# **SIEMENS**

Data sheet 3RV2011-0GA20

CIRCUIT-BREAKER SZ S00, FOR MOTOR PROTECTION, CLASS 10, A-REL. 0.45...0.63A, N-RELEASE8.2A SPRING-L. CONNECTION STANDARD SW. CAPACITY



product brandname	SIRIUS
Product designation	Circuit breaker
Design of the product	For motor protection
Product type designation	3RV2

General technical data		
Size of the circuit-breaker	S00	
Size of contactor can be combined company-specific	S00, S0	
Product extension		
Auxiliary switch	Yes	
Power loss [W] total typical	5 W	
Insulation voltage with degree of pollution 3 rated	690 V	
value		
Surge voltage resistance rated value	6 kV	
maximum permissible voltage for safe isolation		
<ul> <li>in networks with grounded star point between</li> </ul>	400 V	
main and auxiliary circuit		
<ul> <li>in networks with grounded star point between</li> </ul>	400 V	
main and auxiliary circuit		
Protection class IP		

	• on the front	IP20
• of the main contacts typical • of auxiliary contacts typical 100 000  Electrical endurance (switching cycles) • typical 100 000  Type of protection Increased safety Protection against electrical shock Equipment marking acc. to DIN EN 81346-2 Q  Ambient conditions  Ambient emperature • during operation • during storage • during transport  Temperature compensation  **Our **+80 °C**  **Aljustable pick-up value current circuit  **Number of poles for main current circuit  **Our **AC-3 arated value maximum  **Operating durrent rated value  Operating current rated value  Operating current  **at AC-3	• of the terminal	IP20
of auxiliary contacts typical    100 000	Mechanical service life (switching cycles)	
Electrical endurance (switching cycles)  • typical  Type of protection  Increased safety  Protection against electrical shock  Equipment marking acc. to DIN EN 81346-2  Ambient conditions  Ambient temperature  • during operation • during storage • during transport  -50 +80 °C  Temperature compensation  -20 +60 °C  Main circuit  Number of poles for main current circuit  Adjustable pick-up value current of the current-dependent overload release  Operating voltage • rated value • at AC-3 rated value • at 4AC-3 — at 400 V rated value — at 400 V rated value — at 500 V rated value — at 600 V vated value — at 60	of the main contacts typical	100 000
	of auxiliary contacts typical	100 000
Type of protection   Increased safety   Protection against electrical shock   finger-safe   Equipment marking acc. to DIN EN 81346-2   Q   Ambient conditions   Ambient conditions   Ambient temperature   • during operation   -20 +60 °C   • during storage   -50 +80 °C   • during transport   -50 +80 °C   Temperature compensation   -20 +60 °C   Main circuit   Number of poles for main current circuit   3   Adjustable pick-up 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 current rated value   0.63 A   Operating current   • at AC-3   — at 400 V rated value   90 W   — at 500 V rated value   180 W   — at 500 V rated value   180 W   — at 500 V rated value   250 W   Operating frequency   • at AC-3 maximum   15 1/h   Auxiliary circuit   Number of NC contacts   • for auxiliary contacts   O Number of NC contacts   • for auxiliary contacts   O Increase safety   Increased safety   Increase   Incr	Electrical endurance (switching cycles)	
Protection against electrical shock Equipment marking acc. to DIN EN 81346-2  Ambient conditions  Ambient temperature  • during operation • during storage • during transport  - 50 +80 °C  - 10 +60 °C  - 20 +60 °C  - 30 +60 °C  - 40 +60 °C  -	• typical	100 000
Equipment marking acc. to DIN EN 81346-2   Q	Type of protection	Increased safety
Ambient conditions  Ambient temperature  • during operation • during storage • during transport  -50 +80 °C  -50 +80 °C  Temperature compensation  -20 +60 °C  Temperature compensation  -20 +60 °C  Temperature compensation  -20 +60 °C  Main circuit  Number of poles for main current circuit  Adjustable pick-up value current of the current-dependent overload release  Operating voltage  • rated value • at AC-3 rated value maximum  • at AC-3  — at 400 V rated value  • at AC-3  — at 400 V rated value  • at AC-3  — at 230 V rated value  — at 400 V rated value  — at 690 V rated value  —	Protection against electrical shock	finger-safe
Ambient temperature  • during operation • during storage • during transport -50 +80 °C • during transport -50 +80 °C • during transport -50 +80 °C  -50 +60 °C   Main circuit  Number of poles for main current circuit 3 -60 discount overload release  Operating voltage • rated value • at AC-3 rated value maximum -690 V Operating frequency rated value -690 V Operating current rated value -690 V Operating current rated value -60 A  Operating current • at AC-3 - at 400 V rated value - at 400 V rated value - at 400 V rated value - at 500 V rated value - at 500 V rated value - at 690 V rated value -	Equipment marking acc. to DIN EN 81346-2	Q
