SIEMENS

Data sheet 3RV2031-4EA10



Circuit breaker size S2 for motor protection, CLASS 10 A-release 22...32 A N-release 416 A screw terminal Standard switching capacity



product brand name	SIRIUS	
product designation	Circuit breaker	
design of the product	For motor protection	
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 	18 W	
at AC in hot operating state per pole	6 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 	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	22 32 A	
operating voltage		
rated value	20 690 V	
 at AC-3 rated value maximum 	690 V	
at AC-3e rated value maximum	690 V	
operating frequency rated value	50 60 Hz	

operational current rated value operational current	
operational current	32 A
 at AC-3 at 400 V rated value 	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 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	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 450/460 V rated value	30 hp
- at 575/000 V rated value Short-circuit protection	00 Hp
	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	
-	none required
● at 240 V	125
at 240 Vat 400 V	
• at 400 V	100
● at 400 V ● at 500 V	100 80
at 400 Vat 500 Vat 690 V	100 80
at 400 V at 500 V at 690 V installation/ mounting/ dimensions	80
at 400 V at 500 V at 690 V Installation/ mounting/ dimensions mounting position	any
at 400 V at 500 V at 690 V nstallation/ mounting/ dimensions	80

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
— at the side	10 mm
• for live parts at 690 V	
— downwards	50 mm
— upwards— at the side	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	
• for main contacts	
— solid or stranded	2x (1 25 mm²), 1x (1 35 mm²)
 finely stranded with core end processing 	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
safety-related switching onsafety-related switching OFF	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	
 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







Confirmation



<u>KC</u>

General Product Ap-

For use in hazardous locations

Test Certificates

Marine / Shipping







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

Type Test Certificates/Test Report



Marine / Shipping











Miscellaneous

other

other

Railway

Environment

Confirmation



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

Confirmation







Environment

Environmental Confirmations

Further information

Information on the packaging

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

Information- and Downloadcenter (Catalogs, Brochures,...)

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2031-4EA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4EA10

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

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

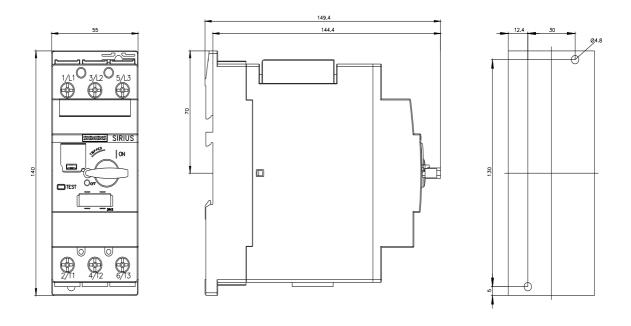
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax}}\underline{\text{de.aspx?mlfb=3RV2031-4EA10\&lang=en}}$

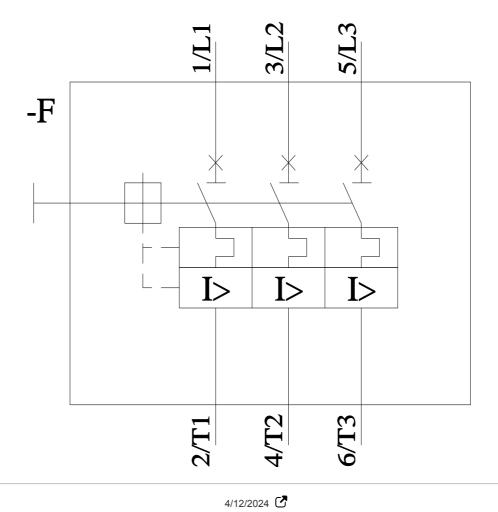
Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4EA10/char

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

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3RV20314EA10 Page 5/6

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