SIEMENS

Data sheet 3RV1011-1CA15



Circuit breaker size S00 for motor protection, CLASS 10 A-release 1.8...2.5 A N-release 33 A Screw terminal Standard switching capacity with transverse auxiliary switch 1 NO+1 NC

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For motor protection
product type designation	3RV1
General technical data	
size of the circuit-breaker	S00
size of contactor can be combined company-specific	S00
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	7.25 W
 at AC in hot operating state per pole 	2.4 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
mechanical service life (operating cycles)	
 of the main contacts typical 	100 000
of auxiliary contacts typical	100 000
electrical endurance (operating cycles) typical	100 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	01/01/2013
SVHC substance name	Lead - 7439-92-1
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
	-30 100 C
relative humidity during operation	10 95 %
relative humidity during operation Main circuit	
Main circuit	10 95 %
Main circuit number of poles for main current circuit adjustable current response value current of the current-	10 95 % 3
Main circuit number of poles for main current circuit adjustable current response value current of the current- dependent overload release	10 95 % 3
Main circuit number of poles for main current circuit adjustable current response value current of the current- dependent overload release operating voltage	10 95 % 3 1.8 2.5 A
Main circuit number of poles for main current circuit adjustable current response value current of the current- dependent overload release operating voltage • rated value	10 95 % 3 1.8 2.5 A 20 690 V
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	10 95 % 3 1.8 2.5 A 20 690 V 690 V
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	10 95 % 3 1.8 2.5 A 20 690 V 690 V
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	10 95 % 3 1.8 2.5 A 20 690 V 690 V 690 V 50 60 Hz
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 95 % 3 1.8 2.5 A 20 690 V 690 V 690 V 50 60 Hz
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	3 1.8 2.5 A 20 690 V 690 V 690 V 50 60 Hz 2.5 A

operating power	
• at AC-3	
— at 230 V rated value	0.4 kW
— at 400 V rated value	0.75 kW
— at 500 V rated value	1.1 kW
— at 690 V rated value	1.5 kW
• at AC-3e	
— at 230 V rated value	0.4 kW
— at 400 V rated value	0.75 kW
— at 500 V rated value	1.1 kW
— at 690 V rated value	1.5 kW
operating frequency	
• at AC-3 maximum	15 1/h
at AC-3e maximum	15 1/h
Auxiliary circuit	
design of the auxiliary switch	transverse
number of NC contacts for auxiliary contacts	1
• note	1
number of NO contacts for auxiliary contacts	1
• note	1
	0
number of CO contacts for auxiliary contacts	U
operational current of auxiliary contacts at AC-15	0.4
• at 24 V	2 A
• at 110 V	2 A
• at 120 V	2 A
• at 125 V	2 A
• at 230 V	0.5 A
operational current of auxiliary contacts at DC-13	
● at 24 V	1 A
● at 60 V	0.15 A
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
 at AC at 400 V rated value 	100 kA
 at AC at 500 V rated value 	10 kA
• at AC at 690 V rated value	2 kA
operating short-circuit current breaking capacity (Ics) at AC	
at 240 V rated value	
	100 kA
at 400 V rated value	100 kA 100 kA
• at 400 V rated value	100 kA
at 400 V rated valueat 500 V rated value	100 kA 100 kA
at 400 V rated valueat 500 V rated valueat 690 V rated value	100 kA 100 kA 2 kA
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings	100 kA 100 kA 2 kA
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor	100 kA 100 kA 2 kA 33 A
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value	100 kA 100 kA 2 kA 33 A
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value	100 kA 100 kA 2 kA 33 A
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value yielded mechanical performance [hp]	100 kA 100 kA 2 kA 33 A
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor	100 kA 100 kA 2 kA 33 A 2.5 A 2.5 A
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor at 230 V rated value	100 kA 100 kA 2 kA 33 A
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor — at 230 V rated value for 3-phase AC motor	100 kA 100 kA 2 kA 33 A 2.5 A 2.5 A
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor at 230 V rated value for 3-phase AC motor at 200/208 V rated value	100 kA 100 kA 2 kA 33 A 2.5 A 2.5 A 0.17 hp
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor — at 230 V rated value for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 220/230 V rated value	100 kA 100 kA 2 kA 33 A 2.5 A 2.5 A 0.17 hp 0.5 hp 0.5 hp
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor — at 230 V rated value for 3-phase AC motor — at 200/208 V rated value — at 460/480 V rated value — at 460/480 V rated value	100 kA 100 kA 2 kA 33 A 2.5 A 2.5 A 0.17 hp 0.5 hp 0.5 hp 1 hp
at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor — at 230 V rated value for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 220/230 V rated value	100 kA 100 kA 2 kA 33 A 2.5 A 2.5 A 0.17 hp 0.5 hp 0.5 hp

