## **SIEMENS**

Data sheet 3RV2031-4EB10



Circuit breaker size S2 for motor protection, Class 20 A-release 22...32 A N-release 416 A screw terminal Standard switching capacity



product brand name  product designation  Circuit breaker  design of the product  product type designation  General technical data  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 per pole  insulation voltage with degree of pollution 3 at AC rated value  SIRIUS  Circuit breaker  For motor protection  3RV2  S2  S2  \$2  \$2  \$2  \$4  \$4  \$4  \$5  \$6  \$6  \$6  \$6  \$6  \$6  \$6  \$6  \$6	
design of the product product type designation  3RV2  General technical data size of the circuit-breaker S2 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 per pole  For motor protection  3RV2  S2  S2  S2  FOR MOTO PROVIDENCE S2  POWER SE	
product type designation  General technical data  size of the circuit-breaker  S2  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  6 W	
Size of the circuit-breaker Size of contactor can be combined company-specific Size of contactor can be combined combined company-specific Size of contactor can be combined combine	
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 per pole  6 W	
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  • W	
power loss [W] for rated value of the current  • at AC in hot operating state 18 W  • at AC in hot operating state per pole 6 W	
<ul> <li>at AC in hot operating state</li> <li>at AC in hot operating state per pole</li> <li>6 W</li> </ul>	
at AC in hot operating state per pole     6 W	
arrive me speciming state party	
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 50 000	
• of auxiliary contacts typical 50 000	
electrical endurance (operating cycles) typical 50 000	
reference code according to IEC 81346-2 Q	
Substance Prohibitance (Date) 10/15/2014	
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	
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 20 690 V	
20 000 V	
• at AC-3 rated value maximum 690 V	

operational current rated value	32 A
operational current	
<ul><li>at AC-3 at 400 V rated value</li></ul>	32 A
at AC-3e at 400 V rated value	32 A
operating power	
• at AC-3	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	30 kW
• at AC-3e	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	30 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)	
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	10 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	416 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	32 A
at 600 V rated value	32 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	3 hp
— at 230 V rated value	5 hp
• for 3-phase AC motor	
— at 200/208 V rated value	10 hp
— at 220/230 V rated value	10 hp
— at 460/480 V rated value	25 hp
— at 575/600 V rated value	30 hp
Short-circuit protection	ov rip
	Vac
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	125
• at 500 V	100
• at 690 V	80
Installation/ mounting/ dimensions	
mounting position	any
mounting position	ung
	screw and snan-on mounting onto 35 mm DIN rail according to DIN EN 60715
fastening method height	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 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
<ul> <li>for grounded parts at 500 V</li> </ul>	
— 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
— at the side	10 mm
• for live parts at 690 V	
— downwards	50 mm
<ul><li>— upwards</li><li>— at the side</li></ul>	50 mm 10 mm
— at the side  Connections/ Terminals	10 111111
type of electrical connection	
for main current circuit	screw-type terminals
arrangement of electrical connectors for main current	Top and bottom
circuit	14
type of connectable conductor cross-sections	
<ul> <li>for main contacts</li> </ul>	
— solid or stranded	2x (1 25 mm²), 1x (1 35 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 16 mm²), 1x (1 25 mm²)
for AWG cables for main contacts	2x (18 3), 1x (18 2)
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	MC
• for main contacts	M6
Safety related data	Von
product function suitable for safety function	Yes
suitability for use	No
<ul><li>safety-related switching on</li><li>safety-related switching OFF</li></ul>	Yes
sarety-related switching OFF  service life maximum	10 a
test wear-related service life necessary	Yes
proportion of dangerous failures	1.00
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920      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
	Yes
overdimensioning according to ISO 13849-2 necessary	res

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	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	

## General Product Approval







Confirmation



<u>KC</u>

**General Product Ap-**

**Test Certificates** 

Marine / Shipping



Type Test Certificates/Test Report

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







Marine / Shipping

other







Miscellaneous

Confirmation



Railway

**Environment** 

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

Confirmation



Siemens **EcoTech** 



**Environmental Confirmations** 

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=3RV2031-4EB10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4EB10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4EB10

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

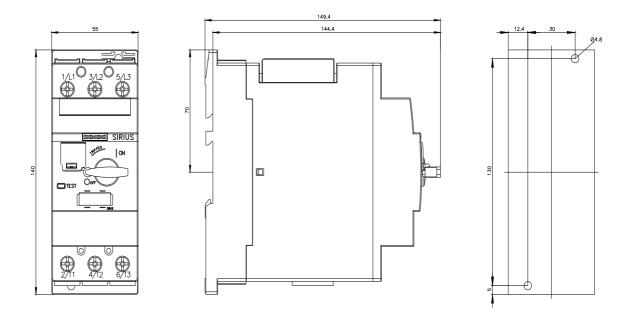
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2031-4EB10&lang=en

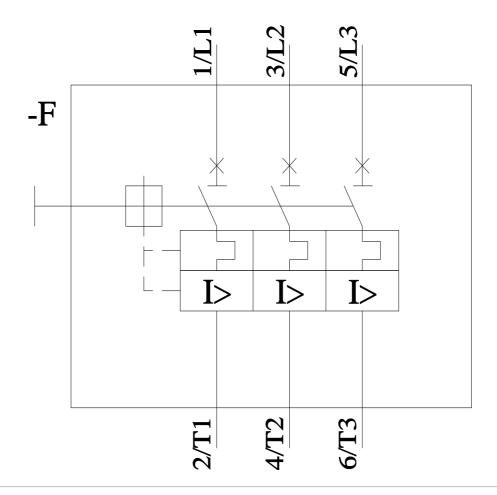
Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4EB10/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4EB10&objecttype=14&gridview=view1





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