# **SIEMENS**

Data sheet 3RV1011-0BA10

Circuit breaker size S00 for motor protection, CLASS 10 A-release 0.14...0.2 A N-release 2.6 A Screw terminal Standard switching capacity



Product brand name	SIRIUS
Product designation	Circuit breaker
Design of the product	For motor protection
Product type designation	3RV1

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N
N
0 V
<b>«V</b>
0 V
0 V

of the terminal IP00  Mechanical service life (switching cycles)     of auxiliary contacts typical 100 000     of auxiliary contacts typical 100 000  Electrical endurance (switching cycles)     otypical 100 000  Type of protection Increased safety  Certificate of suitability ATEX Yes  Protection against electrical shock finger-safe  Reference code acc. to DIN EN 81346-2 Q  Ambient conditions  Installation attitude at height above sea level     onaximum 2 000 m  Ambient temperature     oduring operation -20 +60 °C     oduring operation -50 +80 °C     oduring transport -50 +80 °C  Temperature compensation -20 +60 °C  Relative humidity during operation 10 95 %  Acin circuit  Number of poles for main current circuit 3  Adjustable pick-up value current of the current-dependent overload release  Operating voltage     orated value -4 at AC-3 rated value one -4 at AC-3 -4 at 400 V rated value     at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value     orated value -4 at AC-3 -4 at 400 V rated value	and the found	ID20
Mechanical service life (switching cycles)  of the main contacts typical of auxiliary contacts typical of auxiliary contacts typical of auxiliary contacts typical of protection Type of protection Increased safety Certificate of suitability ATEX Yes Protection against electrical shock Reference code acc. to DIN EN 81346-2 Q  Installation altitude at height above sea level of maximum Ambient temperature of during storage of during storage of during storage of during transport -50 +80 °C -50 +80 °C -50 +80 °C Temperature compensation -20 +60 °C Alain circuit Number of poles for main current circuit 3 Adjustable pick-up value current of the current-dependent overload release Operating frequency rated value operating current of at AC-3 -at 400 V rated value  0 22 A Operating current  of the Case of W -at AC-3 -at 230 V rated value -at 500 V rated value -at 600 V -at AC-3 maximum -at AC-3 max	• on the front	IP20
• of the main contacts typical     • of auxiliary contacts typical     • of auxiliary contacts typical     • typical     100 000  Type of protection     Increased safety Certificate of suitability ATEX     Yes Protection against electrical shock Reference code acc. to DIN EN 81346-2     Q  unbient conditions  Installation altitude at height above sea level     • maximum     2 000 m  Ambient temperature     • during operation     • during storage     • during reparation     • during storage     • during operation     • during storage     • during operation     • 20 +80 °C  Refletive humidity during operation     • 20 +80 °C  Refletive humidity during operation     • 20 +80 °C  Refletive for the compensation     • 20 +80 °C  Refletive for the current of th		IP00
of auxiliary contacts typical     illo 0000  Electrical endurance (switching cycles)     • typical     100 000  Type of protection     Increased safety  Certificate of suitability ATEX     Yes  Protection against electrical shock Reference code acc. to DIN EN 81346-2     Q  unbient conditions  Installation altitude at height above see level     • maximum     Ambient temperature     • during operation     • during storage     • during transport  Temperature compensation     Relative humidity during operation     10 +80 °C  Temperature compensation     20 +60 °C  Relative humidity during operation     10 95 %  Adin 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 current rated value     0.2 A  Operating current     • at AC-3     — at 400 V rated value     — at 400 V rated value     — at 400 V rated value     — at 4500 V rated value     — at 4500 V rated value     — at 500 V rated value     — at 600 W     — at 690 V rated value     — a		
Electrical endurance (switching cycles)  • typical  Type of protection  Certificate of suitability ATEX  Pres  Protection against electrical shock  Reference code acc. to DIN EN 81346-2  Q  Installation altitude at height above sea level  • maximum  Ambient temperature  • during operation  • during storage  • during transport  Temperature compensation  Relative humidity during operation  10 95 %  Adjustable pick-up value current of the current-dependent overload release  Operating current  • at AG-3  — at 400 V rated value  — at 500 V rated value  — at 400 V rated value  — at 500 V rated value  — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 690 V rated value	of the main contacts typical	
	<ul> <li>of auxiliary contacts typical</li> </ul>	100 000
Type of protection   Increased safety   Certificate of suitability ATEX   Yes   Protection against electrical shock   finger-safe   Reference code acc. to DIN EN 81346-2   Q   Initiatilation altitude at height above sea level   • maximum   2 000 m   Ambient temperature   • during operation   -20 +60 °C   • during storage   -50 +80 °C   • during transport   -50 +80 °C   Relative humidity during operation   10 95 %   Iain 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   0.2 A   Operating power   • at AC-3   - at 230 V rated value   25 W   - at 400 V rated value   25 W   - at 400 V rated value   60 W   - at 500 V rated value   60 W   - at 500 V rated value   60 W   - at 690 V rated value   60 W   - at 690 V rated value   60 W   - at 690 V rated value   90 W   Operating frequency   • at AC-3 maximum   15 1/h	Electrical endurance (switching cycles)	
