## **SIEMENS**

Data sheet 3RV2411-4AA10



Circuit breaker size S00 for transformer protection A-release 10...16 A N-release 286 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 at AC in hot operating state per pole at AC in hot operating state per pole at AC in hot operating state at AC in hot operating in hot operation at AC in hot operation at AC in hot operating in hot operation at AC in hot operation at A	product brand name	SIRIUS
Seneral technical data	product designation	Circuit breaker
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   • at AC in hot operating state   9,25 W   insulation voltage with degree of pollution 3 at AC rated value   value   surge voltage resistance rated value   6kV   shock resistance according 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   • of auxiliary contacts (switching cycles)   100 000   • of auxiliary contacts (bytical   100 000   reference code according to IEC 81346-2   Q   Substance Prohibitance (Date)   10/01/2009   Ambient conditions   10/01/2009   Ambient conditions   200 m   ambient temperature   4 uting storage   -50 +80 °C   • during storage   -50 +80 °C   • during transport   -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   operating voltage   -60 60 V   • at AC-3 rated value maximum   690 V   operational current rated value   50 60 Hz   operational current rated value   50 60 Hz   operational current rated value   00 operational current or to the current of the curr	design of the product	For transformer 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 • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value shock resistance according to IEC 60068-2-27  mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation allitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation  Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value at AC-3 rated value maximum operational current rated value	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 680 V  shock resistance according 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  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 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  operating voltage • rated value • at AC-3 rated value maximum 690 V • at AC-3 rated value maximum 690 V operational current rated value operational current value operations of the current rated value operational current value operations of the current rated value operational current value value operational current value value operational current value value operational current value	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  shock resistance according to IEC 60068-2-27  mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical of the main contact typical  preference code according to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature eluting operation -20 +60 °C -50 +80 °C -50 +80 °C -50 +80 °C -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 operating voltage • rated value • at AC-3 rated value maximum 690 V • at AC-3 rated value maximum 690 V  operational current rated value	size of the circuit-breaker	S00
power loss [W] for rated value of the current  at AC in hot operating state 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 shock resistance according to IEC 60068-2-27  mechanical service life (switching cycles) of the main contacts typical of auxiliary contacts typical lelectrical endurance (switching cycles) typical 100 000  reference code according 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 transport elative humidity during operation  Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage art AC-3e rated value maximum operational current rated value operational current of the current operation at AC-3e rated value operational current of value operational current rated value operational current rated value operational current of value operational current care value operational current rated value operational current	size of contactor can be combined company-specific	S00, S0
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 shock resistance according to IEC 60068-2-27 25g / 11 ms mechanical service life (switching cycles) of the main contacts typical 100 000 electrical endurance (switching cycles) typical 100 000 electrical endurance (switching cycles) typical 100 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 10/01/2009  Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation -20 +60 °C during storage -50 +80 °C eduring transport -50 +80 °C relative humidity during operation 10 95 %  Main circuit 3 adjustable current response value current of the current-dependent overload release operating voltage rated value 20 690 V e at AC-3e rated value maximum 690 V e at AC-3e rated value maximum 690 V operational current rated value operational current	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  shock resistance according to IEC 60068-2-27  mechanical service life (switching cycles)  of the main contacts typical  of auxiliary contacts typical  lou 000  electrical endurance (switching cycles) typical  reference code according to IEC 81346-2  Q Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  oturing storage  of during storage  of during storage  of during transport  relative humidity during operation  Main circuit  adjustable current response value current of the current-dependent overload release  operating voltage  orated value  at AC-3e rated value maximum  operational current rated value  operational current  operational current  operational current  10 A  operational current  operational current  of AC  operational current	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  shock resistance according to IEC 60068-2-27  mechanical service life (switching cycles)  of the main contacts typical  of auxiliary contacts typical  electrical endurance (switching cycles) typical  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  of during operation  of during storage  of during storage  of during transport  relative humidity during operation  number of poles for main current circuit  adjustable current response value current of the current-dependent overload release  operating voltage  or at AC-3e rated value maximum  operational current rated value  operational current  680 V	<ul> <li>at AC in hot operating state</li> </ul>	9.25 W
value surge voltage resistance rated value shock resistance according to IEC 60068-2-27 mechanical service life (switching cycles)  • of the main contacts typical • of auxiliary contacts typical lelectrical endurance (switching cycles) typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date) In/01/2009  Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation 10 95 %  Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3e rated value maximum • at AC-3e rated value maximum operational current rated value operational current	at AC in hot operating state per pole	3.1 W
shock resistance according to IEC 60068-2-27  shock resistance according to IEC 60068-2-27  shock resistance service life (switching cycles)  of auxiliary contacts typical of auxiliary contacts typical lectrical endurance (switching cycles) typical reference code according to IEC 81346-2 Qusubstance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature oldering operation oldering storage oldering storage oldering transport relative humidity during operation  mumber of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage operating voltage operating requency rated value at AC-3e rated value maximum operating frequency rated value operational current rated value operational current rated value operational current one		690 V
mechanical service life (switching cycles)  • of the main contacts typical  • of auxiliary contacts typical electrical endurance (switching cycles) typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  • during operation • during storage • during transport relative humidity during operation  Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3 rated value maximum operational current rated value operational current  100 000	surge voltage resistance rated value	6 kV
of the main contacts typical of auxiliary contacts typical lectrical endurance (switching cycles) typical lectrical endurance (switching cycles) typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation during storage of during transport relative humidity during operation  Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage or at AC-3 rated value maximum operating frequency rated value operational current	shock resistance according to IEC 60068-2-27	25g / 11 ms
