## **SIEMENS**

Data sheet 3RV2011-4AA10



Circuit breaker size S00 for motor protection, CLASS 10 A-release 10...16 A N-release 208 A screw terminal Standard switching capacity

product designation design of the product product type designation 3RV2  General technical data size of the circuit-breaker size of contactor can be combined company-specific product extension auxiliary switch yes power loss [W] for rated value of the current • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value surge voltage resistance rated value • between main and auxiliary circuit • of auxiliary contacts typical • of the main contacts typical • of auxiliary contacts typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directiv	product brand name	SIRIUS
Seneral technical data	product designation	Circuit breaker
size of the circuit-breaker size of contactor can be combined company-specific product extension auxiliary switch power loss [W] for rated value of the current • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • between main and auxiliary circuit • between main and auxiliary circuit • between main and suxiliary circuit • between main and suxiliary circuit • between main and suxiliary circuit • of auxiliary contacts typical • of auxiliary contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/4EU  certificate of suitability according to ATEX directive 2014/34/4EU  certificate of suitability according to ATEX directive 2014/34/EU  certificate of suitability a	design of the product	For motor protection
size of the circuit-breaker  size of contactor can be combined company-specific product extension auxiliary switch power loss [W] for rated value of the current  • at AC in hot operating state • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  surge voltage resistance rated value  maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • of auxiliary contacts typical  electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Qu Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during torage • during torage • during transport  temperature compensation relative humidity during operation  10 95 %  Main circuit number of poles for main current circuit  300  S00  S00  S00  S00  S00  S00  S0	product type designation	3RV2
size of contactor can be combined company-specific product extension auxiliary switch  power loss [W] for rated value of the current  • at AC in hot operating state 9.25 W  • at AC in hot operating state per pole 3.1 W  insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point  • between main and auxiliary circuit 400 V  • between main and auxiliary circuit 400 V  shock resistance acc. to IEC 60068-2-27 25g / 11 ms  mechanical service life (switching cycles)  • of the main contacts typical 100 000  • of auxiliary contacts typical 100 000  • of auxiliary contacts typical 100 000  type of protection according to ATEX directive 2014/34/EU 214/34/EU  certificate of suitability according to ATEX directive 2014/34/EU 2214/34/EU  certificate of suitability according to ATEX directive 2014/34/EU 2014/34/EU  creference code acc. to IEC 81346-2 Q  Substance Prohibitance (Date) 01.10.2009  Ambient conditions  installation allitude at height above sea level maximum ambient temperature  • during operation -20 +60 °C  • during transport -50 +80 °C  temperature compensation -20 +60 °C  relative humidity during operation -20 +60 °C  temperature compensation -20 +60 °C  relative humidity during operation -20 +60 °C  temperature to ploes for main current circuit 3	General technical data	
product extension auxiliary switch  power loss [W] for rated value of the current  • at AC in hot operating state • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  surge voltage resistance rated value  maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • of the main contacts typical • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical • of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Anbient conditions  installation altitude at height above sea level maximum amblent temperature • during storage • during transport  temperature compensation relative humidity during operation  during toperation • during torage • during transport  temperature compensation relative humidity during operation  with a Current and ACC and	size of the circuit-breaker	S00
power loss [W] for rated value of the current  at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  maximum permissible voltage for safe isolation in networks with grounded star point  between main and auxiliary circuit betwee	size of contactor can be combined company-specific	S00, S0
at AC in hot operating state at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  maximum permissible voltage for safe isolation in networks with grounded star point  between main and auxiliary circuit between main and surviliary cir	product extension auxiliary switch	Yes
• at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • of the main contacts typical • of the main contacts typical • of auxiliary contacts typical • DMT 02 ATEX F 001  Substance of suitability according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 20	power loss [W] for rated value of the current	
insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  maximum permissible voltage for safe isolation in networks with grounded star point  • between main and auxiliary circuit  • both resistance acc. to IEC 60068-2-27  mechanical service life (switching cycles)  • of the main contacts typical  • of auxiliary contacts typical  • of auxiliary contacts typical  • delectrical endurance (switching cycles) typical  type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Quabstance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  temperature compensation  relative humidity during operation  10. 95 %  Main circuit  number of poles for main current circuit  3	<ul> <li>at AC in hot operating state</li> </ul>	9.25 W
surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point  • between main and auxiliary circuit 400 V  shock resistance acc. to IEC 60068-2-27 25g / 11 ms  mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical   100 000   electrical endurance (switching cycles) typical   type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during torage • during transport • during storage • during transport • during transport  temperature compensation  relative humidity during operation  10 95 %  Main circuit number of poles for main current circuit  3	<ul> <li>at AC in hot operating state per pole</li> </ul>	3.1 W
maximum permissible voltage for safe isolation in networks with grounded star point  • between main and auxiliary circuit  shock resistance acc. to IEC 60068-2-27	9 9 1	690 V
networks with grounded star point  • between main and auxiliary circuit  • between main and auxiliary circuit  • between main and auxiliary circuit  shock resistance acc. to IEC 60068-2-27  mechanical service life (switching cycles)  • of the main contacts typical  • of auxiliary contacts typical  electrical endurance (switching cycles) typical  type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during storage  • during transport  temperature compensation  relative humidity during operation  10. 95 %  Main circuit  number of poles for main current circuit  3	surge voltage resistance rated value	6 kV
