3RA2120-1KA24-0AK6

Data sheet



FUSELESS LOAD FEEDER DIRECT START, AC 400V, SZ. S0, 9...12.5A, AC 110/120V 50/60HZ SCREW TERMINAL FOR RAIL MOUNTING, TYPE OF ASSIGNMENT 2,IQ = 150KA (ALSO FULFILLS TYPE OF ASSIGNMENT 1) 1NO+1NC (CONTACTOR)

product designation non-fused load feeders 3RA2 direct starter direct starter	product brand name	SIRIUS
manufacturer's article number of the supplied contactor of the supplied circuit-breakers of the supplied link module 3RA2821-1AA00 Ceneral technical data size of the circuit-breaker size of the circuit-breaker S0 size of foad feeder S0 product extension auxiliary switch risulation voltage with degree of pollution 3 at AC rated value degree of pollution surge voltage resistance rated value 680 V degree of pollution surge voltage resistance rated value 680 V shock resistance according to IEC 60068-2-27 69 / 11 ms mechanical service life (operating cycles) of contactor typical 10 000 000 type of assignment 2 Substance Prohibitance (Date) 10/01/2009 Ambient conditions ambient temperature during storage during storage 5-50+80 °C during transport 5-50+80 °C during transport solution trevuit number of poles for main current circuit design of the switching contact adjustable current response value current of the current-dependent overload release operating voltage at AC-3 rated value at AC-3 rated value at AC-3 at 400 V rated value 5-5060 Hz operation power at AC-3 at 400 V rated value 5-5060 Hz operation power at AC-3 at 400 V rated value 7-500 W at 6500 V rated value 7-500 W at 6500 V rated value 7-500 W at 6500 V rated value 7-500 W control circuit/Control control supply voltage at AC	product designation	non-fused load feeders 3RA2
of the supplied contactor of the supplied circuit-breakers of the supplied ink module SaRV2021-1KA10 General technical data size of the circuit-breaker size of the circuit-breaker size of load feeder product extension auxiliary switch Yes insulation voltage with degree of pollution 3 at AC rated value degree of pollution 3 surge voltage resistance rated value shock resistance according to IEC 60068-2-27 69 / 11 ms mechanical service life (operating cycles) of contactor typical 10 000 000 10 000 000 Ambient conditions Substance Prohibitance (Date) 10/01/2009 Ambient conditions ambient temperature during operation during storage during transport 5-50+80 °C during infransport 5-50+80 °C Main circuit number of poles for main current circuit design of the switching contact adjustable current response value current of the current-dependent overload release operating voltage at AC-3 rated value at AC-3 rated value 5-50 4 at 600 V rated value 5-500 W at 600 V rated value 7-500 W 7-500 W 7-500 V rated value 7-500 W 7-500 V rated value 8-7-500 V rated value 9-7-500 V rated value	design of the product	direct starter
of the supplied circuit-breakers	manufacturer's article number	
of the supplied link module Societal technical data size of the circuit-breaker size of toad feeder 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 shock resistance according to IEC 60068-2-27	 of the supplied contactor 	3RT2024-1AK60
Size of the circuit-breaker S0 size of load feeder S0 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 6kV shock resistance according to IEC 60069-2-27 6g / 11 ms mechanical service life (operating cycles) of contactor typical 10 000 000 type of assignment 2 Substance Prohibitance (Date) 10/01/2009 Ambient conditions ambient temperature • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C • during transport -50 +80 °C • during transport	 of the supplied circuit-breakers 	3RV2021-1KA10
size of the circuit-breaker size of load feeder product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value degree of pollution 3 surge voltage resistance rated value 6 kV shock resistance according to IEC 60068-2-27 6g /11 ms mechanical service life (operating cycles) of contactor typical 10 000 000 type of assignment 2 Substance Prohibitance (Date) 10/01/2009 Ambient conditions ambient temperature • during operation • during storage • during transport 100 00 000 4 design of the switching contact 4 design of the switching contact 4 dependent overload release operating voltage • at AC-3 rated value maximum 690 V operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 600 V rated value	 of the supplied link module 	3RA2921-1AA00
size of load feeder product extension auxiliary switch product extension auxiliary switch yes insulation voltage with degree of pollution 3 at AC rated value degree of pollution surge voltage resistance rated value shock resistance according to IEC 60088-2-27 mechanical service life (operating cycles) of contactor typical type of assignment 2 Substance Prohibitance (Date) Ambient conditions ambient temperature during operation during storage during storage during transport -50 +80 °C -50 +80 °C Main circuit number of poles for main current circuit design of the switching contact adjustable current response value current of the current- dependent overload release operating voltage at AC-3 rated value at AC-3 rated value maximum seporating power at AC-3 at 400 V rated value at 400 V rated value at 690 V at 690 V control current at AC-3 at 400 V rated value 7 500 W Control circuit/ Control control supply voltage at AC	General technical data	
product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value degree of pollution 3 surge voltage resistance rated value shock resistance according to IEC 60068-2-27 6g / 11 ms mechanical service life (operating cycles) of contactor typical type of assignment 2 Substance Prohibitance (Date) Ambient conditions ambient temperature during operation during storage during storage during transport -50 +80 °C during transport -50 +80 °C during transport -50 +80 °C during transport -50 +80 °C design of the switching contact adjustable current response value current of the current-dependent overload release operating voltage at AC-3 rated value maximum -690 V operating frequency rated value operational current at AC-3 at 400 V rated value at 400 V rated value - at 400 V rated value - at 600 V rated value	size of the circuit-breaker	S0
