# **SIEMENS**

Product data sheet 3RV2021-1AA20



CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, A-REL.1.1...1.6A, N-REL.21A SPRING-L. CONNECTION STANDARD SW. CAPACITY

General technical data:			
product brand name		SIRIUS	
product designation		3RV2 circuit breaker	
Size of the circuit-breaker		S0	
Number of poles / for main current circuit		3	
Product function			
<ul> <li>removable terminal for auxiliary and control circuit</li> </ul>		No	
overload protection		Yes	
phase disturbance recognition		Yes	
short-circuit to earth recognition		No	
Product component			
auxiliary switch		No	
undervoltage release mechanism		No	
• trip indicator		No	
Product extension			
auxiliary switch		Yes	
optional / motor drive		No	
Impulse voltage resistance / rated value	kV	6	
Protection class IP / on the front		IP20	
Protection against electrical shock		finger-safe	

Installation altitude / at a height over sea level / maximum	m	2,000		
Resistance against shock		25g / 11 ms		
Ambient temperature				
during transport	°C	-50 +80		
during storage	°C	-50 +80		
during operating	°C	-20 +60		
Active power loss / total / typical	W	6		
Main circuit:				
Operating voltage / rated value	V	690		
Service power / at AC-3				
• at 400 V / rated value	W	550		
• at 500 V / rated value	W	750		
• at 690 V / rated value	W	1,100		
Operational current / at AC-3 / at 400 V / rated value	Α	1.6		
Mechanical operating cycles as operating time / of the main contacts / typical		100,000		
Frequency of operation / at AC-3 / according to IEC 60947-6-2	1/h	15		
Auxiliary circuit:				
Number of change-over switches / for auxiliary contacts 0				
Number of change-over switches / for auxiliary contacts		0		
Number of change-over switches / for auxiliary contacts  Mechanical operating cycles as operating time / of the auxiliary contacts / typical		0 100,000		
Mechanical operating cycles as operating time / of the auxiliary				
Mechanical operating cycles as operating time / of the auxiliary contacts / typical				
Mechanical operating cycles as operating time / of the auxiliary contacts / typical  Protection function:	A	100,000		
Mechanical operating cycles as operating time / of the auxiliary contacts / typical  Protection function:  Trip class  Adjustable response current / of the current-dependent	A	100,000 CLASS 10		
Mechanical operating cycles as operating time / of the auxiliary contacts / typical  Protection function:  Trip class  Adjustable response current / of the current-dependent overload release	A	100,000 CLASS 10		
Mechanical operating cycles as operating time / of the auxiliary contacts / typical  Protection function:  Trip class  Adjustable response current / of the current-dependent overload release  Breaking capacity limit short-circuit current (lcu)		100,000 CLASS 10 1.1 1.6		
Mechanical operating cycles as operating time / of the auxiliary contacts / typical  Protection function:  Trip class  Adjustable response current / of the current-dependent overload release  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value	A	100,000 CLASS 10 1.1 1.6		
Mechanical operating cycles as operating time / of the auxiliary contacts / typical  Protection function:  Trip class  Adjustable response current / of the current-dependent overload release  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value  • at 500 V / rated value	A A	100,000 CLASS 10 1.1 1.6 100,000 100,000		
Mechanical operating cycles as operating time / of the auxiliary contacts / typical  Protection function:  Trip class  Adjustable response current / of the current-dependent overload release  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value  • at 500 V / rated value  • at 690 V / rated value	A A	100,000 CLASS 10 1.1 1.6 100,000 100,000		
Mechanical operating cycles as operating time / of the auxiliary contacts / typical  Protection function:  Trip class  Adjustable response current / of the current-dependent overload release  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value  • at 500 V / rated value  • at 690 V / rated value  Safety:	A A	100,000 CLASS 10 1.1 1.6 100,000 100,000		
Mechanical operating cycles as operating time / of the auxiliary contacts / typical  Protection function:  Trip class  Adjustable response current / of the current-dependent overload release  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value  • at 500 V / rated value  • at 690 V / rated value  Safety:  Proportion of dangerous failures	A A A	100,000  CLASS 10  1.1 1.6  100,000  100,000  100,000		
Mechanical operating cycles as operating time / of the auxiliary contacts / typical  Protection function:  Trip class  Adjustable response current / of the current-dependent overload release  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value  • at 500 V / rated value  • at 690 V / rated value  Safety:  Proportion of dangerous failures  • with high demand rate / according to SN 31920	A A A	100,000  CLASS 10  1.1 1.6  100,000  100,000  100,000		
Mechanical operating cycles as operating time / of the auxiliary contacts / typical  Protection function:  Trip class  Adjustable response current / of the current-dependent overload release  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value  • at 500 V / rated value  • at 690 V / rated value  Safety:  Proportion of dangerous failures  • with high demand rate / according to SN 31920  • with low demand rate / according to SN 31920  Failure rate (FIT value) / with low demand rate / according to SN	A A A	100,000  CLASS 10  1.1 1.6  100,000  100,000  40  40		

Installation/mounting/dimensions:			
Type of mounting		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	
mounting position		any	
Depth	mm	96	
Height	mm	109	
Width	mm	45	

Connections:			
Arrangement of electrical connectors / for main current circuit	Top and bottom		
Design of the electrical connection			
for main current circuit	spring-loaded terminals		
Type of the connectable conductor cross-section			
for main contacts			
• solid	2x (1 10 mm²)		
• finely stranded			
<ul> <li>without conductor final cutting</li> </ul>	2x (1 6 mm²)		
<ul> <li>with conductor end processing</li> </ul>	2x (1 6 mm²)		
• for AWG conductors / for main contacts	2x (18 8)		

UL/CSA ratings:		
yielded mechanical performance (hp)		
• for single-phase squirrel cage motors		
• at 230 V / rated value	hp	0.1
• for three-phase squirrel cage motors		
• at 460/480 V / rated value	hp	0.75
• at 575/600 V / rated value	hp	0.75
Operating current (FLA) / for three-phase squirrel cage motors		
• at 480 V / rated value	Α	1.6
• at 600 V / rated value	Α	1.3

## Certificates/approvals:

General Product	Approval	For use in hazardous locations	Declaration of Conformity	Test Certificates	
<b>SP</b> CSA	<b>UL</b>	(Ex)	EG-Konf.	Special Test Certificate	Type Test Certificates/Test Report

**Shipping Approval** 

other



other

### 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:

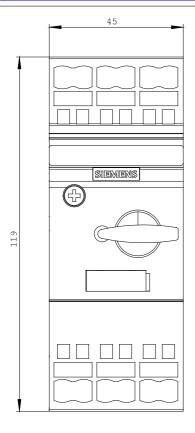
http://www.siemens.com/cax

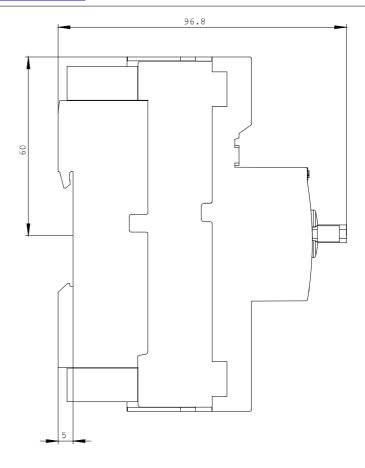
#### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

http://support.automation.siemens.com/WW/view/en/3RV2021-1AA20/all

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

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RV2021-1AA20





last change: Feb 14, 2013