between main and auxiliary circuit     shock resistance acc. to IEC 60068-2-27     z5g / 11 ms      mechanical service life (switching cycles)     of the main contacts typical     of auxiliary contacts typical     leectrical endurance (switching cycles) typical     type of protection according to ATEX directive     2014/34/EU     reference code acc. to IEC 81346-2     Substance Prohibitance (Date)     Ambient conditions     installation altitude at height above sea level maximum     ambient temperature     oduring operation     oduring storage     oduring transport     temperature compensation     relative humidity during operation  Main circuit     number of poles for main current circuit      25g / 11 ms      100 000		
shock resistance acc. to IEC 60068-2-27  mechanical service life (switching cycles)  of the main contacts typical of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature olduring storage olduring transport olduring transport olduring transport electrical for switching cycles) typical 100 000  Ex II (2) GD  DMT 02 ATEX F 001  DMT 02 ATEX F 001  2 000 m  and on the temperature olduring operation olduring storage olduring storage olduring transport olduring transport olduring transport olduring operation	<ul> <li>between main and auxiliary circuit</li> </ul>	400 V
mechanical service life (switching cycles)  • of the main contacts typical  • of auxiliary contacts typical  electrical endurance (switching cycles) typical  type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum ambient temperature  • during operation • during storage • during transport  temperature compensation  relative humidity during operation  Main circuit number of poles for main current circuit  100 000  Ex II (2) GD  DMT 02 ATEX F 001  20 U  DMT 02 ATEX F 001  20 U  20 U  20 U  20 U  20 U  30	<ul> <li>between main and auxiliary circuit</li> </ul>	400 V
of the main contacts typical     of auxiliary contacts typical     electrical endurance (switching cycles) typical     type of protection according to ATEX directive     2014/34/EU  certificate of suitability according to ATEX directive     2014/34/EU  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum     ambient temperature     oduring operation     during storage     during transport     during transport     temperature compensation  relative humidity during operation  Main circuit  number of poles for main current circuit  100 000  EX II (2) GD  DMT 02 ATEX F 001  DMT 02 ATEX F 001  20 00  EX III (2) GD  OU  OU  OU  OU  OU  OU  OU  OU  OU  O	shock resistance acc. to IEC 60068-2-27	25g / 11 ms
of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum ambient temperature     o during operation     during storage     during transport emperature compensation relative humidity during operation  Main circuit number of poles for main current circuit  100 000 EX II (2) GD  DMT 02 ATEX F 001  2 Q  Q  2 00. 1.10.2009  ATEX F 001  2 Q  Q  2 00. 1.10.2009  A OC  -20 +60 °C  -50 +80 °C  -50 +80 °C  -50 +80 °C  -50 +80 °C  -50 +95 °C  -50 +9	mechanical service life (switching cycles)	
electrical endurance (switching cycles) typical  type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  temperature compensation  relative humidity during operation  Main circuit  100 000  Ex II (2) GD  DMT 02 ATEX F 001  DMT 02 ATEX F 001  2 Q  Q  01.10.2009  ATEX F 001  2 Q  Q  01.10.2009  A Substance Prohibitance (Date)  01.10.2009  -20 +60 °C  -20 +60 °C  -20 +80 °C  -30 +80 °C  -30 +80 °C  -30 +80 °C  -30 +60 °C	<ul> <li>of the main contacts typical</li> </ul>	100 000
type of protection according to ATEX directive 2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum 2 000 m  ambient temperature  • during operation • during storage • during transport  temperature compensation -20 +60 °C  -50 +80 °C  temperature compensation -20 +60 °C  relative humidity during operation 10 95 %  Main circuit  number of poles for main current circuit  3	of auxiliary contacts typical	100 000
2014/34/EU  certificate of suitability according to ATEX directive 2014/34/EU  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  temperature compensation  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  2 DMT 02 ATEX F 001  DMT 02 ATEX F 001  DMT 02 ATEX F 001  20 +60 °C  0 +60 °C  - 20 +60 °C	electrical endurance (switching cycles) typical	100 000
reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date) 01.10.2009  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  • during transport -50 +80 °C  temperature compensation -20 +60 °C  relative humidity during operation 10 95 %  Main circuit  number of poles for main current circuit 3		Ex II (2) GD
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport • during transport • c50 +80 °C  temperature compensation -20 +60 °C  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  3	, ,	DMT 02 ATEX F 001
Ambient conditions installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport • during transport • compensation -20 +80 °C  • temperature compensation -20 +80 °C  temperature compensation -20 +60 °C  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  3	reference code acc. to IEC 81346-2	Q
installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  • during transport  • during transport  • during transport  -50 +80 °C  temperature compensation  -20 +60 °C  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  3	Substance Prohibitance (Date)	01.10.2009
ambient temperature  • during operation  • during storage  • during transport  • during transport  -50 +80 °C  temperature compensation  -20 +60 °C  temperature compensation  -20 +60 °C  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  3	Ambient conditions	
<ul> <li>during operation</li> <li>during storage</li> <li>temperature compensation</li> <li>relative humidity during operation</li> <li>mumber of poles for main current circuit</li> </ul>	installation altitude at height above sea level maximum	2 000 m
<ul> <li>during storage</li> <li>during transport</li> <li>temperature compensation</li> <li>relative humidity during operation</li> <li>mumber of poles for main current circuit</li> </ul>	ambient temperature	
● during transport -50 +80 °C  temperature compensation -20 +60 °C  relative humidity during operation 10 95 %  Main circuit  number of poles for main current circuit 3	<ul><li>during operation</li></ul>	-20 +60 °C
temperature compensation -20 +60 °C relative humidity during operation 10 95 %  Main circuit number of poles for main current circuit 3	<ul> <li>during storage</li> </ul>	-50 +80 °C
relative humidity during operation 10 95 %  Main circuit  number of poles for main current circuit 3	during transport	-50 +80 °C
Main circuit number of poles for main current circuit  3	temperature compensation	-20 +60 °C
number of poles for main current circuit 3	relative humidity during operation	10 95 %
·	Main circuit	
adjustable current response value current of the 10 16 A	number of poles for main current circuit	3
	adjustable current response value current of the	10 16 A

