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

product designation design of the product product type designation 3RV2 General technical data size of the circuit-breaker 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 per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value walking provided star point • between main and auxiliary circuit • between main and auxiliary circuit • between main and auxiliary circuit • of the main contacts typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical certificate of suitability according to ATEX directive 2014/34/EU certificate or suitability according to	product brand name	SIRIUS
Seperal technical data	product designation	Circuit breaker
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 • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • between main and surve [ite (switching cycles) • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 20 Q substance Prohibitance (Date) 4 mbient temperature • during storage • during torage • durin	design of the product	For motor protection
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 • at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value waximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during torage • during transport temperature compensation relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 20 W 6 X V 6	product type designation	3RV2
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 20 W • at AC in hot operating state per pole 67 W insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value 6 kV maximum permissible voltage for safe isolation in networks with grounded star point 400 V • between main and auxiliary circuit 400 V shock resistance acc. to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (switching cycles) • of the main contacts typical 50 000 • of auxiliary contacts typical 50 000 electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during torage 50 +80 °C temperature compensation 20 +60 °C relative humidity during operation 40 +60 °C relative humidity during operation 10 +50 · +80 °C temperature compensation 10 +50 · +80 °C relative humidity during operation 40 +60 °C relative humidity during operation 40 +60 °C relative humidity during operation 40 +60 °C number of poles for main current circuit 50 +60 °C number of poles for main current circuit 50 +60 °C	General technical data	
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power loss [W] for rated value of the current at AC in hot operating state at AC in hot operating state at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point between main and auxiliary circuit between main auxiliary circuit between main and auxiliary circuit betwee	size of contactor can be combined company-specific	S2
at AC in hot operating state e AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point between main and auxiliary circuit between main and suxiliary circuit betwee	product extension auxiliary switch	Yes
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insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • both resistance acc. to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical • of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Quustance Prohibitance (Date) Amblent conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport temperature compensation relative humidity during operation Main circuit number of poles for main current circuit 3	 at AC in hot operating state 	20 W
surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit * shock resistance acc. to IEC 60068-2-27 mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date) installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport - 50 +80 °C • during transport - 20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	at AC in hot operating state per pole	6.7 W
maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit shock resistance acc. to IEC 60068-2-27 mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage • during transport temperature compensation relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	0 1	690 V
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shock resistance acc. to IEC 60068-2-27 mechanical service life (switching cycles) of the main contacts typical of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature of during storage of during transport of during transport -50 +80 °C temperature compensation relative humidity during operation Main circuit number of poles for main current circuit 25g / 11 ms Sinus 85nus 25g / 11 ms Sinus 50 000 Ex II (2) GD EX II (2) GD DMT 02 ATEX F 001 20 00 Ex II (2) GD 20 00 20 00 Ex II (2) GD 20 00 20 00 20 00 Ex II (2) GD 20 00 20	 between main and auxiliary circuit 	400 V
mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Substance Prohibitance (Date) installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport temperature compensation relative humidity during operation Main circuit number of poles for main current circuit 50 000 Ex II (2) GD DMT 02 ATEX F 001 Ex II (2) GD 2014/34/EU DMT 02 ATEX F 001 20 00 Ex II (2) GD 20 00 20 00 20 00 4	between main and auxiliary circuit	400 V
of the main contacts typical of auxiliary contacts typical of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature oduring operation during storage during transport during transport temperature compensation relative humidity during operation Main circuit number of poles for main current circuit 50 000 EX II (2) GD DMT 02 ATEX F 001 DMT 02 ATEX F 001 20 00 EX II (2) GD O O O O O O O O O O O O O	shock resistance acc. to IEC 60068-2-27	25g / 11 ms Sinus
of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Substance Prohibitance (Date) installation altitude at height above sea level maximum ambient temperature ouring operation during operation during storage during transport during transport temperature compensation relative humidity during operation Main circuit number of poles for main current circuit 50 000 Ex II (2) GD DMT 02 ATEX F 001 20 0 Ex II (2) GD 20 II (2) GD 20 II (2) GE Ex II (2) GD 20 II (2) GD 20 II (2) GE Ex II (2) GD Ex	mechanical service life (switching cycles)	
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type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum 2 000 m ambient temperature • during operation • during storage • during transport temperature compensation relative humidity during operation Main circuit number of poles for main current circuit DMT 02 ATEX F 001 DMT 02 ATEX F 001 DMT 02 ATEX F 001 20 +60 °C C C C C C C C C DMT 02 ATEX F 001 C DMT 02 ATEX F 001 DMT 02 ATE	of auxiliary contacts typical	50 000
2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport temperature compensation relative humidity during operation Main circuit number of poles for main current circuit DMT 02 ATEX F 001 DMT 02 ATEX F 001 DMT 02 ATEX F 001 20 0 15.10.2014 15.10.2014 15.10.2014 16.10.	electrical endurance (switching cycles) typical	50 000
reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date) 15.10.2014 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 temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3		Ex II (2) GD
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	, ,	DMT 02 ATEX F 001
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installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport -50 +80 °C temperature compensation -20 +60 °C 10 +80 °C -20 +80 °C -20 +80 °C -20 +80 °C -20 +60 °C -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	Substance Prohibitance (Date)	15.10.2014
ambient temperature	Ambient conditions	
 during operation during storage during transport temperature compensation relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 20 +60 °C 3	installation altitude at height above sea level maximum	2 000 m
 ◆ during storage → during transport → 50 +80 °C temperature compensation −20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3 	ambient temperature	
◆ during transport	 during operation 	-20 +60 °C
temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	during storage	-50 +80 °C
relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	during transport	-50 +80 °C
Main circuit number of poles for main current circuit 3	temperature compensation	-20 +60 °C
number of poles for main current circuit 3	relative humidity during operation	10 95 %
·	Main circuit	
adjustable current response value current of the 28 36 A	number of poles for main current circuit	3
	adjustable current response value current of the	28 36 A