of auxiliary contacts typical electrical endurance (switching cycles) typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature     ouring operation     during storage     during transport relative humidity during operation  Adjustable current response value current of the current-dependent overload release  operating voltage     rated value     at AC-3 rated value maximum     at AC-3 rated value maximum operational current rated value operational	mechanical service life (switching cycles)	
electrical endurance (switching cycles) typical reference code according 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 transport relative humidity during operation  Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum electrical electrical typeration  perating frequency rated value operational current rated value operational current rated value  operational current rated value operational current rated value operational current rated value operational current rated value operational current rated value operational current rated value operational current	<ul> <li>of the main contacts typical</li> </ul>	100 000
reference code according 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  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit adjustable current response value current of the current-dependent overload release  operating voltage • rated value • rated value maximum • 690 V • at AC-3 rated value maximum  operating frequency rated value  operational current rated value  operational current rated value  operational current rated value  16 A  operational current rated value  operational current rated value  operational current rated value  operational current rated value	of auxiliary contacts typical	100 000
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit  adjustable current response value current of the current-dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  690 V  operating frequency rated value  operational current rated value  10 60 Hz  operational current rated value  10 60 Hz  operational current rated value  10 60 Hz	electrical endurance (switching cycles) typical	100 000
installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport relative humidity during operation  10 95 %  Main circuit  number of poles for main current circuit adjustable current response value current of the current-dependent overload release  operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum  operational current rated value  operational current rated value  operational current rated value  10 60 Hz  operational current  16 A	reference code according to IEC 81346-2	Q
installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport • during transport  relative humidity during operation  Main circuit  number of poles for main current circuit  adjustable current response value current of the current-dependent overload release  operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum  operational current rated value  operational current rated value  operational current rated value  operational current  20 460 °C  -20 +60 °C  -50 +80 °C  -60 +90 V	Substance Prohibitance (Date)	10/01/2009
ambient temperature  • during operation • during storage • during transport  relative humidity during operation  Main circuit  number of poles for main current circuit  adjustable current response value current of the current-dependent overload release  operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum  operational current rated value  operational current rated value  10 16 A  20 690 V  690 V  690 V  operating frequency rated value  50 60 Hz  operational current rated value  16 A	Ambient conditions	
<ul> <li>during operation</li> <li>during storage</li> <li>during transport</li> <li>storage</li> <li>telative humidity during operation</li> <li>mumber of poles for main current circuit</li> <li>adjustable current response value current of the current-dependent overload release</li> <li>operating voltage</li> <li>rated value</li> <li>at AC-3 rated value maximum</li> <li>at AC-3e rated value maximum</li> <li>at AC-3e rated value</li> <li>operational current rated value</li> <li>operational current rated value</li> <li>to +60 °C</li> <li>to +80 °C</li> <li>to .</li></ul>	installation altitude at height above sea level maximum	2 000 m
<ul> <li>during storage</li> <li>during transport</li> <li>50 +80 °C</li> <li>relative humidity during operation</li> <li>10 95 %</li> </ul> Main circuit <ul> <li>number of poles for main current circuit</li> <li>adjustable current response value current of the current-dependent overload release</li> <li>operating voltage</li> <li>rated value</li> <li>at AC-3 rated value maximum</li> <li>at AC-3e rated value maximum</li> <li>operating frequency rated value</li> <li>operational current rated value</li> <li>16 A</li> </ul>	ambient temperature	
<ul> <li>during transport</li> <li>relative humidity during operation</li> <li>10 95 %</li> </ul> Main circuit <ul> <li>number of poles for main current circuit</li> <li>adjustable current response value current of the current-dependent overload release</li> <li>operating voltage</li> <li>rated value</li> <li>at AC-3 rated value maximum</li> <li>at AC-3e rated value maximum</li> <li>operating frequency rated value</li> <li>operational current rated value</li> <li>operational current</li> </ul> -50 +80 °C 10 95 % 10 16 A 20 690 V 690 V 690 V operational current rated value 50 60 Hz operational current 16 A operational current	<ul><li>during operation</li></ul>	-20 +60 °C
relative humidity during operation  Main circuit  number of poles for main current circuit  adjustable current response value current of the current-dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  • at AC-3e rated value maximum  operating frequency rated value  operational current rated value  10 16 A  10 16 A  20 690 V  • at AC-3 rated value maximum  690 V  operating frequency rated value  16 A	<ul> <li>during storage</li> </ul>	-50 +80 °C
number of poles for main current circuit  adjustable current response value current of the current-dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  • at AC-3e rated value maximum  operating frequency rated value  operational current rated value  16 A  operational current	during transport	-50 +80 °C
number of poles for main current circuit  adjustable current response value current of the current-dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  • at AC-3e rated value maximum  operating frequency rated value  operational current rated value  10 16 A  20 690 V  • at AC-3 rated value maximum  690 V  operational current rated value  16 A	relative humidity during operation	10 95 %
adjustable current response value current of the current-dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  • at AC-3e rated value maximum  operating frequency rated value  operational current rated value  operational current  10 16 A  10 16 A  10 16 A	Main circuit	
current-dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  • at AC-3e rated value maximum  operating frequency rated value  operational current rated value  operational current  to A	number of poles for main current circuit	3
<ul> <li>rated value</li> <li>at AC-3 rated value maximum</li> <li>at AC-3e rated value maximum</li> <li>operating frequency rated value</li> <li>operational current rated value</li> <li>operational current</li> </ul>		10 16 A
<ul> <li>at AC-3 rated value maximum</li> <li>at AC-3e rated value maximum</li> <li>operating frequency rated value</li> <li>operational current rated value</li> <li>operational current</li> </ul>	operating voltage	
<ul> <li>at AC-3e rated value maximum</li> <li>operating frequency rated value</li> <li>operational current rated value</li> <li>operational current</li> </ul>	• rated value	20 690 V
operating frequency rated value 50 60 Hz operational current rated value 16 A operational current	<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V
operational current rated value 16 A operational current	<ul> <li>at AC-3e rated value maximum</li> </ul>	690 V
operational current	operating frequency rated value	50 60 Hz
	operational current rated value	16 A
• at AC-3 at 400 V rated value 16 A	operational current	
	• at AC-3 at 400 V rated value	16 A

