SIEMENS

Data sheet 3RV2031-4PB10



Circuit breaker size S2 for motor protection, Class 20 A-release 28...36 A N-release 520 A screw terminal Standard switching capacity

Design of the product For motor protection	product brand name	SIRIUS
Product type designation 3RV2	product designation	Circuit breaker
size of the circuit-breaker size of contactor can be combined company-specific product extension auxiliary switch 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 shock resistance according to IEC 60068-2-27 mechanical service life (switching cycles) of the main contacts typical of auxiliary contacts typical of auxiliary contacts typical of auxiliary contacts typical of auxiliary contacts (switching cycles) of where the contact of the current of the current of poles for main current circuit adjustable current response value current of the current of poles for main current circuit adjustable current response value current of the current of poles for main current circuit adjustable current response value current of the current of poles for main current circuit adjustable current response value current of the current of poles for main current circuit adjustable current response value current of the current of poles for main current circuit adjustable current response value current of the current of poles for main current circuit adjustable current response value current of the current of poles for main current circuit adjustable current response value current of the current of poles for main current circuit adjustable current response value current of the current of poles for main current circuit adjustable current response value current of the current of poles for main current circuit adjustable current response value cur	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 shock resistance according 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 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current dependent overload release operating voltage • rated value at AC-3e rated value maximum operational current rated value operational current value operation operational current value operation operational current value operational current value operational current value operational current value operational current value	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	General technical data	
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 shock resistance according to IEC 60068-2-27 mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical preference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature eluring operation eluring storage eluring transport eluring tr	size of the circuit-breaker	S2
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 shock resistance according to IEC 60068-2-27 mechanical service life (switching cycles) of the main contacts typical of auxiliary contacts typical felectrical endurance (switching cycles) typical electrical endurance (switching cycles) typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation during storage during transport elative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage art AC-3e rated value maximum operational current rated value operational current of the carrent of the current rated value operational current current	size of contactor can be combined company-specific	S2
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 surge voltage resistance rated value shock resistance according to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (switching cycles) of the main contacts typical 50 000 electrical endurance (switching cycles) typical 50 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 10/15/2014 Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation -20 +60 °C during storage -50 +80 °C eduring transport -50 +80 °C relative humidity during operation 10 95 % Main circuit 10 95 % Main circuit 2 3 adjustable current response value current of the current-dependent overload release operating voltage at AC-3 rated value maximum 690 V at AC-3 rated value maximum 690 V at AC-3 rated value maximum 690 V operational current rated value 50 60 Hz operational current rated value 36 A operational current rated value 36 A	product extension auxiliary switch	Yes
at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value 690 V shock resistance according to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (switching cycles) of the main contacts typical 50 000 electrical endurance (switching cycles) typical 50 000 gelectrical endurance (switching cycles) typical 50 000 gelectrical endurance (switching cycles) typical 750 000 gelectrical endurance (bate) 10/15/2014 gelectrical endurance (bate) 1	power loss [W] for rated value of the current	
insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value shock resistance according to IEC 60068-2-27 mechanical service life (switching cycles) of the main contacts typical of auxiliary contacts typical electrical endurance (switching cycles) typical reference code according to IEC 81346-2 Qu Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation of during storage of during transport relative humidity during operation number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage operating voltage at AC-3e rated value maximum operational current rated value operational current rated value operational current of NV 25g / 11 ms Sinus 50 000 6 kV 25g / 11 ms Sinus 50 000 000 000 000 000 000 000	 at AC in hot operating state 	20 W
value surge voltage resistance rated value 6 kV shock resistance according to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (switching cycles) 25g / 11 ms Sinus • of the main contacts typical 50 000 • of auxiliary contacts typical 50 000 electrical endurance (switching cycles) typical 50 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 10/15/2014 Ambient conditions ambient temperature • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Main circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current-dependent overload release 20 690 V • rated value 20 690 V • at AC-3 rated value maximum 690 V • at AC-3 rated value maximum 690 V • at AC-3 rated value maximum 690 V • operational current rated value 50 60 Hz </th <th>at AC in hot operating state per pole</th> <th>6.7 W</th>	at AC in hot operating state per pole	6.7 W
shock resistance according to IEC 60068-2-27 shock resistance according to IEC 60068-2-27 mechanical service life (switching cycles) of auxiliary contacts typical lectrical endurance (switching cycles) typical reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature oturing operation during storage oturing transport relative humidity during operation number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage orated value at AC-3 rated value maximum operating frequency rated value operating frequency rated value operational current so 000 25 g / 11 ms Sinus 50 000 50 000 50 000 10		690 V
mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical so 0000 reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3 rated value maximum operational current rated value operational current 50 000 40 000 10/15/2014 Ambient conditions 10/15/2014 Ambient conditions 10/15/2014	surge voltage resistance rated value	6 kV
of the main contacts typical of auxiliary contacts typical of auxiliary contacts typical electrical endurance (switching cycles) typical reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature ouring operation ouring storage oduring transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage orated value at AC-3 rated value maximum operating frequency rated value operational current	shock resistance according to IEC 60068-2-27	25g / 11 ms Sinus
