# **SIEMENS**

Data sheet 3RV2011-1EA10



Circuit breaker size S00 for motor protection, CLASS 10 A-release 2.8...4 A N release 52 A screw terminal Standard switching capacity

	OID!! IO
product brand name	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] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	7.25 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	2.4 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
shock resistance according to IEC 60068-2-27	25g / 11 ms
mechanical service life (operating cycles)	
<ul> <li>of the main contacts typical</li> </ul>	100 000
<ul> <li>of auxiliary contacts typical</li> </ul>	100 000
electrical endurance (operating cycles) typical	100 000
type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-20 +60 °C
during storage	-50 +80 °C
<ul> <li>during transport</li> </ul>	-50 +80 °C
relative humidity during operation	10 95 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	2.8 4 A
operating voltage	
rated value	20 690 V
<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V
<ul> <li>at AC-3e rated value maximum</li> </ul>	690 V
operating frequency rated value	50 60 Hz
operational current rated value	4 A
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operational current	
at AC-3 at 400 V rated value	4 A
• at AC-3e at 400 V rated value	4 A
operating power	
<ul><li>at AC-3</li><li>— at 230 V rated value</li></ul>	0.8 kW
— at 400 V rated value	1.5 kW
— at 500 V rated value	2.2 kW
— at 690 V rated value	3 kW
• at AC-3e	J KW
— at 230 V rated value	0.8 kW
— at 400 V rated value	1.5 kW
— at 500 V rated value	2.2 kW
— at 690 V rated value	3 kW
operating frequency	
at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
Auxiliary circuit	
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of CO contacts for auxiliary contacts	0
Protective and monitoring functions	
product function	
ground fault detection	No
phase failure detection	Yes
trip class	CLASS 10
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	
at AC at 240 V rated value	100 kA
<ul> <li>at AC at 400 V rated value</li> </ul>	100 kA
<ul> <li>at AC at 500 V rated value</li> </ul>	100 kA
<ul> <li>at AC at 690 V rated value</li> </ul>	6 kA
operating short-circuit current breaking capacity (lcs)	
at AC  • at 240 V rated value	100 kA
at 400 V rated value     at 400 V rated value	100 KA 100 kA
at 500 V rated value      at 500 V rated value	100 KA
at 690 V rated value	4 kA
response value current of instantaneous short-circuit trip	52 A
unit	0271
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
<ul> <li>at 480 V rated value</li> </ul>	4 A
at 600 V rated value	4 A
yielded mechanical performance [hp]	
• for single-phase AC motor	0.401
— at 110/120 V rated value	0.13 hp
— at 230 V rated value	0.33 hp
• for 3-phase AC motor	0.8 hp
<ul><li>— at 200/208 V rated value</li><li>— at 220/230 V rated value</li></ul>	0.8 hp 0.75 hp
— at 460/480 V rated value	2 hp
— at 450/460 V rated value	3 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
design of the short-circuit trip	agricat
protection of the main circuit	
•	14.0.00 A
● at 400 V	gL/gG 32 A
● at 400 V ● at 500 V	gL/gG 32 A gL/gG 32 A
• at 500 V	gL/gG 32 A
<ul><li>at 500 V</li><li>at 690 V</li></ul>	gL/gG 32 A

fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	97 mm
width	45 mm
depth	97 mm
required spacing	
with side-by-side mounting at the side	0 mm
• for grounded parts at 400 V	
— downwards	30 mm
— upwards	30 mm
— upwarus — at the side	9 mm
	9 111111
• for live parts at 400 V	22
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
<ul> <li>for grounded parts at 500 V</li> </ul>	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
<ul> <li>for live parts at 500 V</li> </ul>	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for grounded parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
• for live parts at 690 V	V IIIIII
— downwards	50 mm
— upwards	50 mm
— upwards — backwards	
	0 mm
<ul><li>— at the side</li><li>— forwards</li></ul>	30 mm
	0 mm
Connections/ Terminals	
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>— solid or stranded</li> </ul>	0 (0.75 0.5
	2x (0,75 2,5 mm²), 2x 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul><li>finely stranded with core end processing</li><li>at AWG cables for main contacts</li></ul>	
<ul> <li>finely stranded with core end processing</li> <li>at AWG cables for main contacts</li> <li>tightening torque</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12
<ul> <li>finely stranded with core end processing</li> <li>at AWG cables for main contacts</li> <li>tightening torque</li> <li>for main contacts with screw-type terminals</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12 0.8 1.2 N·m
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12 0.8 1.2 N·m Diameter 5 to 6 mm
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12 0.8 1.2 N·m Diameter 5 to 6 mm
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip  design of the thread of the connection screw	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip  design of the thread of the connection screw  • for main contacts	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  Safety related data	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  Safety related data  B10 value  • with high demand rate according to SN 31920	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2  M3
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  Safety related data  B10 value  • with high demand rate according to SN 31920  proportion of dangerous failures	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2  M3
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  Safety related data  B10 value  • with high demand rate according to SN 31920  proportion of dangerous failures  • with low demand rate according to SN 31920	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2  M3  5 000
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  Safety related data  B10 value  • with high demand rate according to SN 31920  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2  M3  5 000  50 %
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  Safety related data  B10 value  • with high demand rate according to SN 31920  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  failure rate [FIT]	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2  M3  5 000  50 %
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  Safety related data  B10 value  • with high demand rate according to SN 31920  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  failure rate [FIT]  • with low demand rate according to SN 31920	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2  M3  5 000  50 % 50 % 50 FIT
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  Safety related data  B10 value  • with high demand rate according to SN 31920  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  failure rate [FIT]	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2  M3  5 000  50 % 50 %
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw  • for main contacts  Safety related data  B10 value  • with high demand rate according to SN 31920  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  failure rate [FIT]  • with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC 61508  protection class IP on the front according to IEC	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2  M3  5 000  50 % 50 % 50 FIT
— finely stranded with core end processing  • at AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw  • for main contacts  Safety related data  B10 value  • with high demand rate according to SN 31920  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  failure rate [FIT]  • with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC 61508	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (18 14), 2x 12  0.8 1.2 N·m Diameter 5 to 6 mm Pozidriv size 2  M3  5 000  50 % 50 % 50 FIT 10 y

#### Certificates/ approvals

### **General Product Approval**





Confirmation



**KC** 



For use in hazardous locations

**Declaration of Conformity** 

**Test Certificates** 











Special Test Certificate Type Test Certificates/Test Report

#### Marine / Shipping













Marine / Shipping

other



Confirmation



Vibration and Shock

Railway

Confirmation

## **Further information**

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2011-1EA10

Cax online generator

 $\underline{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RV2011-1EA10}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1EA10

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

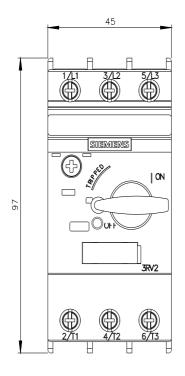
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2011-1EA10&lang=en

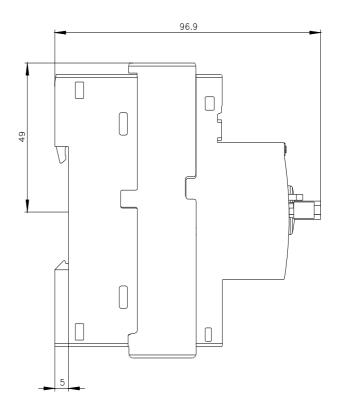
Characteristic: Tripping characteristics, I2t, Let-through current

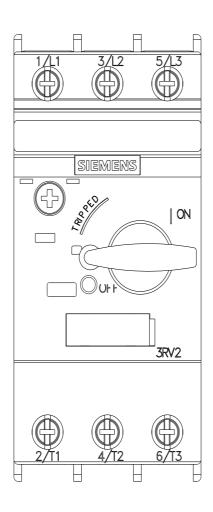
https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1EA10/char

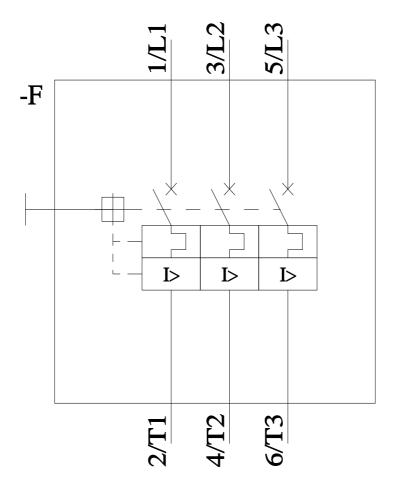
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2011-1EA10&objecttype=14&gridview=view1









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