at AC-3e 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
• at AC-3e	
— 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	
<ul> <li>at AC-3 maximum</li> </ul>	15 1/h
<ul><li>at AC-3e maximum</li></ul>	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	No
ground fault detection     phase failure detection	No Voc
phase failure detection  Aria along	Yes
trip class	CLASS 10
design of the overload release	thermal
breaking capacity maximum short-circuit current (lcu)	
• at AC at 240 V rated value	100 kA
<ul> <li>at AC at 400 V rated value</li> </ul>	55 kA
<ul> <li>at AC at 500 V rated value</li> </ul>	10 kA
at AC at 690 V rated value	4 kA
breaking capacity operating short-circuit current (Ics) at AC	
<ul> <li>at 240 V rated value</li> </ul>	100 kA
<ul> <li>at 400 V rated value</li> </ul>	30 kA
<ul> <li>at 500 V rated value</li> </ul>	5 kA
at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	286 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	16 A
at 600 V rated value      at 600 V rated value	16 A
	IVA
yielded mechanical performance [hp]	
• for single-phase AC motor	1 hn
— 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	J J. 1211
mstanation/ mounting/ uninensions	

mounting position	any
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	
<ul> <li>for grounded parts at 400 V</li> </ul>	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
<ul> <li>for live parts at 400 V</li> </ul>	
— 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
• 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	V IIIII
type of electrical connection	
for main current circuit	corou tuno torminale
arrangement of electrical connectors for main current	screw-type terminals  Top and bottom
circuit	Top and bottom
type of connectable conductor cross-sections	
• for main contacts	
— solid or stranded	2x (0,75 2,5 mm²), 2x 4 mm²
finely stranded with core end processing	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	( · ··· · · <u>, -</u> ·· · -
• 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 size 2
design of the thread of the connection screw	
• for main contacts	M3
Safety related data	
B10 value	5,000
with high demand rate according to SN 31920	5 000
proportion of dangerous failures	EO 0/
<ul> <li>with low demand rate according to SN 31920</li> </ul>	50 %
<ul><li>with low demand rate according to SN 31920</li><li>with high demand rate according to SN 31920</li></ul>	50 % 50 %
with low demand rate according to SN 31920 with high demand rate according to SN 31920 failure rate [FIT]	50 %
<ul><li>with low demand rate according to SN 31920</li><li>with high demand rate according to SN 31920</li></ul>	

IP20 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front display version for switching status

Certificates/ approvals

**General Product Approval** 



Confirmation





**KC** 



**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping



**Special Test Certific-**<u>ate</u>

Type Test Certificates/Test Report





Marine / Shipping









Confirmation

other

other

Railway



Vibration and Shock

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=3RV2411-4AA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2411-4AA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2411-4AA10

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2411-4AA10&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2411-4AA10/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2411-4AA10&objecttype=14&gridview=view1

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