• during operation     • during storage     • during transport     • during transport     • during transport     • 50 +80 °C     • during transport     • 50 +80 °C  Temperature compensation     • 22 +60 °C  Main circuit  Number of poles for main current circuit     3 Adjustable pick-up value current of the current-dependent overload release  Operating voltage     • rated value     • at AC-3 rated value maximum     690 V     • at AC-3 rated value maximum     690 V Operating current rated value     Operating current     • at AC-3     — at 400 V rated value     — at 400 V rated value     — at 400 V rated value     — at 500 V rated value     — at 600 V rated value     — at 60-3 maximum  15 1/h  Auxiliary circuit  Number of NC contacts     • for auxiliary contacts  • for auxiliary contacts  0 Number of NO contacts		
• during storage • during transport • during transport • during transport • 50 +80 °C  Temperature compensation -20 +60 °C  Main circuit  Number of poles for main current circuit 3 Adjustable pick-up value current of the current-dependent overload release Operating voltage • rated value • at AC-3 rated value maximum  Operating frequency rated value  Operating current rated value  Operating current • at AC-3	Ambient temperature	
• during transport  -50 +80 °C  Temperature compensation  -20 +60 °C  Main circuit  Number of poles for main current circuit 3 Adjustable pick-up value current of the current-dependent overload release  Operating voltage • rated value • at AC-3 rated value maximum  Operating frequency rated value  Operating current • at AC-3 — at 400 V rated value  • at AC-3 — at 400 V rated value  • at AC-3 — at 230 V rated value — at 400 V rated value — at 400 V rated value — at 400 V rated value — at 500 V rated value — at 690 V	<ul><li>during operation</li></ul>	
Temperature compensation  -20 +60 °C  Main circuit  Number of poles for main current circuit 3 Adjustable pick-up value current of the current-dependent overload release  Operating voltage • rated value • at AC-3 rated value maximum 690 V  Operating frequency rated value 0.63 A  Operating current rated value 0.63 A  Operating power • at AC-3 — at 400 V rated value 90 W Operating power • at AC-3 — at 230 V rated value 90 W — at 400 V rated value 180 W — at 500 V rated value 180 W Operating frequency • at AC-3 maximum 15 1/h  Auxiliary circuit  Number of NC contacts • for auxiliary contacts  0  Number of NC contacts  • for auxiliary contacts	during storage	
Number of poles for main current circuit  Adjustable pick-up value current of the current-dependent overload release  Operating voltage  • rated value • at AC-3 rated value maximum  Operating current rated value  • at AC-3 — at 400 V rated value  • at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V  Operating frequency • at AC-3 — at 230 V rated value — at 500 V rated value — at 690 V rated value  Operating frequency • at AC-3 maximum  15 1/h  Auxiliary circuit  Number of NC contacts • for auxiliary contacts  0  Number of NO contacts		
Number of poles for main current circuit  Adjustable pick-up value current of the current-dependent overload release  Operating voltage  • rated value • at AC-3 rated value maximum  Operating frequency rated value  Operating current rated value  • at AC-3  — at 400 V rated value  — at 400 V rated value  — at 400 V rated value  — at 500 V rated value  — at 690 V  Operating frequency • at AC-3 maximum  Operating frequency • at AC-3 maximum  Toperating frequency • at AC-3 maximum  Auxiliary circuit  Number of NC contacts • for auxiliary contacts  • for auxiliary contacts  Operating voltage  0.45 0.63 A  0.69 V  0.60 HZ  0.63 A  0.64 IX  0.65 IX  0.67 IX  0.68 IX  0.69	Temperature compensation	-20 +60 °C
Adjustable pick-up value current of the current- dependent overload release  Operating voltage  • rated value • at AC-3 rated value maximum  Operating frequency rated value  Operating current rated value  Operating current rated value  Operating current • at AC-3  — at 400 V rated value  Operating power • at AC-3  — at 230 V rated value  — at 400 V rated value  — at 500 V rated value  — at 690 V  Operating frequency • at AC-3 maximum  15 1/h  Auxiliary circuit  Number of NC contacts • for auxiliary contacts  • for auxiliary contacts  Ogo V  690 V  690 V  690 V  690 V  690 A  690 V  690 V  690 A  690 A  690 A  690 B  690 A  690 B  690 A  690 B  6		
dependent overload release  Operating voltage  • rated value • at AC-3 rated value maximum  Operating frequency rated value  • at AC-3  — at 400 V rated value  • at AC-3  — at 230 V rated value  — at 500 V rated value  90 W  — at 400 V rated value  180 W  — at 690 V rated value  91 W  Auxiliary circuit  Number of NC contacts  • for auxiliary contacts  • over table value  690 V	-	