Certificate of suitability ATEX Profection against electrical shock Reference code acc. to DIN EN 81348-2 Q Imbient conditions  Installation altitude at height above sea level  • maximum Ambient temperature  • during operation • during storage • during transport  Temperature compensation -20 +60 °C • during transport -50 +80 °C  Temperature compensation -20 +60 °C Relative humidity during operation -20 +60 °C  Relative humidity during operation -20 +60 °C  Relative humidity during operation -20 +60 °C  Relative humidity during operation -20 +60 °C  Relative humidity during operation -20 +60 °C  Relative humidity during operation -20 +60 °C  Relative humidity during operation -20 +60 °C	• typical	100 000
Protection against electrical shock Reference code acc. to DIN EN 81346-2  Vinibient conditions  Installation altitude at height above sea level  • maximum  • maximum  • during operation  • during storage  • during transport  -50 +80 °C  • during transport  -50 +80 °C  -60 +80 °C  -70 +60 °C  -70 +80 °C  -7080 °C  -70 80 °C  -70	Type of protection	Increased safety
Reference code acc. to DIN EN 81346-2  Q  Installation altitude at height above sea level  • maximum  Ambient temperature  • during operation • during storage • during stransport  Temperature compensation Relative humidity during operation  Adjustable pick-up value current of the current-dependent overload release  Operating voltage • rated value • at AC-3 rated value • at AC-3 — at 230 V rated value — at 500 V rated value — at 690 V rated value — at 690 V rated value — at 500 V rated value — at 690 V rated value	Certificate of suitability ATEX	Yes
Installation altitude at height above sea level  • maximum  Ambient temperature  • during operation • during storage • during storage • during transport  -50 +80 °C  -50 +80 °C  -50 +80 °C  -50 +80 °C  -60 °C  -70 +60 °C  -70 +60 °C  -70 +60 °C  -70 +80 °C  -7080	Protection against electrical shock	finger-safe
maximum	Reference code acc. to DIN EN 81346-2	Q
■ maximum     Ambient temperature     ● during operation     ● during storage     ● during transport     ─ 50 +80 °C     ● during transport     ─ 50 +80 °C     ─ Temperature compensation     ─ 20 +60 °C Relative humidity during operation     ─ 20 +60 °C Relative humidity during operation     ─ 20 +60 °C Relative humidity during operation     ☐ 10 95 %    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     ○ 2 A    Operating current     ● at AC-3     ─ at 400 V rated value     ○ 2 A    Operating power     ● at AC-3     ─ at 230 V rated value     ─ at 500 V rated value     ○ 40 W   — at 690 V rated value     ○ 40 W   — at 690 V rated value     ○ 40 W   — at 690 V rated value     ○ 40 W   — at 690 V rated value     ○ 40 W   — at 690 V rated value     ○ 40 W   — at 690 V rated value     ○ 40 W   — at 690 V rated value     ○ 40 W   — at 690 V rated value     ○ 40 W   — at 690 V rated value     ○ 40 W   — at 690 V rated value     ○ 40 W   — at 690 V rated value     ○ 40 W   — at 690 V rated value     ○ 41 AC-3 maximum	Ambient conditions	
Ambient temperature  • during operation • during storage • during transport  -50 +80 °C  • during transport  -50 +80 °C  Temperature compensation -20 +60 °C  Relative humidity during operation  10 95 %  //ain 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  0.2 A  Operating current rated value  • at AC-3 — at 400 V rated value  - at AC-3 — at 400 V rated value  - at 400 V rated value  - at 500 V rated value  - at 60 W - at 500 V rated value  - at 600 V rated value  - at 600 V rated value  - at 600 V rated value  - at 500 V rated value  - at 600 V rate	Installation altitude at height above sea level	
• during operation     • during storage     • during transport     • during transport     • during transport     • 50 +80 °C  Temperature compensation     • 20 +60 °C Relative humidity during operation     10 95 %  ###################################	• maximum	2 000 m
• during storage • during transport -50 +80 °C  Temperature compensation -20 +60 °C  Relative humidity during operation -20 +60 °C  -20 +60	Ambient temperature	
	during operation	-20 +60 °C
Temperature compensation -20 +60 °C Relative humidity during operation 10 95 %  Alain 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 requency rated value 50 60 Hz Operating current rated value 0.2 A Operating current at 400 V rated value 0.2 A  Operating power  • at AC-3 — at 230 V rated value 25 W — at 400 V rated value 60 W — at 500 V rated value 60 W — at 690 V rated value 90 W Operating frequency • at AC-3 maximum 15 1/h	during storage	-50 +80 °C
Relative humidity during operation  10 95 %  Alain 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 50 60 Hz  Operating current rated value 0.2 A  Operating current • at AC-3 — at 400 V rated value — at 400 V rated value — at 500 V rated value 60 W — at 500 V rated value 90 W  Operating frequency • at AC-3 maximum  15 1/h	during transport	-50 +80 °C