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 according to IEC 60068-2-27 6g / 11 ms mechanical service life (operating cycles) of contactor typical 10 000 000 type of assignment 2 Substance Prohibitance (Date) 10/01/2009 Ambient conditions ambient temperature • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C Main circuit number of poles for main current circuit 3 design of the switching contact electromechanical adjustable current response value current of the current-dependent overload release operating voltage • rated value 690 V • at AC-3 rated value maximum 690 V operating frequency rated value 50 60 Hz operating over at AC-3 • at 400 V rated value 5 500 W • at 500 V rated value 7 500 W control circuit/ Control Control supply voltage at AC	size of load feeder	S0
degree of pollution surge voltage resistance rated value 6 kV shock resistance according to IEC 60068-2-27 6g / 11 ms mechanical service life (operating cycles) of contactor typical 10 000 000 type of assignment 2 Substance Prohibitance (Date) 10/01/2009 Ambient conditions ambient temperature 4 during operation 4 during storage 5 during transport -20 +60 °C -50 +80 °C during transport number of poles for main current circuit 3 design of the switching contact electromechanical adjustable current response value current of the current- dependent overload release operating voltage 1 at AC-3 rated value 5 00 60 Hz operating frequency rated value 11.5 A operating power at AC-3 1 at 600 V rated value 5 500 W 1 at 600 V rated value 5 500 W 1 at 600 V rated value 7 500 W 2 at 600 V rated value 7 500 W 2 at 600 V rated value 7 500 W 2 control circuit/ Control control supply voltage at AC	product extension auxiliary switch	Yes
surge voltage resistance rated value shock resistance according to IEC 60068-2-27 mechanical service life (operating cycles) of contactor typical type of assignment 2 Substance Prohibitance (Date) Ambient conditions ambient temperature • during operation • during storage • during transport -20 +60 °C • during transport -50 +80 °C Main circuit number of poles for main current circuit design of the switching contact adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum operating frequency rated value operational current at AC-3 at 400 V rated value • at 500 V vated value • at 500 V rated value • at 690 V vated value • 7 500 W • at 600 V rated value • at 690 V rated value • 7 500 W • at 690 V rated value • at 690 V rated value • 7 500 W • at 690 V rated value • 7 500 W • at 690 V rated value • 7 500 W • at 500 V rated value • at 690 V rated value	insulation voltage with degree of pollution 3 at AC rated value	690 V
shock resistance according to IEC 60068-2-27 mechanical service life (operating cycles) of contactor typical type of assignment 2 Substance Prohibitance (Date) Ambient conditions ambient temperature • during operation • during storage • during transport Main circuit number of poles for main current circuit design of the switching contact adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum operating frequency rated value operational current at AC-3 • at 400 V rated value • at 500 V rated value • at 500 V rated value • at 500 V rated value • at 690 V vated value • at 690 V vated value • 7 500 W • at 690 V vated value • 7 500 W • at 690 V vated value • 7 500 W • at 690 V vated value • 7 500 W • At 500 V vated value • At 500 V rated value	degree of pollution	3
mechanical service life (operating cycles) of contactor typical type of assignment 2 Substance Prohibitance (Date) Ambient conditions ambient temperature • during operation • during storage • during transport -50 +80 °C • during transport -50 +80 °C Main circuit number of poles for main current circuit design of the switching contact adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum operating frequency rated value operating power at AC-3 • at 400 V rated value • at 400 V rated value • at 500 V rated value • at 690 V vated value • at 690 V vated value • at 690 V vated value • 7 500 W control circuit/ Control control supply voltage at AC-	surge voltage resistance rated value	6 kV
type of assignment 2 Substance Prohibitance (Date) 10/01/2009 Ambient conditions ambient temperature • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C Main circuit number of poles for main current circuit 3 design of the switching contact electromechanical adjustable current response value current of the current-dependent overload release operating voltage • rated value 690 V operating frequency rated value 50 60 Hz operating power at AC-3 • at 400 V rated value 5500 W • at 690 V rated value 7500 W control circuit/ Control control supply voltage at AC	shock resistance according to IEC 60068-2-27	6g / 11 ms
Substance Prohibitance (Date) Ambient conditions ambient temperature • during operation • during storage • during transport -50 +80 °C • during transport -50 +80 °C Main circuit number of poles for main current circuit design of the switching contact adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum operating frequency rated value operating power at AC-3 • at 400 V rated value • at 400 V rated value • at 690 V • at 500 V rated value operational current at AC-3 • at 400 V rated value • 500 W • at 690 V • at 690 V • at 690 V rated value operational current at AC-3 • at 400 V rated value operational current at AC-3 • at 400 V rated value operational current value opera	mechanical service life (operating cycles) of contactor typical	10 000 000
ambient temperature • during operation • during storage • during transport -50 +80 °C • during transport -50 +80 °C Main circuit number of poles for main current circuit design of the switching contact adjustable current response value current of the current- dependent overload release operating voltage • rated value • at AC-3 rated value maximum operating frequency rated value operational current at AC-3 at 400 V rated value 11.5 A operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 690 V • at 690 V operational current at AC-3 • at 400 V rated value 7 500 W control circuit/ Control control supply voltage at AC	type of assignment	2
