

Product data sheet 3RV2011-0FA20

CIRCUIT-BREAKER SZ S00, FOR MOTOR PROTECTION, CLASS 10, A-REL. 0.35...0.5A,N-RELEASE 6.5A SPRING-L. CONNECTION

General technical data:				
Product brand name		SIRIUS		
Product designation		3RV2 circuit breaker		
Size of the circuit-breaker		S00		
Trip class		CLASS 10		
Protection class IP / frontal/front side		IP20		
Degree of pollution		3		
Altitude of installation site / at a height over sea level / maximum	m	2,000		
Ambient temperature				
during storage	°C	-50 80		
during the operating phase	°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		
Real loss power / total / typical	W	5		
Item designation				
<ul> <li>according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> </ul>		F		
according to DIN EN 61346-2		F		
Mechanical switching cycle as operating period				
of the main contacts / typical		100,000		
of the auxiliary contacts / typical		100,000		
Type of the driving mechanism / Motor drive		No		
design of the operating mechanism		selector switch		
Product function				
Overload protection		Yes		
Short-circuit to earth recognition		No		
Phase disturbance recognition		Yes		
Product component				
auxiliary switch		No		

No   No   No			
Product extension / optional / Motor drive  Main circuit:  Number of poles / for main current circuit  Operating voltage / at 3 AC / rated value / maximum  Operating current / at AC-3 / at 400 V / rated value  Service power / at AC-3  - at 400 V / rated value  - at 690 V / rate	Undervoltage release mechanism		No
Number of poles / for main current circuit  Operating voltage / at 3 AC / rated value / maximum  Operating current / at AC-3 / at 400 V / rated value  A 0.44  Service power / at AC-3  - at 400 V / rated value  - at 690 V rated value  - at	trip indicator		No
Number of poles / for main current circuit Operating voltage / at 3 AC / rated value / maximum 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 600 V / rated value	Product extension / optional / Motor drive		No
Operating voltage / at 3 AC / rated value / maximum  Operating current / at AC-3 / at 400 V / rated value  A	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 600 V / rated value • at 600 V / rated value  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit • of the current-dependent overload release • A 0.35 0.5  Service power / at AC-3 / at 230 V / rated value • A 0.5  Service power / at AC-3 / at 230 V / rated value • A 0.5  Auxiliary circuit:  Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts / instantaneous switching Number of NC contacts / for auxiliary contacts / instantaneous switching  Number of change-over switches / for auxiliary contact  Inputs/ Outputs:  Breaking capacity limit short-circuit current (Icu) • at 400 V / rated value • at 500 V / rated value • at 500 V / rated value  A 100,000  A 100,000  A 100,000  Design of the overcurrent release and short-circuit release  Installation/mounting/dimensions:  Installation/mounting/dimensions:  Installation/mounting/dimensions:  Installation/mounting/dimensions:  Service power / at AC-3 / at 230 V / rated value  Installation/mounting aliaccording to DIN EN 60715	Number of poles / for main current circuit		3
Service power / at AC-3  - at 400 V / rated value - at 500 V / rated value - AC-3 / according to IEC 60947-6-2 / maximum - Arrangement of electrical connectors / for main current circuit - Adjustable response current - of the current-dependent overload release - A	Operating voltage / at 3 AC / rated value / maximum	V	690
at 400 V / rated value  at 690 V / rated value  at 690 V / rated value  W 120  W 180  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  of the current-dependent overload release  A 0.35 0.5  Service power / at AC-3 / at 230 V / rated value  Continuous current / rated value  W 60  Continuous current / rated value  Product extension / auxiliary switch  Number of NC contacts / for auxiliary contacts / instantaneous switching  Number of NO contacts / for auxiliary contacts / instantaneous switching  Number of digital inputs  O   Short-circuit:  Breaking capacity limit short-circuit current (Icu)  at 400 V / rated value  at 600 V / rated value  A 100,000  A 100,000  Design of the overcurrent release and short-circuit release  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation	Operating current / at AC-3 / at 400 V / rated value	Α	0.44
- at 500 V / rated value  - at 690 V / rated value  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  - of the current-dependent overload release - of the current-dependent overload release - A 0.35 0.5  Service power / at AC-3 / at 230 V / rated value - Octinuous current / rated value - A 0.5  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 digital inputs - O   Short-circuit:  Breaking capacity limit short-circuit current (lcu) - at 400 V / rated value - at 690	Service power / at AC-3		
Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  • of the current-dependent overload release  A 0.35 0.5  Service power / at AC-3 / at 230 V / 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 digital inputs  O  Short-circuit:  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value  • at 500 V / rated value  • at 600 V / rated value  • at 6	• at 400 V / rated value	W	120
Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  • of the current-dependent overload release  A 0.35 0.5  Service power / at AC-3 / at 230 V / rated value  Continuous current / rated value  W 60  A 0.5  Auxillary 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 digital inputs  O  Short-circuit:  Breaking capacity limit short-circuit current (lcu)  • at 400 V / rated value  • at 690 V / rated value  Design of the overcurrent release and short-circuit release  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  10  Type of fixing/fixation  15  Type of fixing/fixation  16  Type of fixing/fixation  16  Type of fixing/fixation  17  Type of fixing/fixation  17  Type of fixing/fixation  18  Type of fixing/fixation  18  Type of fixing/fixation  19  Type of fixing/fixation  10  Type of fixing/fixation  10  Type of fixing/fixation  15  Type of fixing/fixation	• at 500 V / rated value	W	120
Maximum Arrangement of electrical connectors / for main current circuit Adjustable response current • of the current-dependent overload release A 0.35 0.5  Service power / at AC-3 / at 230 V / rated value W 60 Continuous current / rated value A 0.5  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 Quitable response switches / for auxiliary contacts / instantaneous switching Number of Unitable response current (for auxiliary contacts / instantaneous switching Number of VO contacts / for auxiliary contacts / instantaneous value Number of digital inputs O 0  Short-circuit:  Breaking capacity limit short-circuit current (lcu) • at 400 V / rated value • at 500 V / rated value • at 500 V / rated value • at 690 V / rated valu	• at 690 V / rated value	W	180
