SIEMENS

Product data sheet 3RV2021-4AA10



CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 11...16A, N-RELEASE 208A, SCREW CONNECTION, STANDARD SW. CAPACITY

General technical data:		
Product brand name		SIRIUS
product designation		3RV2 circuit breaker
Size of the circuit-breaker		S0
Trip class		CLASS 10
Protection class IP / on the front		IP20
Degree of pollution		3
Installation altitude / at a height over sea level / maximum	m	2,000
Ambient temperature		
during storage	°C	-50 80
during operating	°C	-20 60
during transport	°C	-50 80
Resistance against shock		25g / 11 ms
Impulse voltage resistance / rated value	kV	6
Insulation voltage / rated value	V	690
Active power loss / total / typical	W	8.3
Item designation		
 according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 		F
according to DIN EN 61346-2		F

of the main contacts / typical of the auxiliary contacts / typical of the auxiliary contacts / typical of the driving mechanism / motor drive Design of the operating mechanism overload protection overload	Mechanical operating cycles as operating time		
Type of the driving mechanism / motor drive Design of the operating mechanism Product function - overload protection - ophase disturbance recognition Product component - auxiliary switch - undervoltage release mechanism - tip indicator Product extension / optional / motor drive No Main circuit: Number of poles / for main current circuit Agustado V / rated value - at 400 V / rated value - at 690 V / rated value	of the main contacts / typical		100,000
Design of the operating mechanism Product function • overload protection • phase disturbance recognition Product organism witch • phase disturbance recognition Product organism witch • undervoltage release mechanism • trip indicator Product extension / optional / motor drive No Main circuit: Number of poles / for main current circuit Operating voltage / at AC-3 / rated value / maximum Operating voltage / at AC-3 / at 400 V / rated value • at 400 V / rated value • at 500 V / rated value • at 500 V / rated value • at 600 V / rated value • at 600 V / rated value • at 600 V / rated value • of the non-delayed short-circuit release • of the content or rated value A 16 Auxiliary circuit: Product extension / auxiliary contacts / instantaneous switching Number of NC contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts / instantaneous switching	of the auxiliary contacts / typical		100,000
Product function overload protection phase disturbance recognition Product component auxiliary switch overload protection phase disturbance recognition Product component auxiliary switch No No No No No No Product extension / optional / motor drive No Main circuit: Number of poles / for main current circuit Operating voltage / at AC-3 / rated value / maximum V 690 Operating current / at AC-3 / at 400 V / rated value at 400 V / rated value	Type of the driving mechanism / motor drive		No
overload protection phase disturbance recognition Product component auxiliary switch vidervoltage release mechanism trip indicator Product extension / optional / motor drive Main circuit: Number of poles / for main current circuit Operating voltage / at AC-3 / rated value / maximum Operating current / at AC-3 / rated value / maximum Operating current / at AC-3 / at 400 V / rated value at 400 V / rated value vider operating voltage / value at 690 V / rated value vider operating voltage / value vider operating value	Design of the operating mechanism		selector switch
Product component - auxiliary switch - undervoltage release mechanism - trip indicator No Main circuit: Number of poles / for main current circuit Operating voltage / at AC-3 / rated value / maximum - at 400 V / rated value - at 600 V / rated value - at 600 V / rated value - of the non-delayed short-circuit release - of the current-dependent overload release - of the current-dependent overload release - of the current-dependent overload release - of the current-rated value - Auxiliary circuit: Product extension / auxiliary switch Number of No contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts No No No No No - So - O - O - O - O - O - O - O -	Product function		
Product component - auxiliary switch - undervoltage release mechanism - trip indicator Product extension / optional / motor drive Main circuit: Number of poles / for main current circuit Operating voltage / at AC-3 / rated value / maximum Operating current / at AC-3 / at 400 V / rated value - at 400 V / rated value - at 500 V / rated value - at 600 V / rated value - at 600 V / rated value Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum Of the non-delayed short-circuit release - of the current-dependent overload release - A 208 208 - Otto current / rated value - Auxiliary circuit: Product extension / auxiliary switch - No - Ves	overload protection		Yes
auxiliary switch undervoltage release mechanism trip indicator Product extension / optional / motor drive No Main circuit: Number of poles / for main current circuit Operating voltage / at AC-3 / rated value / maximum V 690 Operating current / at AC-3 / at 400 V / rated value at 400 V / rated value val	phase disturbance recognition		Yes
Indervoltage release mechanism Intro-indicator Product extension / optional / motor drive No Main circuit: Number of poles / for main current circuit Operating voltage / at AC-3 / rated value / maximum V 690 Operating current / at AC-3 / at 400 V / rated value A 15.5 Service power / at AC-3 / at 400 V / rated value at 400 V / rated value v 7,500 at 690 V / rated value v 7,500 at 690 V / rated value v 7,500 at 690 V / rated value v 7,500 t 11,000 Frequency of operation / at AC-3 / according to IEC 60947-6-2 / waximum Arrangement of electrical connectors / for main current circuit Adjustable response current of the non-delayed short-circuit release of the current-dependent overload release of the current-dependent overload release of the current-dependent overload release A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxillary circuit: Product extension / auxillary switch Number of NC contacts / for auxillary contacts / instantaneous switching Number of NC contacts / for auxillary contacts / instantaneous switching Number of Change-over switches / for auxillary contacts Inputs/ Outputs:	Product component		
trip indicator No Product extension / optional / motor drive No Main circuit: Number of poles / for main current circuit	auxiliary switch		No
Product extension / optional / motor drive Main circuit: Number of poles / for main current circuit Operating voltage / at AC-3 / rated value / maximum V 690 Operating current / at AC-3 / at 400 V / rated value A 15.5 Service power / at AC-3 - at 400 V / rated value - at 600 V / rated value - at 600 V / rated value - at 690 V / rated value - of the non-delayed short-circuit release - of the current-dependent overload release - of the current-dependent overload release - of the current-dependent overload release - of the current / rated value - Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts D	undervoltage release mechanism		No
