## SIEMENS

## Data sheet

## 3RV2031-4VA10



Circuit breaker size S2 for motor protection, CLASS 10 A-release 35...45 A N-release 650 A screw terminal Standard switching capacity

-2/11 4/12 6/15	
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	
<ul> <li>at AC in hot operating state</li> </ul>	24.5 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	8.2 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)	
<ul> <li>of the main contacts typical</li> </ul>	50 000
<ul> <li>of auxiliary contacts typical</li> </ul>	50 000
electrical endurance (operating cycles) typical	50 000
type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/15/2014
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul> <li>during operation</li> </ul>	-20 +60 °C
<ul> <li>during storage</li> </ul>	-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	35 45 A
operating voltage	
rated value	20 690 V
<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V
<ul> <li>at AC-3e rated value maximum</li> </ul>	690 V
operating frequency rated value	50 60 Hz
operational current rated value	45 A
operational current	

• at AC-3 at 400 V rated value	45 A
at AC-3e at 400 V rated value	45 A
operating power	
• at AC-3	
— at 230 V rated value	11 kW
— at 400 V rated value	22 kW
— at 500 V rated value	30 kW
— at 690 V rated value	37 kW
• at AC-3e	
— at 230 V rated value	11 kW
— at 400 V rated value	22 kW
— at 500 V rated value	30 kW
— at 690 V rated value	37 kW
operating frequency	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
Protective and monitoring functions	
product function	
<ul> <li>ground fault detection</li> </ul>	No
<ul> <li>phase failure detection</li> </ul>	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	4 MA
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	650 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
<ul> <li>at 480 V rated value</li> </ul>	45 A
at 600 V rated value	45 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	3 hp
— at 230 V rated value	10 hp
<ul> <li>for 3-phase AC motor</li> </ul>	
— at 200/208 V rated value	15 hp
— at 220/230 V rated value	15 hp
— at 460/480 V rated value	40 hp
— at 575/600 V rated value	50 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	125
● at 500 V	100
• at 690 V	80
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	140 mm
width	55 mm
depth	149 mm

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required spacing	0	
• with side-by-side mounting at the side	0 mm	
<ul> <li>for grounded parts at 400 V</li> </ul>	50	
— downwards	50 mm	
— upwards	50 mm	
— at the side	10 mm	
<ul> <li>for live parts at 400 V</li> </ul>		
— 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	
<ul> <li>for live parts at 500 V</li> </ul>		
— downwards	50 mm	
— upwards	50 mm	
— at the side	10 mm	
<ul> <li>for grounded parts at 690 V</li> </ul>		
— downwards	50 mm	
— upwards	50 mm	
— at the side	10 mm	
• for live parts at 690 V		
— downwards	50 mm	
— upwards	50 mm	
— at the side	10 mm	
onnections/ 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 25 mm²), 1x (1 35 mm²)	
— finely stranded with core end processing	2x (1 16 mm <sup>2</sup> ), 1x (1 25 mm <sup>2</sup> )	
for AWG cables for main contacts	2x (18 3), 1x (18 2)	
tightening torque	2x (10 3), 1x (10 2)	
for main contacts with screw-type terminals	3 4.5 N·m	
	Diameter 5 to 6 mm	
design of screwdriver shaft		
size of the screwdriver tip	Pozidriv size 2	
design of the thread of the connection screw		
for main contacts	M6	
afety related data		
B10 value		
<ul> <li>with high demand rate according to SN 31920</li> </ul>	5 000	
proportion of dangerous failures		
<ul> <li>with low demand rate according to SN 31920</li> </ul>	50 %	
<ul> <li>with high demand rate according to SN 31920</li> </ul>	50 %	
failure rate [FIT]		
<ul> <li>with low demand rate according to SN 31920</li> </ul>	50 FIT	
T1 value for proof test interval or service life according to IEC 61508	10 a	
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 version for switching status	Handle	
ertificates/ approvals		
General Product Approval		For use in hazard ous locations

	<u>Confirmation</u>		KC	EAC	K ATEX		
For use in hazard- ous locations	Declaration of Confo	rmity	Test Certificates		Marine / Shipping		
IECE×	UK CA	CE EG-Konf.	<u>Special Test Certific-</u> <u>ate</u>	Type Test Certific- ates/Test Report	ABS		
Marine / Shipping					other		
BUREAU VERITAS		Hoyd's Register urs	PRS	RINA	<u>Confirmation</u>		
other	Railway						
UDE VDE	<u>Confirmation</u>	Vibration and Shock					
Further information							
Siemens has decided to exit the Russian market (see here).							

et (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RV2031-4VA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4VA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4VA10

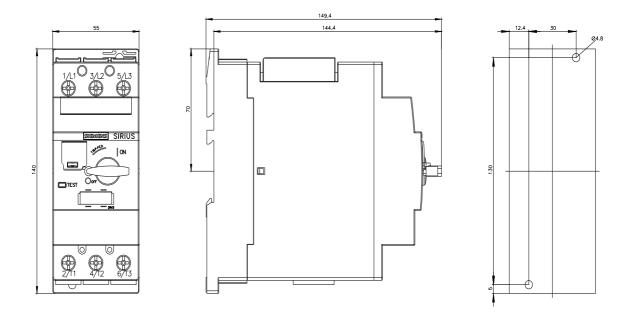
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2031-4VA10&lang=en

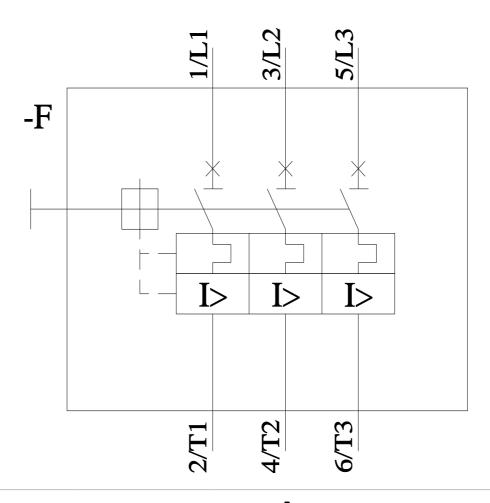
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4VA10/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4VA10&objecttype=14&gridview=view1





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