Short-circuit protection		
product function short circuit protection	Yes	
design of the short-circuit trip	magnetic	
design of the fuse link		
for short-circuit protection of the auxiliary switch required	fuse gG: 10 A, miniature circuit breaker C 6 A (short-circuit current lk < 400 A)	
design of the fuse link for IT network for short-circuit		
protection of the main circuit		
• at 240 V	none required	
• at 400 V	gL/gG 35 A	
• at 500 V	gL/gG 25 A	
• at 690 V	gL/gG 25 A	
Installation/ mounting/ dimensions		
mounting position	any	
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715	
height	90 mm	
width	45 mm	
depth	75 mm	
required spacing		
• for grounded parts at 400 V		
— downwards	20 mm	
— upwards	20 mm	
— at the side	9 mm	
• for live parts at 400 V		
— downwards	20 mm	
— upwards	20 mm	
— at the side	9 mm	
 for grounded parts at 500 V 		
— downwards	20 mm	
— upwards	20 mm	
— at the side	9 mm	
 for live parts at 500 V 		
— downwards	20 mm	
— upwards	20 mm	
— at the side	9 mm	
 for grounded parts at 690 V 		
— downwards	20 mm	
— upwards	20 mm	
— backwards	0 mm	
— at the side	9 mm	
— forwards	0 mm	
● for live parts at 690 V		
— downwards	20 mm	
— upwards	20 mm	
— backwards	0 mm	
— at the side	9 mm	
— forwards	0 mm	
Connections/ Terminals		
type of electrical connection		
for main current circuit	screw-type terminals	
for auxiliary and control circuit	screw-type terminals	
arrangement of electrical connectors for main current	Top and bottom	
type of connectable conductor cross-sections		
type of connectable conductor cross-sections • for main contacts		
ior main contacts — solid or stranded	2v (0.5	
	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x (1 4 mm²)	
— finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	
type of connectable conductor cross-sections		
 for auxiliary contacts 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	
colid or strandad	4 THE TOTAL TO THE TAX THE TOTAL TO THE TOTAL THE TOTAL TO THE TOTAL THE TOTAL TO T	
solid or stranded tightening torque	2A (0.0 1.0 Hilli), 2A (0.70 2.0 Hilli)	

• for auxiliary contacts with screw-type terminals	0.8 1.2 N·m	
size of the screwdriver tip	Pozidriv size 2	
design of the thread of the connection screw		
• for main contacts	M3	
 of the auxiliary and control contacts 	M3	
Safety related data		
product function suitable for safety function	Yes	
suitability for use		
 safety-related switching on 	No	
safety-related switching OFF	Yes	
service life maximum	10 a	
test wear-related service life necessary	Yes	
proportion of dangerous failures		
 with low demand rate according to SN 31920 	40 %	
 with high demand rate according to SN 31920 	50 %	
B10 value with high demand rate according to SN 31920	5 000	
failure rate [FIT] with low demand rate according to SN 31920	50 FIT	
ISO 13849		
device type according to ISO 13849-1	3	
overdimensioning according to ISO 13849-2 necessary	Yes	
IEC 61508		
safety device type according to IEC 61508-2	Type A	
Electrical Safety		
protection class IP on the front according to IEC 60529	IP20	
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front	
Display		
display version for switching status	Rocker switch	
Approvals Certificates		
General Product Approval		

UK CA



Confirmation





<u>KC</u>

General Product Approval

For use in hazardous locations

Test Certificates

Marine / Shipping







Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping



Miscellaneous











other

Confirmation

Railway

Special Test Certificate Environmental Confirmations

Environment

urther information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RV1011-1CA15

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV1011-1CA15

 ${\bf Service \& Support \ (Manuals, \ Certificates, \ Characteristics, \ FAQs, ...)}$

https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1CA15

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

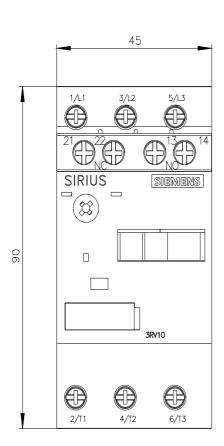
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV1011-1CA15&lang=er

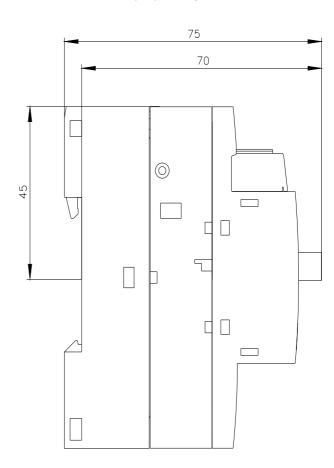
Characteristic: Tripping characteristics, I²t, Let-through current

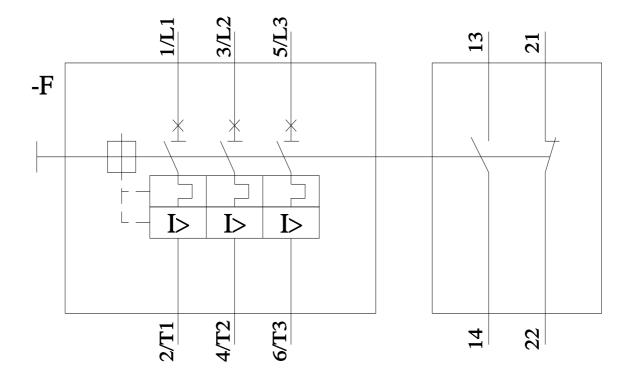
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Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV1011-1CA15&objecttype=14&gridview=view1







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