Adjustable response current  • of the current-dependent overload release  A 0.35 0.5  Service power / at AC-3 / at 230 V / rated value  Continuous current / rated value  W 60  A 0.5  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 dange-over switches / for auxiliary contact  Inputs/ Outputs:  Number of digital inputs  O  Short-circuit:  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value • at 500 V / rated value • at 690 V / rated value • at 690 V / rated value • at 690 V / rated value  • at 690 V / rated value  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  Type of fixing/fixation  A 0.35 0.5   0  60  A 0.5  O  O  A 0.5  O  O  A 10.000  A 100.000  A 100.00		1/h	15
• of the current-dependent overload release  Service power / at AC-3 / at 230 V / rated value  Continuous current / rated value  W 60  A 0.5  Auxillary 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 contact  Inputs/ Outputs:  Number of digital inputs  O  Short-circuit:  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value • at 500 V / rated value • at 690 V / rated value  • at 690 V / rated value • at 690 V / rated value  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  A 0.35 0.5  V 60  A 0.5  O  O  O  O  O  O  O  O  O  O  O  O  O	Arrangement of electrical connectors / for main current circuit		Top and bottom
Service power / at AC-3 / at 230 V / 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 thonge-over switches / for auxiliary contact  Inputs/ Outputs:  Number of digital inputs  O  Short-circuit:  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value • at 500 V / rated value • at 690	Adjustable response current		
A   0.5	of the current-dependent overload release	Α	0.35 0.5
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 contact  Inputs/ Outputs:  Number of digital inputs  O  Short-circuit:  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value • at 500 V / rated value • at 690 V / rated value • at 690 V / rated value  Installation/mounting/dimensions:  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  Yes  O  10  10  10  10  10  10  10  10  10	Service power / at AC-3 / at 230 V / rated value	W	60
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 contact  Inputs/ Outputs:  Number of digital inputs  O  Short-circuit:  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value • at 500 V / rated value • at 690 V / rated value  • at 690 V / rated value  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  Yes  O  10  0  10  10  10  10  10  10  10	Continuous current / rated value	Α	0.5
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 contact  Inputs/ Outputs:  Number of digital inputs  O  Short-circuit:  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value • at 500 V / rated value • at 690 V / rated value  • at 690 V / rated value  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  O  availary contacts / instantaneous  0  0  4  100,000  A 100,000  A 100,000  A 100,000  Screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	Auxiliary circuit:		
Switching  Number of NO contacts / for auxiliary contacts / instantaneous switching  Number of change-over switches / for auxiliary contact  Inputs / Outputs:  Number of digital inputs  O  Short-circuit:  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value • at 500 V / rated value • at 690 V / rated value • at 690 V / rated value  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  O  O  availiary contact / 0  0  10  0  10  10  10  10  10  10  10	Product extension / auxiliary switch		Yes
Number of change-over switches / for auxiliary contact  Inputs/ Outputs:  Number of digital inputs  O  Short-circuit:  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value • at 500 V / rated value • at 690 V / rated value • at 690 V / rated value  Design of the overcurrent release and short-circuit release  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  O  O  O  O  O  O  O  O  O  O  O  O  O			0
Inputs/ Outputs:  Number of digital inputs  O  Short-circuit:  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value  • at 500 V / rated value  • at 690 V / rated value  Design of the overcurrent release and short-circuit release  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  o  0  100,000  A 100,000  A 100,000  A 100,000  A 100,000  any  screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715			0
Number of digital inputs    Short-circuit:	Number of change-over switches / for auxiliary contact		0
Short-circuit:  Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value  • at 500 V / rated value  • at 690 V / rated value  A 100,000  Design of the overcurrent release and short-circuit release  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  any  Screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	Inputs/ Outputs:		
Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value  • at 500 V / rated value  • at 690 V / rated value  A 100,000  Design of the overcurrent release and short-circuit release  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  A 100,000  A 100,000  A 100,000  A 100,000  A 100,000  A 100,000  Seriem and short-circuit release  Type of fixing/fixation  Seriem and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	Number of digital inputs		0
<ul> <li>• at 400 V / rated value</li> <li>• at 500 V / rated value</li> <li>• at 690 V / rated value</li> <li>Design of the overcurrent release and short-circuit release</li> <li>Installation/mounting/dimensions:</li> <li>built in orientation</li> <li>Type of fixing/fixation</li> <li>A 100,000</li> <li>A 1</li></ul>	Short-circuit:		
at 500 V / rated value     at 690 V / rated value     A 100,000  Design of the overcurrent release and short-circuit release  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  A 100,000  A 100,000  Thermomagnetic  any  screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	Breaking capacity limit short-circuit current (lcu)		
• at 690 V / rated value  Design of the overcurrent release and short-circuit release  Installation/mounting/dimensions:  built in orientation  Type of fixing/fixation  A 100,000  thermomagnetic  any  screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	• at 400 V / rated value	Α	100,000
Design of the overcurrent release and short-circuit release  Installation/mounting/dimensions:  built in orientation  any  Type of fixing/fixation  screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	• at 500 V / rated value	Α	100,000
Installation/mounting/dimensions:  built in orientation any  Type of fixing/fixation screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	• at 690 V / rated value	А	100,000
built in orientation any  Type of fixing/fixation screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	Design of the overcurrent release and short-circuit release		thermomagnetic
Type of fixing/fixation screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	Installation/mounting/dimensions:		
mounting rail according to DIN EN 60715	built in orientation		any
	Type of fixing/fixation		screw and snap-on mounting onto 35 mm standard
····	Width	mm	45