Number of poles / for main current circuit Operating voltage / at AC-3 / rated value / maximum V 690 Operating current / at AC-3 / at 400 V / rated value A 15.5 Service power / at AC-3 - at 400 V / rated value - at 500 V / rated value - at 600 V / rated value - at 690 V / rated value - at 690 V / rated value - at 690 V / rated value Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum Arrangement of electrical connectors / for main current circuit Adjustable response current - of the non-delayed short-circuit release - of the current-dependent overload release - of the current-dependent overload release - of the current-dependent overload release A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	trip indicator		No
Number of poles / for main current circuit Operating voltage / at AC-3 / rated value / maximum V 690 Operating current / at AC-3 / at 400 V / rated value A 15.5 Service power / at AC-3 • at 400 V / rated value • at 500 V / rated value • at 500 V / rated value • at 690 V / rated value W 7,500 • at 690 V / rated value Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum Arrangement of electrical connectors / for main current circuit • of the non-delayed short-circuit release • of the current-dependent overload release • of the current-dependent overload release • of the current-dependent overload release • A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	Product extension / optional / motor drive		No
Operating voltage / at AC-3 / rated value / maximum Operating current / at AC-3 / at 400 V / rated value A 15.5 Service power / at AC-3 • at 400 V / rated value • at 500 V / rated value • at 500 V / rated value • at 690 V rated value W 11,000 Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum Arrangement of electrical connectors / for main current circuit Adjustable response current • of the non-delayed short-circuit release • of the current-dependent overload release A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	Main circuit:		
Operating current / at AC-3 / at 400 V / rated value Service 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 Top and bottom Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum maximum Arrangement of electrical connectors / for main current circuit • of the non-delayed short-circuit release • of the current-dependent overload release • of the current-dependent overload release A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	Number of poles / for main current circuit		3
Service power / at AC-3 • at 400 V / rated value • at 500 V / rated value • at 690 V / rated value • at 690 V / rated value Frequency of operation / at AC-3 / according to IEC 60947-6-2 / I/h Arrangement of electrical connectors / for main current circuit Adjustable response current • of the non-delayed short-circuit release • of the current-dependent overload release • of the current-dependent overload release • of the current / rated value A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	Operating voltage / at AC-3 / rated value / maximum	V	690
at 400 V / rated value at 500 V / rated value at 690 V / rated value w 7,500 Trequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum Arrangement of electrical connectors / for main current circuit Adjustable response current of the non-delayed short-circuit release of the current-dependent overload release of the current-dependent overload release of the current / rated value Continuous current / rated value Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	Operating current / at AC-3 / at 400 V / rated value	А	15.5
at 500 V / rated value at 690 V / rated value Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum Arrangement of electrical connectors / for main current circuit Adjustable response current of the non-delayed short-circuit release of the current-dependent overload release of the current-dependent overload release A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	Service power / at AC-3		
• at 690 V / rated value Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum Arrangement of electrical connectors / for main current circuit Adjustable response current • of the non-delayed short-circuit release • of the current-dependent overload release • of the current-dependent overload release A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	at 400 V / rated value	W	7,500
Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum Arrangement of electrical connectors / for main current circuit Adjustable response current • of the non-delayed short-circuit release • of the current-dependent overload release • of the current-dependent overload release A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	at 500 V / rated value	W	7,500
maximum Arrangement of electrical connectors / for main current circuit Adjustable response current of the non-delayed short-circuit release of the current-dependent overload release A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	at 690 V / rated value	W	11,000
Adjustable response current • of the non-delayed short-circuit release • of the current-dependent overload release A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:		1/h	15
• of the non-delayed short-circuit release • of the current-dependent overload release • of the current-dependent overload release A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	Arrangement of electrical connectors / for main current circuit		Top and bottom
of the current-dependent overload release A 11 16 Service power / at AC-3 / at 230 V / rated value W 4,000 Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Yes Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	Adjustable response current		
Service power / at AC-3 / at 230 V / rated value Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	of the non-delayed short-circuit release	А	208 208
Continuous current / rated value A 16 Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous of switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	of the current-dependent overload release	Α	11 16
Auxiliary circuit: Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	Service power / at AC-3 / at 230 V / rated value	W	4,000
Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts 1	Continuous current / rated value	А	16
Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts 0 Inputs/ Outputs:	Auxiliary circuit:		
Number of NO contacts / for auxiliary contacts / instantaneous switching Number of change-over switches / for auxiliary contacts 1	Product extension / auxiliary switch		Yes
Number of change-over switches / for auxiliary contacts Inputs/ Outputs:	•		0
Inputs/ Outputs:			0
	Number of change-over switches / for auxiliary contacts		0
Number of digital inputs 0	Inputs/ Outputs:		
	Number of digital inputs		0

