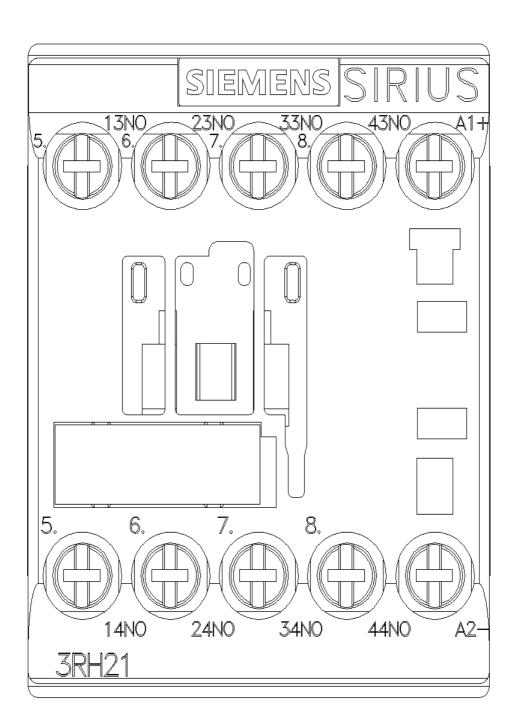
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2140-1BM40&objecttype=14&gridview=view1

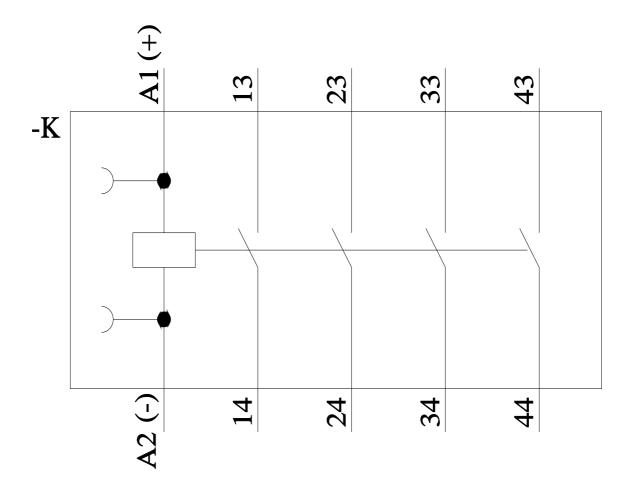












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