Operating voltage  • rated value • at AC-3 rated value maximum  Operating frequency rated value  Operating current rated value  • at AC-3  — at 400 V rated value  Operating power  • at AC-3  — at 230 V rated value  — at 400 V rated value  — at 500 V rated value  — at 690 V v rated value  — at 690 V v rated value  — at AC-3  — at AC-3 maximum  15 1/h  Auxiliary circuit  Number of NC contacts  • for auxiliary contacts  Operating frequency  • at AC-3 maximum  690 V  690 V  690 W  690		0.45 0.63 A
rated value     at AC-3 rated value maximum     690 V  Operating frequency rated value     50 60 Hz  Operating current rated value     0.63 A  Operating current      at AC-3     — at 400 V rated value     0.63 A  Operating power      at AC-3     — at 230 V rated value     90 W     — at 400 V rated value     180 W     — at 500 V rated value     — at 690 V rated value     250 W  Operating frequency     at AC-3 maximum  15 1/h  Auxiliary circuit  Number of NC contacts     for auxiliary contacts  O  Number of NO contacts	<u> </u>	
at AC-3 rated value maximum  Operating frequency rated value  Operating current rated value  Operating current  at AC-3  — at 400 V rated value  Operating power  at AC-3  — at 230 V rated value  — at 500 V rated value  — at 500 V rated value  — at 690 V rated value  — at 690 V rated value  — at 600 V rated value  — at 700 V rated value  — at 800 V rated value  — at 600 V rated value  Operating frequency  at AC-3 maximum  15 1/h  Auxillary circuit  Number of NC contacts  for auxiliary contacts  0  Number of NO contacts		690 V
Operating frequency rated value  Operating current  • at AC-3  — at 400 V rated value  Operating power  • at AC-3  — at 230 V rated value  — at 400 V rated value  — at 400 V rated value  — at 500 V rated value  — at 690 V rated value  — at 690 V rated value  — at AC-3 maximum  15 1/h  Auxiliary circuit  Number of NC contacts  • for auxiliary contacts  Number of NO contacts		
Operating current         0.63 A           Operating current              ■ at AC-3             — at 400 V rated value             — at 400 V rated value             ■ at AC-3             — at 230 V rated value             — at 400 V rated value             — at 400 V rated value             — at 500 V rated value             — at 690 V rated value             — at 690 V rated value             — at AC-3 maximum             — at AC-3 ma		
Operating current  • at AC-3  — at 400 V rated value  Operating power  • at AC-3  — at 230 V rated value  — at 400 V rated value  — at 400 V rated value  — at 500 V rated value  — at 690 V rated value  — at 690 V rated value  — at AC-3 maximum  Operating frequency  • at AC-3 maximum  15 1/h  Auxiliary circuit  Number of NC contacts  • for auxiliary contacts  0  Number of NO contacts		
• at AC-3     — at 400 V rated value	· · · · · ·	
- at 400 V rated value 0.63 A  Operating power  ■ at AC-3  — at 230 V rated value 90 W — at 400 V rated value 180 W — at 500 V rated value 250 W  Operating frequency ■ at AC-3 maximum 15 1/h  Auxiliary circuit  Number of NC contacts ■ for auxiliary contacts  Number of NO contacts  ■ for auxiliary contacts		
Operating power  • at AC-3  — at 230 V rated value 90 W  — at 400 V rated value 180 W  — at 500 V rated value 250 W  Operating frequency • at AC-3 maximum 15 1/h  Auxiliary circuit  Number of NC contacts • for auxiliary contacts  0  Number of NO contacts		0.63 A
— at 230 V rated value       90 W         — at 400 V rated value       180 W         — at 500 V rated value       250 W         Operating frequency <ul> <li>at AC-3 maximum</li> <li>15 1/h</li> </ul> Auxiliary circuit         Number of NC contacts       0         Number of NO contacts       0	Operating power	
- at 400 V rated value 180 W - at 500 V rated value 250 W  Operating frequency  • at AC-3 maximum 15 1/h  Auxiliary circuit  Number of NC contacts  • for auxiliary contacts  • for auxiliary contacts  Number of NO contacts	● at AC-3	
- at 500 V rated value - at 690 V rated value 250 W  Operating frequency	— at 230 V rated value	90 W
— at 690 V rated value 250 W  Operating frequency          • at AC-3 maximum 15 1/h  Auxiliary circuit  Number of NC contacts         • for auxiliary contacts  Number of NO contacts  Number of NO contacts	— at 400 V rated value	180 W
Operating frequency  • at AC-3 maximum  15 1/h  Auxiliary circuit  Number of NC contacts  • for auxiliary contacts  0  Number of NO contacts	— at 500 V rated value	180 W
at AC-3 maximum  Auxiliary circuit  Number of NC contacts     for auxiliary contacts  Number of NO contacts  O  Number of NO contacts	— at 690 V rated value	250 W
Auxiliary circuit  Number of NC contacts  • for auxiliary contacts  Number of NO contacts  0	Operating frequency	
Number of NC contacts	• at AC-3 maximum	15 1/h
• for auxiliary contacts  Number of NO contacts  0	Auxiliary circuit	
Number of NO contacts	Number of NC contacts	
	• for auxiliary contacts	0
• for auxiliary contacts 0	Number of NO contacts	
	• for auxiliary contacts	0