current-dependent overload release	
operating voltage	
• rated value	690 V
• rated value	20 690 V
at AC-3 rated value maximum	690 V
operating frequency rated value	50 60 Hz
operational current rated value	16 A
operational current at AC-3 at 400 V rated value	16 A
operating power at AC-3	
• at 230 V rated value	4 kW
• at 400 V rated value	7.5 kW
at 500 V rated value	7.5 kW
at 690 V rated value	11 kW
operating frequency at AC-3 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
breaking capacity operating short-circuit current (lcs) at AC	
at 240 V rated value	100 kA
at 400 V rated value	30 kA
at 500 V rated value	5 kA
at 690 V rated value	2 kA
breaking capacity maximum short-circuit current (Icu)	
at AC at 240 V rated value	100 kA
at AC at 400 V rated value	55 kA
at AC at 500 V rated value	10 kA
<ul> <li>at AC at 690 V rated value</li> </ul>	4 kA
response value current of instantaneous short-circuit trip	208 A
unit	
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
<ul> <li>at 480 V rated value</li> </ul>	16 A
at 600 V rated value	16 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	1 hp
— at 230 V rated value	2 hp
• for 3-phase AC motor	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	5 hp
— at 460/480 V rated value	10 hp
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	gL/gG 80 A
• at 400 V	gL/gG 63 A
• at 500 V	gL/gG 50 A
• at 690 V	gL/gG 40 A
Installation/ mounting/ dimensions	
mounting position	any
5 Page 1	,