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 AC-3  — at 230 V rated value  — at 500 V rated value  Operating frequency  • at AC-3 maximum  Operating frequency  • at AC-3 maximum  15 1/h  Operating frequency  • at AC-3 maximum  15 1/h	Temperature compensation	-20 +60 °C
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  • at AC-3 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  60 W  — at 690 V  Operating frequency • at AC-3  — at 400 V rated value  90 W  Operating frequency • at AC-3 rated value  60 W  — at 690 V rated value  90 W  Operating frequency • at AC-3 maximum  15 1/h	Relative humidity during operation	10 95 %
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  • at AC-3 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  60 W  — at 690 V  Operating frequency • at AC-3  — at 400 V rated value  90 W  Operating frequency • at AC-3 rated value  60 W  — at 690 V rated value  90 W  Operating frequency • at AC-3 maximum  15 1/h	Main circuit	
dependent overload release  Operating voltage  • rated value • at AC-3 rated value maximum  690 V  Operating frequency rated value  50 60 Hz  Operating current rated value  0.2 A  Operating current • at AC-3  — at 400 V rated value  0.2 A  Operating power  • at AC-3  — at 230 V rated value  — at 400 V rated value  60 W  — at 500 V rated value  90 W  Operating frequency • at AC-3 maximum  15 1/h	Number of poles for main current circuit	3
Operating voltage  ● rated value  ● at AC-3 rated value maximum  690 V  Operating frequency rated value  50 60 Hz  Operating current rated value  0.2 A  Operating current  ● at AC-3  — at 400 V rated value  0.2 A  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  90 W  Operating frequency  ● at AC-3 maximum  15 1/h	Adjustable pick-up value current of the current-	0.14 0.2 A
<ul> <li>rated value</li> <li>690 V</li> <li>at AC-3 rated value maximum</li> <li>690 V</li> <li>Operating frequency rated value</li> <li>50 60 Hz</li> <li>Operating current rated value</li> <li>0.2 A</li> <li>Operating current <ul> <li>at AC-3</li> <li>at 400 V rated value</li> <li>0.2 A</li> </ul> </li> <li>Operating power <ul> <li>at AC-3</li> <li>at AC-3</li> <li>at AC-3</li> <li>at 400 V rated value</li> <li>60 W</li> <li>at 500 V rated value</li> <li>60 W</li> <li>at 690 V rated value</li> <li>90 W</li> </ul> </li> <li>Operating frequency <ul> <li>at AC-3 maximum</li> <li>15 1/h</li> </ul> </li> </ul>	dependent overload release	
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 400 V rated value  60 W  — at 500 V rated value  — at 690 V rated value  Operating frequency  at AC-3 maximum  at AC-3 maximum  690 V  Operating frequency  at AC-3 maximum  690 V  Operating frequency  15 1/h	Operating voltage	
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 400 V rated value  — at 500 V rated value  — at 690 V rated value  90 W  Operating frequency  • at AC-3 maximum  15 1/h	• rated value	690 V
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  60 W  — at 500 V rated value  — at 690 V rated value  90 W  Operating frequency  at AC-3 maximum  15 1/h	<ul><li>at AC-3 rated value maximum</li></ul>	690 V
Operating current         • at AC-3         — at 400 V rated value       0.2 A         Operating power         • at AC-3       25 W         — at 230 V rated value       60 W         — at 500 V rated value       60 W         — at 690 V rated value       90 W         Operating frequency       • at AC-3 maximum         • at AC-3 maximum       15 1/h	Operating frequency rated value	50 60 Hz
at AC-3     — at 400 V rated value     0.2 A  Operating power     • at AC-3     — at 230 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	Operating current rated value	0.2 A
— at 400 V rated value       0.2 A         Operating power       • at AC-3         — at 230 V rated value       25 W         — at 400 V rated value       60 W         — at 500 V rated value       60 W         — at 690 V rated value       90 W         Operating frequency       at AC-3 maximum         • at AC-3 maximum       15 1/h	Operating current	
Operating power         ● at AC-3         — at 230 V rated value       25 W         — at 400 V rated value       60 W         — at 500 V rated value       60 W         — at 690 V rated value       90 W         Operating frequency       15 1/h	• at AC-3	
<ul> <li>at AC-3         — at 230 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 maxim</li></ul>	— at 400 V rated value	0.2 A
— at 230 V rated value       25 W         — at 400 V rated value       60 W         — at 500 V rated value       60 W         — at 690 V rated value       90 W         Operating frequency       at AC-3 maximum         15 1/h	Operating power	
— at 400 V rated value 60 W — at 500 V rated value 60 W — at 690 V rated value 90 W  Operating frequency  ■ at AC-3 maximum 15 1/h	• at AC-3	
— at 500 V rated value       60 W         — at 690 V rated value       90 W         Operating frequency       at AC-3 maximum         15 1/h	— at 230 V rated value	25 W
— at 690 V rated value 90 W  Operating frequency  ● at AC-3 maximum 15 1/h	— at 400 V rated value	60 W
— at 690 V rated value 90 W  Operating frequency  ● at AC-3 maximum 15 1/h	— at 500 V rated value	60 W
Operating frequency  ● at AC-3 maximum  15 1/h		90 W
• at AC-3 maximum 15 1/h		
uxiliary circuit		15 1/h
	Auxiliary circuit	