### Number of CO contacts 0 • for auxiliary contacts Protective and monitoring functions Product function No • Ground fault detection • Phase failure detection Yes Trip class CLASS 10 Design of the overload release thermal Operational short-circuit current breaking capacity (Ics) at AC 100 kA • at 240 V rated value 100 kA • at 400 V rated value 100 kA • at 500 V rated value 100 kA • at 690 V rated value Maximum short-circuit current breaking capacity (Icu) 100 kA • at AC at 240 V rated value 100 kA • at AC at 400 V rated value 100 kA • at AC at 500 V rated value 100 kA • at AC at 690 V rated value Breaking capacity short-circuit current (Icn) 10 kA • at 1 current path at DC at 150 V rated value 10 kA • with 2 current paths in series at DC at 300 V rated value 10 kA • with 3 current paths in series at DC at 450 V rated value UL/CSA ratings Full-load current (FLA) for three-phase AC motor 0.63 A • at 480 V rated value 0.63 A • at 600 V rated value Short-circuit protection **Product function Short circuit protection** Yes Design of the short-circuit trip magnetic Design of the fuse link for IT network for short-circuit protection of the main circuit • at 690 V gL/gG 6 A

Installation/ mounting/ dimensions		
Mounting position	any	
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	
Height	106 mm	
Width	45 mm	