ambient temperature • during operation • during storage • during transport -50 +80 °C • during transport -50 +80 °C Main circuit number of poles for main current circuit design of the switching contact adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum operating frequency rated value operating frequency rated value operating power at AC-3 • at 400 V rated value • at 600 V rated value	Substance Prohibitance (Date)	10/01/2009
 during operation during storage 50 +80 °C Main circuit number of poles for main current circuit design of the switching contact adjustable current response value current of the current-dependent overload release operating voltage at AC-3 rated value maximum operating frequency rated value operating power at AC-3 at 400 V rated value at 400 V rated value at 500 W at 690 V operating power at AC-3 at 400 V rated value at 500 V rated value at 690 V at 690 V at 690 V at 690 V rated value at 7500 W at 690 V rated value at 69	Ambient conditions	
• during storage • during transport • during transport rumber of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum operating frequency rated value operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 500 V rated value • at 690 V rated value • at 690 V rated value operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 500 V rated value • at 500 V rated value • at 690 V rated value • at 690 V rated value • at 500 V rated value • at 500 V rated value • at 690 V rated value	ambient temperature	
during transport	 during operation 	-20 +60 °C
Main circuit 3 number of poles for main current circuit 3 design of the switching contact electromechanical adjustable current response value current of the current-dependent overload release 9 12.5 A operating voltage 690 V • rated value 690 V • at AC-3 rated value maximum 690 V operating frequency rated value 50 60 Hz operating power at AC-3 at 400 V rated value 11.5 A operating power at AC-3 5 500 W • at 400 V rated value 5 500 W • at 690 V rated value 7 500 W Control circuit/ Control control supply voltage at AC	during storage	-50 +80 °C
number of poles for main current circuit design of the switching contact adjustable current response value current of the current- dependent overload release operating voltage • rated value • at AC-3 rated value maximum operating frequency rated value operating a to AC-3 at 400 V rated value operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 690 V Operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 500 V rated value • at 690 V rated value operating to trait value operating power at AC-3 • at 400 V rated value • at 500 V rated value operating to trait value operating	during transport	-50 +80 °C
design of the switching contact adjustable current response value current of the current- dependent overload release operating voltage • rated value • at AC-3 rated value maximum operating frequency rated value operational current at AC-3 at 400 V rated value operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 690 V control circuit/ Control control supply voltage at AC	Main circuit	
adjustable current response value current of the current- dependent overload release operating voltage • rated value • at AC-3 rated value maximum operating frequency rated value operational current at AC-3 at 400 V rated value operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 690 V • at 690 V Operating power at AC-3 • at 400 V rated value • at 500 W • at 690 V rated value operating power at AC-3 • at 400 V rated value operating power at AC-3 • at 400 V rated value operating power at AC-3 • at 400 V rated value operating power at AC-3 • at 500 W operating power at AC-3 • at 400 V rated value operating power at AC-3 • at 400 V rated value operating power at AC-3 • at 400 V rated value operating power at AC-3 operating power at AC-3 • at 400 V rated value operating power at AC-3	number of poles for main current circuit	3
dependent overload release operating voltage • rated value • at AC-3 rated value maximum 690 V operating frequency rated value 50 60 Hz operational current at AC-3 at 400 V rated value 11.5 A operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 500 V rated value • at 690 V rated value 7 500 W • at 690 V rated value 7 500 W Control circuit/ Control control supply voltage at AC	design of the switching contact	electromechanical
rated value at AC-3 rated value maximum 690 V operating frequency rated value operational current at AC-3 at 400 V rated value operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 690 V rated value		9 12.5 A
at AC-3 rated value maximum operating frequency rated value operational current at AC-3 at 400 V rated value operating power at AC-3 operatin	operating voltage	
operating frequency rated value operational current at AC-3 at 400 V rated value 11.5 A operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 690 V rated value 7 500 W Control circuit/ Control control supply voltage at AC	rated value	690 V
operational current at AC-3 at 400 V rated value operating power at AC-3 • at 400 V rated value • at 500 V rated value • at 690 V rated value 7 500 W control circuit/ Control control supply voltage at AC	at AC-3 rated value maximum	690 V
operating power at AC-3 • at 400 V rated value 5 500 W • at 500 V rated value 7 500 W • at 690 V rated value 7 500 W Control circuit/ Control control supply voltage at AC	operating frequency rated value	50 60 Hz
at 400 V rated value at 500 V rated value at 690 V rated value 7 500 W Control circuit/ Control control supply voltage at AC	operational current at AC-3 at 400 V rated value	11.5 A
at 500 V rated value at 690 V rated value 7 500 W Control circuit/ Control control supply voltage at AC	operating power at AC-3	
at 690 V rated value 7 500 W Control circuit/ Control control supply voltage at AC	• at 400 V rated value	5 500 W
Control circuit/ Control control supply voltage at AC	at 500 V rated value	7 500 W
control supply voltage at AC	at 690 V rated value	7 500 W
	Control circuit/ Control	
• at 50 Hz rated value 110 V	control supply voltage at AC	
	 at 50 Hz rated value 	110 V