Number of CO contacts	
for auxiliary contacts	0
Dratactive and manitaring functions	
Protective and monitoring functions  Product function	
Ground fault detection	No
Phase failure detection	Yes
Trip class	CLASS 10
Design of the overload release	thermal
Operational short-circuit current breaking capacity	
(Ics) at AC	
• at 240 V rated value	100 000 A
• at 400 V rated value	100 000 A
• at 500 V rated value	100 000 A
• at 690 V rated value	100 000 A
Maximum short-circuit current breaking capacity (Icu)	
• 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	100 kA
Breaking capacity short-circuit current (Icn)	
• at 1 current path at DC at 150 V rated value	10 kA
<ul> <li>with 2 current paths in series at DC at 300 V rated value</li> </ul>	10 kA
<ul> <li>with 3 current paths in series at DC at 450 V rated value</li> </ul>	10 kA
Response value current	
• of instantaneous short-circuit trip unit	2.6 A
UL/CSA ratings	
Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	0.2 A
● at 600 V rated value	0.2 A
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 240 V	none required
● at 400 V	None required
● at 500 V	None required
● at 690 V	None required

Installation/ mounting/ dimensions

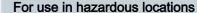
Mounting position	any
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
Height	90 mm
Width	45 mm
Depth	75 mm

Connections/Terminals	
Product function	
<ul> <li>removable terminal for auxiliary and control</li> </ul>	No
circuit	
Type of electrical connection	
for main current circuit	screw-type terminals
Arrangement of electrical connectors for main current	Top and bottom
circuit	
Type of connectable conductor cross-sections	
• for main contacts	
<ul><li>— single or multi-stranded</li></ul>	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x (1 4 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
Type of connectable conductor cross-sections	
<ul> <li>for auxiliary contacts</li> </ul>	
<ul><li>— single or multi-stranded</li></ul>	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)
Tightening torque	
<ul> <li>for main contacts with screw-type terminals</li> </ul>	0.8 1.2 N·m
• for auxiliary contacts with screw-type terminals	0.8 1.2 N·m
Size of the screwdriver tip	Pozidriv 2
Design of the thread of the connection screw	
• for main contacts	M3

Safety related data		
B10 value		
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	5 000	
Proportion of dangerous failures		
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	50 %	
• with high demand rate acc. to SN 31920	50 %	
Failure rate [FIT]		
• with low demand rate acc. to SN 31920	50 FIT	
Display version		
• for switching status	Rocker switch	

## Certificates/approvals

#### **General Product Approval**















**IECE**x

#### **Declaration of Conformity**

#### **Test Certificates**

#### Marine / Shipping



Miscellaneous

Special Test Certificate

Type Test Certificates/Test Report





### Marine / Shipping











Confirmation

other

Miscellaneous

#### other



#### 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=3RV1011-0BA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV1011-0BA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-0BA10

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)  $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV1011-0BA10\&lang=en}}$ 

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-0BA10/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV1011-0BA10&objecttype=14&gridview=view1