current-dependent overload release	
operating voltage	000.17
rated value	690 V
rated value	20 690 V
at AC-3 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
operating power at AC-3	40.5130
• at 400 V rated value	18.5 kW 22 kW
at 500 V rated value at 600 V rated value	
at 690 V rated value	30 kW
operating frequency at AC-3 maximum	15 1/h
Protective and monitoring functions	
product function	M-
ground fault detection	No V
phase failure detection	Yes CLASS 40
trip class	CLASS 10
design of the overload release	thermal
breaking capacity operating short-circuit current (lcs) 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
breaking capacity maximum short-circuit current (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
response value current of instantaneous short-circuit trip	520 A
unit 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]	30 A
• for single-phase AC motor	
— at 110/120 V rated value	3 hp
— at 230 V rated value	7.5 hp
• for 3-phase AC motor	
— at 200/208 V rated value	15 hp
— at 220/230 V rated value	15 hp
— at 460/480 V rated value	30 hp
— at 575/600 V rated value	40 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 standard mounting rail according to DIN EN 60715
height	140 mm
width	55 mm

required spacing • for grounded parts at 400 V — downwards — upwards — at the side • for live parts at 400 V — downwards — upwards — at the side • for grounded parts at 500 V — downwards — upwards — at the side • for live parts at 500 V — downwards — at the side • for live parts at 500 V — downwards — at the side • for grounded parts at 500 V — downwards — upwards — at the side • for grounded parts at 690 V — downwards	50 mm 50 mm 50 mm 50 mm 10 mm 50 mm
 for grounded parts at 400 V downwards upwards at the side for live parts at 400 V downwards upwards at the side for grounded parts at 500 V downwards upwards upwards at the side for live parts at 500 V downwards upwards at the side for live parts at 500 V downwards upwards upwards at the side for grounded parts at 690 V 	50 mm 10 mm 50 mm 50 mm 10 mm 50 mm 50 mm 50 mm 10 mm 50 mm 50 mm 50 mm 50 mm
 downwards upwards at the side for live parts at 400 V downwards upwards at the side for grounded parts at 500 V downwards upwards upwards at the side for live parts at 500 V downwards upwards at the side for live parts at 500 V downwards upwards at the side for grounded parts at 690 V 	50 mm 10 mm 50 mm 50 mm 10 mm 50 mm 50 mm 50 mm 10 mm 50 mm 50 mm 50 mm 50 mm
 at the side for live parts at 400 V downwards upwards at the side for grounded parts at 500 V downwards upwards at the side for live parts at 500 V downwards upwards at the side for grounded parts at 690 V 	10 mm 50 mm 10 mm 50 mm 50 mm 50 mm 10 mm 50 mm 10 mm 50 mm 50 mm 50 mm
