SIEMENS

Data sheet

3RV2031-4PA10

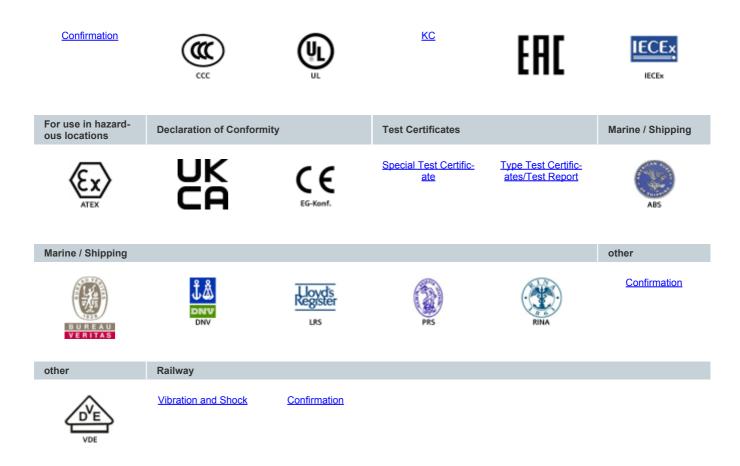


Circuit breaker size S2 for motor protection, CLASS 10 A-release 28...36 A N-release 520 A screw terminal Standard switching capacity

4/12 6/73	
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 	20 W
 at AC in hot operating state per pole 	6.7 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
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	
 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	28 36 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	36 A
operational current	

• at AC-3 at 400 V rated value	36 A
at AC-3e at 400 V rated value	36 A
operating power	
• at AC-3	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	22 kW
— at 690 V rated value	30 kW
• at AC-3e	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	22 kW
— at 690 V rated value	30 kW
	50 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
	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	520 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	36 A
• at 600 V rated value	36 A
yielded mechanical performance [hp]	
 yielded mechanical performance [hp] for single-phase AC motor — at 110/120 V rated value 	3 hp
• for single-phase AC motor — at 110/120 V rated value	3 hp 7.5 hp
 for single-phase AC motor — at 110/120 V rated value — at 230 V rated value 	3 hp 7.5 hp
 for single-phase AC motor — at 110/120 V rated value — at 230 V rated value for 3-phase AC motor 	7.5 hp
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value 	7.5 hp 15 hp
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value 	7.5 hp 15 hp 15 hp
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value 	7.5 hp 15 hp 15 hp 30 hp
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value 	7.5 hp 15 hp 15 hp
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value Short-circuit protection 	7.5 hp 15 hp 15 hp 30 hp
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value 	7.5 hp 15 hp 15 hp 30 hp
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value Short-circuit protection 	7.5 hp 15 hp 15 hp 30 hp 40 hp
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value Short-circuit protection 	7.5 hp 15 hp 15 hp 30 hp 40 hp Yes
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit 	7.5 hp 15 hp 15 hp 30 hp 40 hp Yes
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value brot-circuit protection groduct function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit 	7.5 hp 15 hp 15 hp 30 hp 40 hp Yes magnetic
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 240 V 	7.5 hp 15 hp 15 hp 30 hp 40 hp Yes magnetic none required
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 240 V at 400 V 	7.5 hp 15 hp 15 hp 30 hp 40 hp Yes magnetic none required 125
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 240 V at 400 V at 500 V at 690 V 	7.5 hp 15 hp 15 hp 30 hp 40 hp Yes magnetic none required 125 100
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 240 V at 400 V at 500 V at 690 V Installation/ mounting/ dimensions 	7.5 hp 15 hp 15 hp 30 hp 40 hp Yes magnetic none required 125 100 80
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 240 V at 400 V at 500 V at 690 V Installation/ mounting/ dimensions mounting position 	7.5 hp 15 hp 15 hp 30 hp 40 hp Yes magnetic none required 125 100 80
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 240 V at 400 V at 500 V at 690 V Installation/ mounting/ dimensions mounting position fastening method 	7.5 hp 15 hp 15 hp 30 hp 40 hp Yes magnetic none required 125 100 80 Any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 240 V at 400 V at 500 V at 690 V Installation/ mounting/ dimensions mounting position fastening method height 	7.5 hp 15 hp 15 hp 30 hp 40 hp Yes magnetic none required 125 100 80 any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 140 mm
 for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 240 V at 400 V at 500 V at 690 V Installation/ mounting/ dimensions mounting position fastening method 	7.5 hp 15 hp 15 hp 30 hp 40 hp Yes magnetic none required 125 100 80 Any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715

required spacing		
with side-by-side mounting at the side	0 mm	
 for grounded parts at 400 V 		
— downwards	50 mm	
	50 mm	
— upwards		
- at the side	10 mm	
• for live parts at 400 V	50	
— 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	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 ²), 1x (1 25 mm ²)	
 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		
for main contacts	M6	
	INIO	
afety related data		
B10 value		
 with high demand rate according to SN 31920 	5 000	
proportion of dangerous failures		
 with low demand rate according to SN 31920 	50 %	
 with high demand rate according to SN 31920 	50 %	
failure rate [FIT]		
 with low demand rate according to SN 31920 	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



Further information

Siemens has decided to exit the Russian market (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=3RV2031-4PA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4PA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4PA10

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

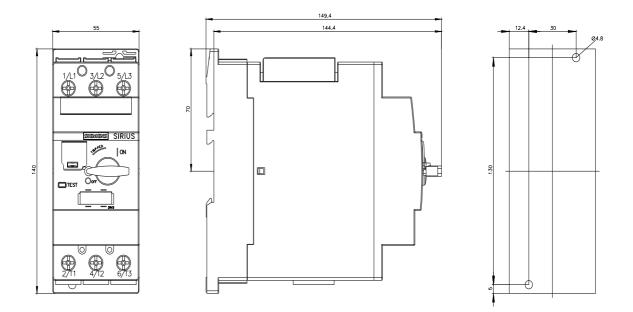
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4PA10&lang=en

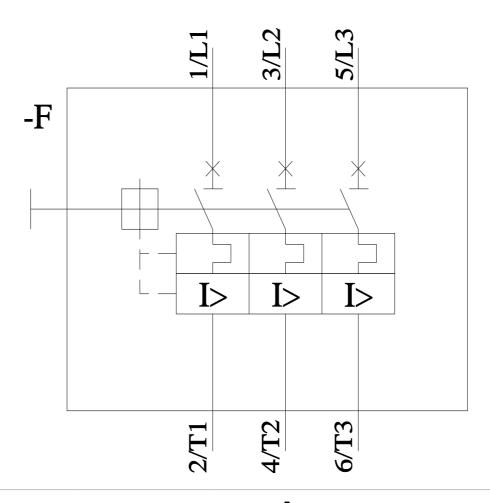
Characteristic: Tripping characteristics, I²t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4PA10/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4PA10&objecttype=14&gridview=view1





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