Height	mm	109
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
<ul> <li>removable terminal for auxiliary and control circuit</li> </ul>		No
design of the electrical connection		
for main current circuit		spring-loaded terminals
Type of the connectable conductor cross-section		
• for main contacts		
• unifilar		2x (0.5 4 mm2)
• stranded wire		2x (0.5 4 mm2)
• stranded wire		
with conductor end processing		2 x (0.5 2.5 mm2)
without conductor final cutting		2x (0.5 2.5 mm2)
at AWG-conductors / for main contacts		2x (20 12)
Certificates/approvals:		
verification of suitability		CE / UL / CSA

• für Staubexplosionsschutz für Zone 21/22

• for gas explosion protection for zone 1/2

no

no

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			
<ul> <li>with low demand rate / according to SN 31920</li> </ul>	%	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

Global Industry Mall (Online ordering system)

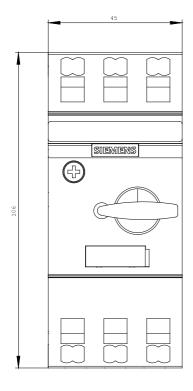
http://www.siemens.com/industrial-controls/mall

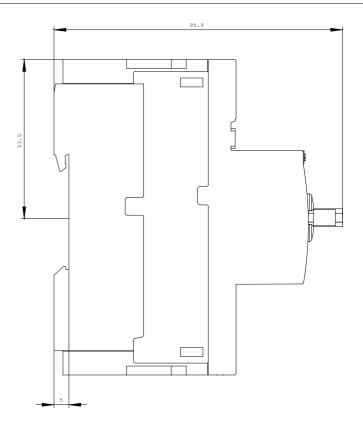
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

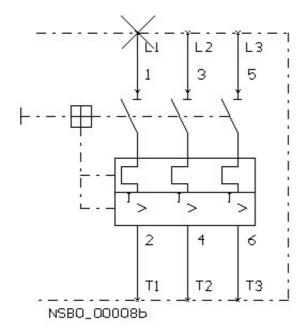
http://support.automation.siemens.com/WW/view/en/3RV2011-0FA20/all

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

 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RV2011-0FA20}$ 







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