fastening method	screw and snap-on mounting onto 35 mm standard mounting rail
	according to DIN EN 60715
height	97 mm
width	45 mm
depth	97 mm
required spacing	
for grounded parts at 400 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• 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><li>— downwards</li></ul>	30 mm
— downwards — upwards	30 mm
— at the side	9 mm
— at the side     • for live parts at 500 V	J 111111
for live parts at 500 v      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	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	No
type of electrical connection	
for main current circuit	screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections	
for main contacts	
<ul><li>— solid or stranded</li></ul>	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)
at AWG cables for main contacts	2x (18 14), 2x 12
tightening torque	
for main contacts with screw-type terminals	0.8 1.2 N·m
design of screwdriver shaft	Diameter 5 to 6 mm
size of the screwdriver tip	Pozidriv 2
design of the thread of the connection screw	
• for main contacts	M3
Safety related data	
B10 value	
with high demand rate acc. to SN 31920	5 000
proportion of dangerous failures	50.07
with low demand rate acc. to SN 31920	50 %
with high demand rate acc. to SN 31920	50 %
failure rate [FIT]	FOFIT
with low demand rate acc. to SN 31920  The low for proof text interval or coming life acc. to	50 FIT
T1 value for proof test interval or service life acc. to	10 y

**IEC 61508** protection class IP on the front acc. to IEC 60529 IP20 touch protection on the front acc. to IEC 60529 finger-safe, for vertical contact from the front display version for switching status Handle

Certificates/ approvals

## **General Product Approval**



Confirmation





<u>KC</u>



For use in hazardous locations

**Declaration of Conformity** 

**Test Certificates** 





**UK Declaration of** Conformity



Type Test Certificates/Test Report

**Special Test Certific-**

## 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=3RV2011-4AA10

Cax online generator

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-4AA10

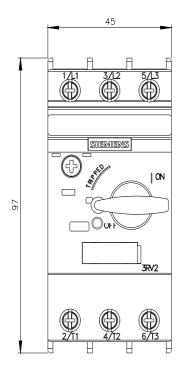
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

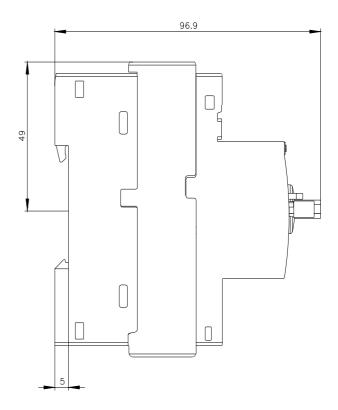
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2011-4AA10&lang=en

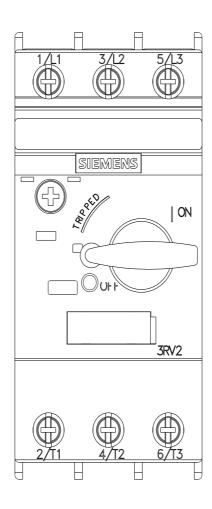
Characteristic: Tripping characteristics, I2t, Let-through current

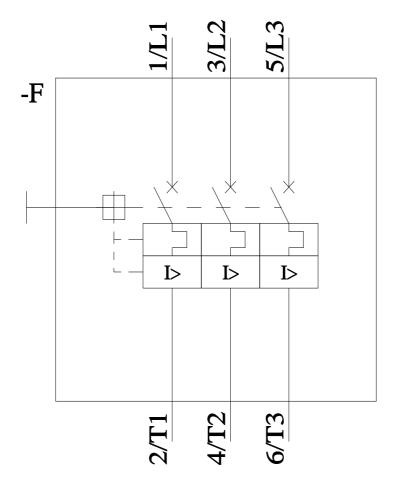
https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-4AA10/char

Further characteristics (e.g. electrical endurance, switching frequency)
<a href="http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2011-4AA10&objecttype=14&gridview=view1">http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2011-4AA10&objecttype=14&gridview=view1</a>









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