Depth	96 mm	
Required spacing		
<ul> <li>with side-by-side mounting</li> </ul>		
— forwards	0 mm	
— Backwards	0 mm	
— upwards	50 mm	
— downwards	50 mm	
— at the side	0 mm	
<ul><li>for grounded parts</li></ul>		
— forwards	0 mm	
— Backwards	0 mm	
— upwards	50 mm	
— at the side	30 mm	
— downwards	50 mm	
• for live parts		
— forwards	0 mm	
— Backwards	0 mm	
— upwards	50 mm	
— downwards	50 mm	
— at the side	30 mm	
Connections/Terminals		
Product function	Ni-	
Product function  • removable terminal for auxiliary and control	No	
Product function  • removable terminal for auxiliary and control circuit	No	
Product function  ● removable terminal for auxiliary and control circuit  Type of electrical connection		
Product function  • removable terminal for auxiliary and control circuit  Type of electrical connection  • for main current circuit	No spring-loaded terminals Top and bottom	
Product function  ● removable terminal for auxiliary and control circuit  Type of electrical connection	spring-loaded terminals	
Product function  • removable terminal for auxiliary and control circuit  Type of electrical connection  • for main current circuit  Arrangement of electrical connectors for main current	spring-loaded terminals	
Product function  • removable terminal for auxiliary and control circuit  Type of electrical connection  • for main current circuit  Arrangement of electrical connectors for main current circuit	spring-loaded terminals	
Product function  • removable terminal for auxiliary and control circuit  Type of electrical connection  • for main current circuit  Arrangement of electrical connectors for main current circuit  Type of connectable conductor cross-sections	spring-loaded terminals	
Product function	spring-loaded terminals Top and bottom	
Product function  • removable terminal for auxiliary and control circuit  Type of electrical connection  • for main current circuit  Arrangement of electrical connectors for main current circuit  Type of connectable conductor cross-sections  • for main contacts  — single or multi-stranded	spring-loaded terminals  Top and bottom  2x (0,5 4 mm²)	
Product function  • removable terminal for auxiliary and control circuit  Type of electrical connection  • for main current circuit  Arrangement of electrical connectors for main current circuit  Type of connectable conductor cross-sections  • for main contacts  — single or multi-stranded  — finely stranded with core end processing  — finely stranded without core end	spring-loaded terminals  Top and bottom $2x (0,5 4 mm^2)$ $2x (0.5 2.5 mm^2)$	
Product function  • removable terminal for auxiliary and control circuit  Type of electrical connection  • for main current circuit  Arrangement of electrical connectors for main current circuit  Type of connectable conductor cross-sections  • for main contacts  — single or multi-stranded  — finely stranded with core end processing  — finely stranded without core end processing	spring-loaded terminals  Top and bottom  2x (0,5 4 mm²)  2x (0.5 2.5 mm²)  2x (0.5 2.5 mm²)	
Product function         • removable terminal for auxiliary and control circuit  Type of electrical connection         • for main current circuit  Arrangement of electrical connectors for main current circuit  Type of connectable conductor cross-sections         • for main contacts             — single or multi-stranded             — finely stranded with core end processing             — finely stranded without core end processing             • at AWG conductors for main contacts  Design of screwdriver shaft  Safety related data	spring-loaded terminals  Top and bottom  2x (0,5 4 mm²)  2x (0.5 2.5 mm²)  2x (0.5 2.5 mm²)	
Product function	spring-loaded terminals  Top and bottom  2x (0,5 4 mm²)  2x (0.5 2.5 mm²)  2x (0.5 2.5 mm²)  Diameter 3 mm	
Product function	spring-loaded terminals  Top and bottom  2x (0,5 4 mm²)  2x (0.5 2.5 mm²)  2x (0.5 2.5 mm²)	
Product function	spring-loaded terminals  Top and bottom  2x (0,5 4 mm²)  2x (0.5 2.5 mm²)  2x (0.5 2.5 mm²)  Diameter 3 mm	

• with high demand rate acc. to SN 31920	50 %
Failure rate [FIT]	
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	50 FIT
T1 value for proof test interval or service life acc. to IEC 61508	10 y
Display version	
• for switching status	Handle