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 at 60 Hz rated value 	120 V
apparent holding power of magnet coil at AC	8.5 VA
Protective and monitoring functions	
trip class	CLASS 10
design of the overload release	thermal (bimetallic)
response value current of instantaneous short-circuit trip unit	162.5 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	11 A
at 600 V rated value	11 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	0.5 hp
— at 230 V rated value	2 hp
• for 3-phase AC motor	2 ha
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value — at 575/600 V rated value	7.5 hp 10 hp
Short-circuit protection	10 πρ
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
conditional short-circuit current (Iq)	magnotio
• at 690 V according to IEC 60947-4-1 rated value	4 000 A
at 400 V according to IEC 60947-4-1 rated value	153 000 A
at 500 V according to IEC 60947-4-1 rated value	42 000 A
Installation/ mounting/ dimensions	
mounting position	vertical
fastening method	screw and snap-on mounting onto 35 mm DIN rail
height	193.1 mm
width	45 mm
depth	97.1 mm
required spacing	
 for grounded parts 	
— forwards	10 mm
— backwards	0 mm
— upwards	30 mm
— at the side	9 mm
— downwards	10 mm
• for live parts	40
— forwards	10 mm
— backwards	0 mm
— upwards — downwards	30 mm
— at the side	10 mm 9 mm
Connections/ Terminals	9 11111
type of electrical connection for main current circuit	screw-type terminals
type of connectable conductor cross-sections for main contacts stranded	1 10 mm², 2x (2.5 6 mm²)
connectable conductor cross-section for main contacts finely stranded with core end processing	1 6 mm²
Safety related data	
B10 value with high demand rate according to SN 31920	1 000 000
proportion of dangerous failures with high demand rate according to SN 31920	73 %
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	For use in hazard- ous locations Declaration of Conformity











