SIEMENS

Data sheet 3RV2331-4RC10



Circuit breaker size S2 for starter combination Rated current 80 A N-release 1040 A screw terminal Standard switching capacity





product brand name	SIRIUS	
product designation	Circuit breaker	
design of the product	For starter combinations	
product type designation	3RV2	
General technical data		
size of the circuit-breaker	S2	
size of contactor can be combined company-specific	S2	
product extension auxiliary switch	Yes	
power loss [W] for rated value of the current		
 at AC in hot operating state 	29.5 W	
 at AC in hot operating state per pole 	9.8 W	
insulation voltage with degree of pollution 3 at AC rated value	690 V	
surge voltage resistance rated value	6 kV	
shock resistance according to IEC 60068-2-27	25g / 11 ms Sinus	
mechanical service life (operating cycles)		
 of the main contacts typical 	20 000	
 of auxiliary contacts typical 	20 000	
electrical endurance (operating cycles) typical	20 000	
reference code according to IEC 81346-2	Q	
Substance Prohibitance (Date)	03/01/2017	
SVHC substance name	Lead - 7439-92-1 Lead titanium zirconium oxide - 12626-81-2	
Weight	1.168 kg	
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	
relative humidity during operation	10 95 %	
Environmental footprint		
Environmental Product Declaration(EPD)	Yes	
global warming potential [CO2 eq] total	239.877 kg	
global warming potential [CO2 eq] during manufacturing	12.8 kg	
global warming potential [CO2 eq] during sales	0.477 kg	
global warming potential [CO2 eq] during operation	230 kg	
global warming potential [CO2 eq] after end of life	-3.4 kg	

Siemens Eco Profile (SEP)	Siemens EcoTech
Main circuit	
number of poles for main current circuit	3
type of voltage for main current circuit	AC
operating voltage	
• rated value	20 690 V
at AC-3 rated value maximum	690 V
operating frequency rated value	50 60 Hz
operational current rated value	80 A
operational current	
 at AC-3 at 400 V rated value 	80 A
operating power	
• at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	55 kW
— at 690 V rated value	75 kW
operating frequency	
• at AC-3 maximum	15 1/h
Auxiliary circuit	
type of voltage for auxiliary and control circuit	AC/DC
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	No
trip class	CLASS 10
maximum short-circuit current breaking capacity (Icu)	
at AC at 240 V rated value	100 kA
 at AC at 400 V rated value 	65 kA
 at AC at 500 V rated value 	8 kA
 at AC at 690 V rated value 	4 kA
operating short-circuit current breaking capacity (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	1 040 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	77 A
at 600 V rated value	77 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	7.5 hp
• for 3-phase AC motor	
— at 200/208 V rated value	25 hp
— at 220/230 V rated value	30 hp
— at 460/480 V rated value	60 hp
— at 575/600 V rated value	75 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	none required
• at 400 V	160
• at 500 V	125
● at 690 V	100

nstallation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60718
height	140 mm
width	55 mm
depth	149 mm
required spacing	
 with side-by-side mounting at the side 	0 mm
 for grounded parts at 400 V 	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
 for live parts at 400 V 	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for grounded parts at 500 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for live parts at 500 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for grounded parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	10 mm
— forwards	0 mm
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• for live parts at 690 V	FO
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	10 mm
— forwards	0 mm
connections/ Terminals	
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	
— solid or stranded	2x (1 35 mm²), 1x (1 50 mm²)
 finely stranded with core end processing 	2x (1 25 mm²), 1x (1 35 mm²)
for AWG cables for main contacts	2x (18 2), 1x (18 1)
tightening torque	
for main contacts with screw-type terminals	3 4.5 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	M6
afety related data	
product function suitable for safety function	Yes
suitability for use	
safety-related switching on	No
safety-related switching OFF safety-related switching OFF	Yes
service life maximum	10 a
test wear-related service life necessary	Yes
proportion of dangerous failures	100
proportion of uangerous failules	

 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
T1 value	
 for proof test interval or service life according to IEC 61508 	10 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	Handle
Approvals Certificates	

General Product Approval









<u>KC</u>



General Product Approval

Test Certificates

Maritime application



Special Test Certificate

Type Test Certificates/Test Report







Maritime application

other







Miscellaneous



Confirmation

other

Railway

Environment



Special Test Certificate

Confirmation



Siemens EcoTech



Environmental Confirmations

Further 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)

 $\underline{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2331-4RC10}$

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2331-4RC10

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

 $\underline{https://support.industry.siemens.com/cs/ww/en/ps/3RV2331-4RC10}$

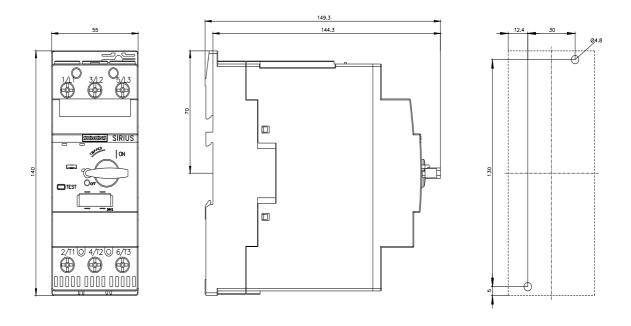
 $Image\ database\ (product\ images,\ 2D\ dimension\ drawings,\ 3D\ models,\ device\ circuit\ diagrams,\ EPLAN\ macros,\ ...)$

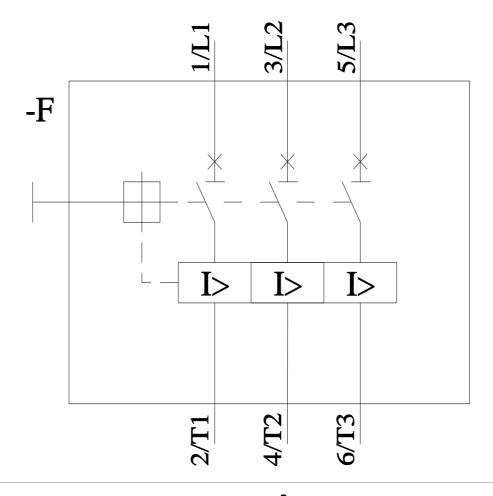
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2331-4RC10&lang=en

 $\label{lem:characteristic} \textbf{Characteristics}, \textbf{I}^{\textbf{2}}\textbf{t}, \textbf{Let-through current}$

https://support.industry.siemens.com/cs/ww/en/ps/3RV2331-4RC10/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2331-4RC10&objecttype=14&gridview=view1





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