## **SIEMENS**

Data sheet 3RV2042-4JB10



Circuit breaker size S3 for motor protection, Class 20 A-release 45...63 A N-release 819 A screw terminal Increased switching capacity 100 kA



design of the product Fo	ircuit breaker promotor protection
product type designation 3R General technical data	·
General technical data	
	RV2
size of the circuit-breaker S3	
	3
size of contactor can be combined company-specific S3	3
product extension auxiliary switch Ye	es
power loss [W] for rated value of the current	
• at AC in hot operating state 34	\$ W
• at AC in hot operating state per pole 11	1.3 W
insulation voltage with degree of pollution 3 at AC rated value 1.0	000 V
surge voltage resistance rated value 8 kg	kV
shock resistance according to IEC 60068-2-27 25	5g / 11 ms Sinus
mechanical service life (operating cycles)	
• of the main contacts typical 25	5 000
• of auxiliary contacts typical 25	5 000
electrical endurance (operating cycles) typical 25	5 000
reference code according to IEC 81346-2 Q	
Substance Prohibitance (Date) 03	3/01/2017
SVHC substance name Le	ead - 7439-92-1
Ambient conditions	
installation altitude at height above sea level maximum 2 0	000 m
ambient temperature	
• during operation -20	0 +60 °C
• during storage -50	0 +80 °C
• during transport -50	0 +80 °C
relative humidity during operation 10	0 95 %
Main circuit	
number of poles for main current circuit 3	
adjustable current response value current of the current- dependent overload release	5 63 A
operating voltage	
• rated value 20	) 690 V
• at AC-3 rated value maximum 69	90 V
	90 V
• at AC-3e rated value maximum 69	

	20.4
operational current rated value	63 A
operational current	
<ul> <li>at AC-3 at 400 V rated value</li> </ul>	63 A
at AC-3e at 400 V rated value	63 A
operating power	
• at AC-3	
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	55 kW
• at AC-3e	
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	55 kW
operating frequency	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
Protective and monitoring functions	
product function	
ground fault detection	No
phase failure detection	Yes
trip class	CLASS 20
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	anoma.
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	15 kA
at AC at 500 V rated value     at AC at 690 V rated value	7.5 kA
	7.5 KA
operating short-circuit current breaking capacity (lcs) at AC	400 1-4
at 240 V rated value	100 kA
at 400 V rated value	50 kA
at 500 V rated value	7.5 kA
at 690 V rated value	4 kA
response value current of instantaneous short-circuit trip unit	819 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	63 A
at 600 V rated value	63 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	5 hp
— at 230 V rated value	15 hp
• for 3-phase AC motor	
— at 200/208 V rated value	20 hp
— at 220/230 V rated value	25 hp
— at 460/480 V rated value	50 hp
— at 575/600 V rated value	60 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
Installation/ mounting/ dimensions	
mounting position	any
	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	165 mm
width	70 mm
depth	176 mm
required spacing	
with side-by-side mounting at the side	0 mm
<ul> <li>for grounded parts at 400 V</li> </ul>	

— downwards	70 mm
— upwards	70 mm
— at the side	10 mm
<ul><li>for live parts at 400 V</li></ul>	
— downwards	70 mm
— upwards	70 mm
— at the side	10 mm
● for grounded parts at 500 V	
— downwards	110 mm
— upwards	110 mm
— at the side	10 mm
• for live parts at 500 V	
— downwards	110 mm
— upwards	110 mm
— at the side	10 mm
● for grounded parts at 690 V	
— downwards	150 mm
— upwards	150 mm
— at the side	30 mm
• for live parts at 690 V	
— downwards	150 mm
— upwards	150 mm
— at the side	30 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	2x (2.5 16 mm²)
— solid or stranded	2x (2,5 50 mm²), 1x (10 70 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (2.5 35 mm²), 1x (2.5 50 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (10 35 mm²), 1x (10 50 mm²)
tightening torque	
<ul> <li>for main contacts for ring cable lug</li> </ul>	4.5 6 N·m
outer diameter of the usable ring cable lug maximum	19 mm
tightening torque	
<ul> <li>for main contacts with screw-type terminals</li> </ul>	4.5 6 N·m
Safety related data	
product function suitable for safety function	Yes
suitability for use	
<ul> <li>safety-related switching on</li> </ul>	No
safety-related switching OFF	Yes
service life maximum	10 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	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
T1 value	
<ul> <li>for proof test interval or service life according to IEC 61508</li> </ul>	10 a
Electrical Safety	

protection class IP on the front according to IEC 60529

touch protection on the front according to IEC 60529

Display

display version for switching status

Handle

Approvals Certificates

## General Product Approval







Confirmation



<u>KC</u>

General Product Approval

**Test Certificates** 

Marine / Shipping



Type Test Certificates/Test Report

Special Test Certificate







Marine / Shipping

other







**Miscellaneous** 

Confirmation



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)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2042-4JB10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2042-4JB10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4JB10

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

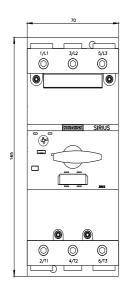
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2042-4JB10&lang=en

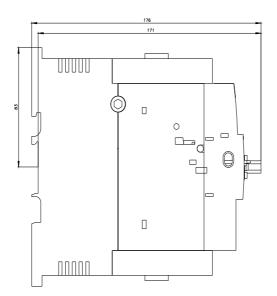
Characteristic: Tripping characteristics, I²t, Let-through current

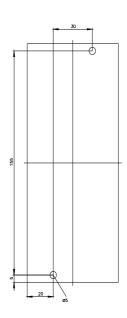
https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4JB10/char

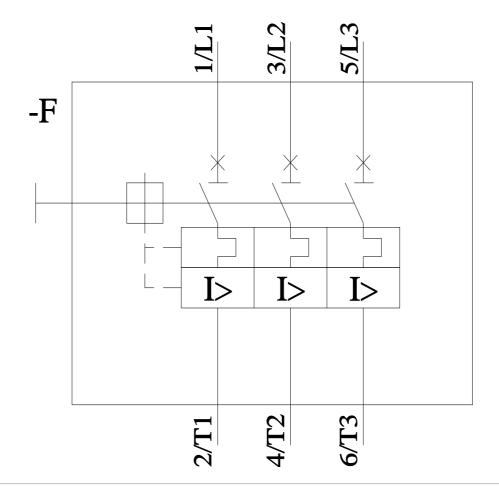
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2042-4JB10&objecttype=14&gridview=view1









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