Test Certificates

Marine / Shipping

Type Test Certificates/Test Report

Special Test Certific-









Marine / Shipping

other Railway







Confirmation

Vibration and Shock

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=3RA2120-1KA24-0AK6

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RA2120-1KA24-0AK6}}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1KA24-0

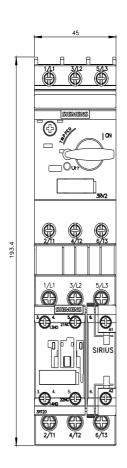
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

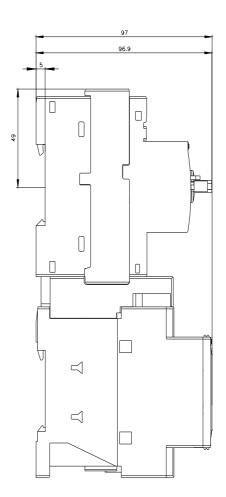
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-1KA24-0AK6&lang=en

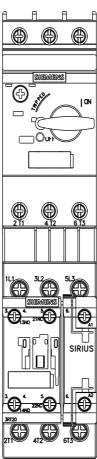
Characteristic: Tripping characteristics, I2t, Let-through current

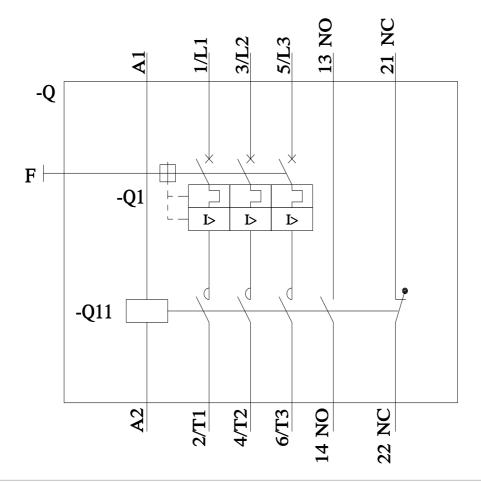
https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1KA24-0AK6/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2120-1KA24-0AK6&objecttype=14&gridview=view1









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