SIEMENS

Data sheet 3RV2411-4AA20



Circuit breaker size S00 for transformer protection A-release 10...16 A N-release 286 A Spring-type 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 at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value of the main contacts typical electrical endurance (switching cycles) of the main 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 utring operation of utring storage of utring 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	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 during operation 20 +60 °C • during storage 50 +80 °C • during transport 55 +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 4 - 60 690 V • at AC-3 areted value maximum 690 V operational current rated value 50 60 Hz operational current rated value 50 60 Hz operational current rated value 00 coperational	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 arated value at AC-3e rated value maximum operational current rated value operational current of tevalue operational current rated value operational current rated value operational current of current operation at AC according to IEC 800 V sat AC according to IEC 800 V operational current rated value operational current rated value operational current rated value operational current rated value	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	 at AC in hot operating state 	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 Inumber of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • at AC-3e rated value maximum • at AC-3e rated value maximum operational current operation frequency 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 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	 of the main contacts typical 	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 -60 +90 V -60 +90 V -6	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	
 during operation during storage during transport storage telative humidity during operation mumber 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 at AC-3e rated value operational current rated value operational current rated value to +60 °C to +80 °C to .	installation altitude at height above sea level maximum	2 000 m
 during storage during transport 50 +80 °C 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 operating frequency rated value operational current rated value 16 A 	ambient temperature	
 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 operating frequency rated value operational current rated value operational current -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	during operation	-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	 during storage 	-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
 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
 at AC-3 rated value maximum at AC-3e rated value maximum operating frequency rated value operational current rated value operational current 	operating voltage	
 at AC-3e rated value maximum operating frequency rated value operational current rated value operational current 	• rated value	20 690 V
operating frequency rated value 50 60 Hz operational current rated value 16 A operational current	 at AC-3 rated value maximum 	690 V
operational current rated value 16 A operational current	 at AC-3e rated value maximum 	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

	40.4
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	
• at AC-3 maximum	15 1/h
at AC-3e maximum	15 1/h
	13 1/11
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 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
at AC at 690 V rated value	4 kA
breaking capacity operating short-circuit current (Ics)	
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
response value current of instantaneous short-circuit trip unit	286 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	40.4
at 480 V rated value	16 A
• at 600 V rated value	16 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— 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	3-3-107

mounting position	any
	any
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
height	106 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 	
downwards	30 mm
— upwards	30 mm
— at the side	9 mm
 for grounded parts at 500 V 	
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	
type of electrical connection	
for main current circuit	spring-loaded terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections	
for main contacts	
— solid or stranded	2x (0,5 4 mm²)
finely stranded with core end processing	2x (0.5 2.5 mm²)
finely stranded without core end processing	2x (0.5 2.5 mm²)
at AWG cables for main contacts	2x (20 12)
design of screwdriver shaft	Diameter 3 mm
size of the screwdriver tip	3,0 x 0,5 mm
Safety related data	
B10 value	
with high demand rate according to SN 31920	5 000
proportion of dangerous failures	
with low demand rate according to SN 31920	50 %
with high demand rate according to SN 31920 with high demand rate according to SN 31920	50 %
failure rate [FIT]	
with low demand rate according to SN 31920	50 FIT
T1 value for proof test interval or service life according to IEC 61508	10 y
	IDOO
protection class IP on the front according to IEC 60529	IP20

Handle

Certificates/ approvals

General Product Approval



Confirmation





<u>KC</u>



Declaration of Conformity

Test Certificates

Marine / Shipping



Special Test Certificate Type Test Certificates/Test Report





Marine / Shipping











Confirmation

other

other

Railway



Confirmation

Vibration and Shock

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=3RV2411-4AA20

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2411-4AA20

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2411-4AA20

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

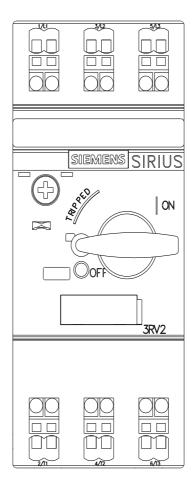
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2411-4AA20\&lang=en}}$

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2411-4AA20/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2411-4AA20&objecttype=14&gridview=view1



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