### Certificates/approvals

# General Product Approval For use in hazardous locations







EAI



For use in	Declaration of	Test Certificates	Shipping Approval
hazardous	Conformity		
locations			



**IECE**x



Special Test Certificate Type Test
Certificates/Test
Report

KC





## **Shipping Approval**



LRS







other

Environmental

Confirmations

Confirmation

## other Railway



Miscellaneous

Vibration and Shock

### Further information

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

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

Industry Mall (Online ordering system)

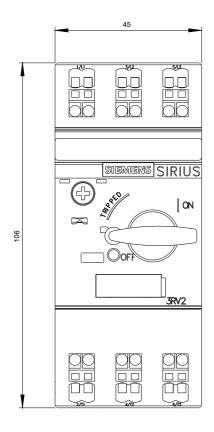
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2011-0GA20

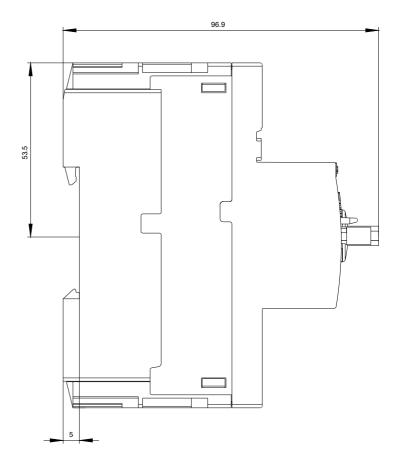
Cax online generator

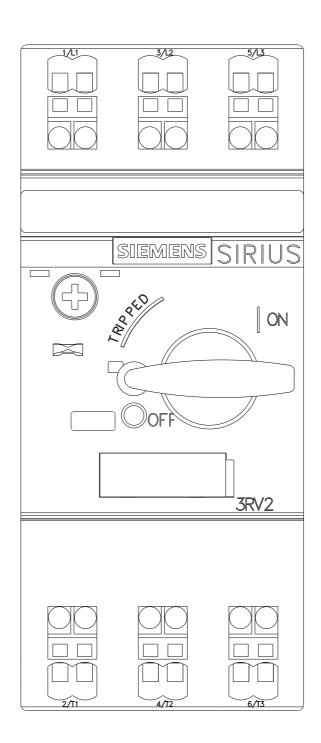
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-0GA20

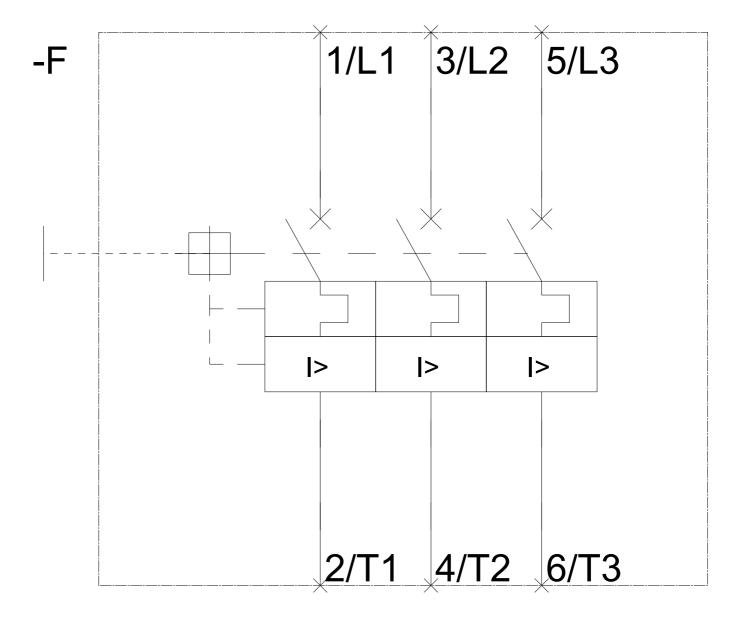
https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-0GA20

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2011-0GA20&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2011-0GA20&lang=en</a>









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