 at the side for live parts at 400 V downwards upwards at the side for grounded parts at 500 V downwards upwards at the side for live parts at 500 V downwards upwards at the side for grounded parts at 690 V 	10 mm 50 mm 10 mm 50 mm 50 mm 50 mm 10 mm 50 mm 10 mm 50 mm 50 mm 50 mm
 for live parts at 400 V — downwards — upwards — at the side for grounded parts at 500 V — downwards — upwards — at the side for live parts at 500 V — downwards — upwards — upwards — at the side for grounded parts at 690 V 	50 mm 50 mm 50 mm 50 mm 50 mm 10 mm 50 mm 10 mm 50 mm 50 mm
 downwards upwards at the side for grounded parts at 500 V downwards upwards at the side for live parts at 500 V downwards upwards upwards at the side for grounded parts at 690 V 	50 mm 10 mm 50 mm 50 mm 10 mm 50 mm 10 mm 50 mm 50 mm 50 mm
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 downwards upwards at the side for live parts at 500 V downwards upwards at the side for grounded parts at 690 V 	50 mm 10 mm 50 mm 10 mm 50 mm 10 mm
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 for live parts at 500 V — downwards — upwards — at the side for grounded parts at 690 V 	50 mm 50 mm 10 mm
 downwards upwards at the side for grounded parts at 690 V 	50 mm 10 mm 50 mm
upwardsat the sidefor grounded parts at 690 V	50 mm 10 mm 50 mm
— at the side• for grounded parts at 690 V	10 mm 50 mm
• for grounded parts at 690 V	50 mm
downwards	
	5() mm
— upwards	
— at the side	10 mm
 for live parts at 690 V 	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	No
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 mm²), 1x (1 25 mm²)
 at 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 2
design of the thread of the connection screw	
for main contacts	M6
Safety related data	
B10 value	
with high demand rate acc. to SN 31920	5 000
proportion of dangerous failures	
with low demand rate acc. to SN 31920	50 %
with high demand rate acc. to SN 31920 with high demand rate acc. to SN 31920	50 %
failure rate [FIT]	
with low demand rate acc. to SN 31920	50 FIT
T1 value for proof test interval or service life acc. to	10 y
IEC 61508	IDOO
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
display version for switching status	Handle
Certificates/ approvals	
General Product Approval	



Confirmation





<u>KC</u>



For use in hazardous locations

Declaration of Conformity

Test Certificates





UK Declaration of Conformity



Special Test Certificate Type Test Certificates/Test Report

Marine / Shipping













Marine / Shipping

other

Railway



Confirmation



Vibration and Shock

Confirmation

Further information

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, ...)

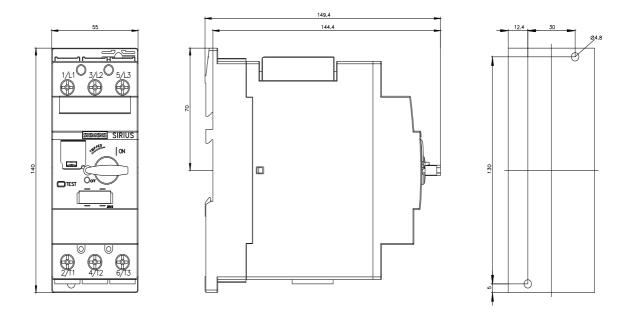
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4PA10&lang=en

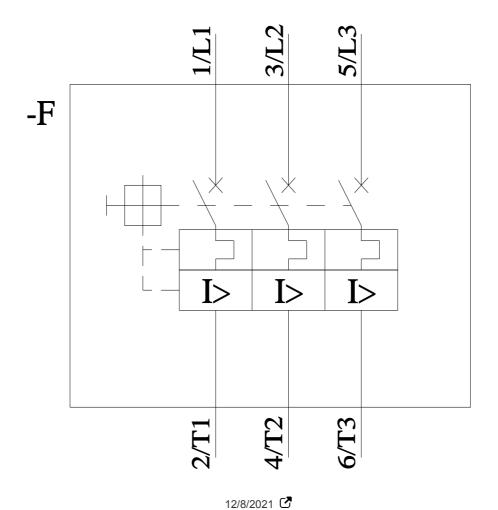
Characteristic: Tripping characteristics, I^2t , Let-through current

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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