Short-circuit:		
Breaking capacity limit short-circuit current (lcu)		
• at 400 V / rated value	Α	55,000
• at 500 V / rated value	Α	10,000
• at 690 V / rated value	Α	4,000
Design of the overcurrent release and short-circuit release		thermomagnetic

Installation/mounting/dimensions:			
Built in orientation		any	
Type of mounting		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	
Width	mm	45	
Height	mm	97	
Depth	mm	91	
Distance, to be maintained, to the ranks assembly			
• forwards	mm	0	
• backwards	mm	0	
• upwards	mm	50	
• downwards	mm	50	
• sidewards	mm	0	
Distance, to be maintained, to earthed part			
• forwards	mm	0	
• backwards	mm	0	
• upwards	mm	50	
• sidewards	mm	30	
• downwards	mm	50	
Distance, to be maintained, conductive elements			
• forwards	mm	0	
• backwards	mm	0	
• upwards	mm	50	
• downwards	mm	50	
• sidewards	mm	30	

Connections:			
Product function			
• removable terminal for main circuit	No		
• removable terminal for auxiliary and control circuit	No		
Design of the electrical connection			
for main current circuit	screw-type terminals		
Type of the connectable conductor cross-section			
• for main contacts			

• solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
• stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
• finely stranded	
with conductor end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²

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Verification of suitability

• für Staubexplosionsschutz für Zone 21/22

• for AWG conductors / for main contacts

• for gas explosion protection for zone 1/2

CE/UL/CSA

2x (16 ... 12), 2x (14 ... 8)

no

no

General Product Approval





ROSTEST



For use in hazardous locations

 $\frac{\mathsf{DEKRA}\;\mathsf{EXAM},}{\mathsf{DMT}}$

Test Certificates

Manufacturer

other

Shipping Approval













other

Manufacturer

other



UL/CSA ratings		
yielded mechanical performance (hp)		
for single-phase squirrel cage motors		
• at 110/120 V / rated value	hp	1
• at 230 V / rated value	hp	2
for three-phase squirrel cage motors		
• at 200/208 V / rated value	hp	3
• at 220/230 V / rated value	hp	5
• at 460/480 V / rated value	hp	10
Operating current (FLA) / for three-phase squirrel cage motors		
• at 480 V / rated value	Α	14

Safety:	
B10 value / with high demand rate	
• according to SN 31920	50,000
T1 value / for proof test interval or service life	

according to IEC 61508	а	10
Failure rate (FIT value) / with low demand rate		
according to SN 31920	FIT	50
Proportion of dangerous failures		
• with low demand rate / according to SN 31920	%	40
• with high demand rate / according to SN 31920	%	40
Protection against electrical shock		finger-safe

Further information:

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

http://www.siemens.com/industrial-controls/mall

CAx-Online-Generator

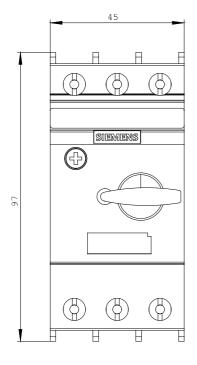
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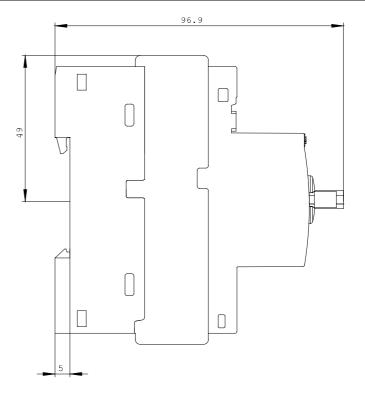
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

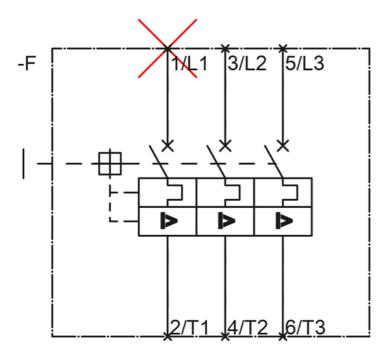
http://support.automation.siemens.com/WW/view/en/3RV2021-4AA10/all

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

 $\underline{\text{http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RV2021-4AA10}$







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