of auxiliary contacts typical electrical endurance (switching cycles) typical reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature ouring operation during storage during transport relative humidity during operation Adjustable current response value current of the current-dependent overload release operating voltage at AC-3 rated value maximum at AC-3e rated value maximum operational current rated value	mechanical service life (switching cycles)	
electrical endurance (switching cycles) typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum operational current rated value operational current	 of the main contacts typical 	50 000
reference code according 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 relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • rated value maximum 690 V • at AC-3 rated value maximum 690 V operating frequency rated value operational current rated value operational current rated value operational current rated value operational current rated value operational current rated value operational current rated value operational current	of auxiliary contacts typical	50 000
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum 690 V operating frequency rated value operational current rated value 36 A operational current rated value 36 A	electrical endurance (switching cycles) typical	50 000
installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum operational current rated value operational current rated value 36 A operational current rated value 36 A	reference code according to IEC 81346-2	Q
installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport • 50 +80 °C • during transport relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum operating frequency rated value operational current rated value operational current rated value operational current 2 0 00 m -20 +60 °C -50 +80 °C -60 +90 °C -60 +90 °C -60 +90 °C -60 .	Substance Prohibitance (Date)	10/15/2014
ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum operating frequency rated value operational current rated value operational current rated value 36 A operational current rated value 36 A	Ambient conditions	
 during operation during storage during transport storage telative humidity during operation mumber of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage rated value at AC-3 rated value maximum at AC-3e rated value maximum at AC-3e rated value operating frequency rated value operational current rated value at AC-operational current at AC-operational current 	installation altitude at height above sea level maximum	2 000 m
 during storage during transport 50 +80 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage rated value at AC-3 rated value maximum at AC-3e rated value maximum operating frequency rated value operating frequency rated value operational current rated value 36 A 	ambient temperature	
 during transport relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage rated value at AC-3 rated value maximum at AC-3e rated value maximum operating frequency rated value operating frequency rated value operational current 36 A 	during operation	-20 +60 °C
relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum operating frequency rated value operational current rated value 36 A operational current	during storage	-50 +80 °C
Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum operating frequency rated value operational current rated value 3 3 28 36 A 29 20 690 V 690 V 690 V 360 Hz 36 A	during transport	-50 +80 °C
number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum operating frequency rated value operational current rated value 3 28 36 A 20 690 V 690 V 690 V 360 Hz	relative humidity during operation	10 95 %
adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum operating frequency rated value operational current rated value operational current 28 36 A 20 690 V 690 V 690 V 360 Hz	Main circuit	
current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum operating frequency rated value operational current rated value operational current operational current	number of poles for main current circuit	3
 rated value at AC-3 rated value maximum at AC-3e rated value maximum operating frequency rated value operational current rated value operational current 		28 36 A
 at AC-3 rated value maximum at AC-3e rated value maximum operating frequency rated value operational current rated value operational current 	operating voltage	
at AC-3e rated value maximum 690 V operating frequency rated value operational current rated value operational current	• rated value	20 690 V
operating frequency rated value 50 60 Hz operational current rated value 36 A operational current	 at AC-3 rated value maximum 	690 V
operational current rated value 36 A operational current	• at AC-3e rated value maximum	690 V
operational current	operating frequency rated value	50 60 Hz
	operational current rated value	36 A
• at AC-3 at 400 V 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
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
breaking capacity maximum short-circuit current (Icu)	tioma
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 300 V rated value at AC at 690 V rated value	4 kA
breaking capacity operating short-circuit current (Ics)	4 M
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	520 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	26.4
at 480 V rated value at 600 V rated value	36 A
	36 A
yielded mechanical performance [hp]	
• 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	45 ha
— 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	
101011	
● at 240 V	none required
● at 240 V ● at 400 V	none required 125
• at 400 V	125
at 400 Vat 500 V	125 100
 at 400 V at 500 V at 690 V Installation/ mounting/ dimensions 	125 100
at 400 Vat 500 Vat 690 V	125 100 80

height	140 mm
width	55 mm
depth	149 mm
required spacing	
• 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	10 111111
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
for grounded parts at 690 V	10 111111
Hor grounded parts at 690 v Hor grounded parts at 690 v Hor grounded parts at 690 v	50 mm
— upwards	50 mm
— upwards — at the side	10 mm
at the side for live parts at 690 V	10 111111
Hor live parts at 690 v Hownwards	50 mm
— downwards — upwards	50 mm
— at the side	10 mm
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	1 op and 2000.
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 size 2
design of the thread of the connection screw	
for main contacts	M6
Safety 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 y
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
and play version for entitioning exacts	
Certificates/ approvals	





Confirmation







Declaration of Conformity

Test Certificates

Marine / Shipping



Special Test Certificate

Type Test Certificates/Test Report





Marine / Shipping

other











Confirmation

other

Railway



Confirmation

Vibration and Shock

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=3RV2031-4PB10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4PB10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4PB10

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4PB10&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4PB10/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4PB10&objecttype=14&gridview=view1

last modified:

6/25/2022

