SIEMENS

Data sheet 3RV2031-4JB10



Circuit breaker size S2 for motor protection, Class 20 A-release 54...65 A N-release 845 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 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 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 stree voltage resistance rated value for the main contacts typical of auxiliary contacts typical electrical endurance (switching cycles) of the main 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 of utring operation of during storage of utring transport relative humility 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 of at AC-3 at eated value maximum en AC-3 at 400 V rated value operational current of AC-3 at 400 V rated value operational current of tack at 4C-3 at 400 V rated value operational current of the Corrections of AC-3 at 400 V rated value operational current of the Corrections of AC-3 at 400 V rated value operational current of the Corrections of AC-3 at 400 V rated value operational current of the Corrections of AC-3 at 400 V rated value operational current of the Corrections of AC-3 at 400 V rated value operational current of the Corrections of AC-3 at 400 V rated value operational current of the Corrections of AC-3 at 400 V rated value operational current of the Corrections of AC-3 at 400 V rated value operational current of AC-3 at 400 V rated value operational current of AC-3 at 400 V rated value	product brand name	SIRIUS
Second S	product designation	Circuit breaker
Size of the circuit-breaker S2	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 electrical endurance (switching cycles) typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation allitude 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	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 26 W • at AC in hot operating state per pole 8.7 W insulation voltage with degree of pollution 3 at AC rated 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) • of the main contacts typical 20 000 • of auxiliary contacts typical 20 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 04/10/2015 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 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 operating voltage • rated value 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 operational curr	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) lypical 20 000 ### Pack Sinus ### Operation	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 electrical endurance (switching cycles) typical 20 000 electrical endurance (switching cycles) typical 20 000 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 arated value at AC-3e rated value maximum enter operation at AC-3e rated value maximum operational current rated value operational current and value operational current rated value operational current of the current of the current of the current of the current rated value operational current of the current operation operation of the current operation operation operation of the current rated value operational current rated value operational current rated value	size of contactor can be combined company-specific	S2
at AC in hot operating state 26 W at AC in hot operating state per pole 8.7 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 20 000 electrical endurance (switching cycles) typical 20 000 electrical endurance (switching cycles) typical 20 000 electrical endurance (switching cycles) typical 20 000 substance Prohibitance (Date) 04/10/2015 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 3 adjustable current response value current of the current-dependent overload release operating voltage rated value aximum 690 V e at AC-3e rated value maximum 690 V e at AC-3e rated value maximum 690 V operational current rated value oper	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 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 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature of during storage of 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 or at AC-3e rated value maximum operational current rated value operational current rated value operational current rated value operational current of the Carrent of the correction of the correction of the current of the current rated value operational current of the CV 25 MV 4 NV 20 00 M at AC-3e rated value operational current rated value operational current rated value operational current rated value operational current of the CV composition of the CV com	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 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 orated value at AC-3e rated value maximum operational current rated value operational current rated value operational current of NC operational current operational current rated value operational current of NC operational current operational current rated value operational current rated value operational current of NC operational cur	 at AC in hot operating state 	26 W
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 Quality contacts (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 • at AC-3e rated value maximum • at AC-3e rated value maximum operational current operation frequency rated value operational current	at AC in hot operating state per pole	8.7 W
shock resistance according to IEC 60068-2-27 mechanical service life (switching cycles) of atxiliary 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 olduring storage during storage during transport relative humidity during operation mumber of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage		690 V
mechanical service life (switching cycles) • of the main contacts typical 20 000 • of auxiliary contacts typical 20 000 electrical endurance (switching cycles) typical 20 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 04/10/2015 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 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 operating voltage • rated value 20 690 V • at AC-3 rated value maximum 690 V operating frequency rated value operation according frequency rated value operational current current current operational current rated value operational current cur	surge voltage resistance rated value	6 kV
of the main contacts typical of auxiliary contacts typical clectrical endurance (switching cycles) typical electrical endurance (switching cycles) typical zo 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation during storage of 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 or at AC-3 rated value maximum operating frequency rated value operational current 20 000 04/10/2015 20 000 04/10/2015 20 000 04/10/2015 Ambient conditions current +60 °C current +60 °C current +80 °C current -80 °C curren	shock resistance according to IEC 60068-2-27	25g / 11 ms Sinus
of auxiliary contacts typical electrical endurance (switching cycles) typical 20 000 reference code according to IEC 81346-2 Q 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 rated value at AC-3 rated value maximum at AC-3e rated value maximum operational current rated value	mechanical service life (switching cycles)	
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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 65 A operational current rated value 65 A	of auxiliary contacts typical	20 000
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 65 A operational current rated value 65 A	electrical endurance (switching cycles) typical	20 000
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 operational current rated value operational current 2 0 00 m 2 0 +60 °C -20 +80 °C -50 +80	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 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 operational current rated value operational current 2 0 00 m -20 +60 °C -50 +80 °C -50	Substance Prohibitance (Date)	04/10/2015
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 rated value operational current rated value 65 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 operational current rated value operational current rated value 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 operational current rated value 65 A operational current operational current 	ambient temperature	
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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 10 95 % 54 65 A 54 65 A	during storage	-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 operational current 65 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 operational current 3 54 65 A 52 69 V 690 V	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 54 65 A 20 690 V	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	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 		54 65 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 65 A operational current	 at AC-3 rated value maximum 	690 V
operational current rated value 65 A operational current	• at AC-3e rated value maximum	690 V
operational current	operating frequency rated value	50 60 Hz
	operational current rated value	65 A
• at AC-3 at 400 V rated value 65 A	operational current	
	at AC-3 at 400 V rated value	65 A

• at AC-3e at 400 V rated value	65 A
operating power	
• at AC-3	
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	45 kW
— at 690 V rated value	55 kW
• at AC-3e	SS KIT
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	45 kW
— at 690 V rated value	55 kW
operating frequency	O KV
• at AC-3 maximum	15 1/h
at AC-3e maximum	15 1/h
Protective and monitoring functions	TO THE
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)	thorntal .
• at AC at 240 V rated value	65 kA
at AC at 400 V rated value	65 kA
at AC at 500 V rated value	8 kA
at AC at 690 V rated value	4 kA
breaking capacity operating short-circuit current (Ics)	7 (0.1
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	845 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
 at 480 V rated value 	65 A
at 600 V rated value	62 A
yielded mechanical performance [hp]	
 for 3-phase AC motor 	
 at 200/208 V rated value 	20 hp
— at 220/230 V rated value	25 hp
— at 460/480 V rated value	50 hp
— at 575/600 V rated value	60 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	160
• at 500 V	125
● at 690 V	100
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
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	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for grounded parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— upwards — at the side	10 mm
at the side for live parts at 690 V	TV IIIII
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
Connections/ 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 35 mm²), 1x (1 50 mm²)
 finely stranded with core end processing 	2x (1 25 mm²), 1x (1 35 mm²)
 at AWG cables for main contacts 	2x (18 2), 1x (18 1)
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 with high demand rate according to SN 31920	50 %
failure rate [FIT]	
	50 FIT
 with low demand rate according to SN 31920 	50 FIT
with low demand rate according to SN 31920 T1 value for proof test interval or service life according to IEC 61508	10 y
with low demand rate according to SN 31920 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529	10 y
with low demand rate according to SN 31920 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC	10 y
with low demand rate according to SN 31920 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529	10 y



Confirmation





<u>KC</u>



Declaration of Conformity

Test Certificates

Marine / Shipping





Special Test Certificate

Type Test Certificates/Test Report





Marine / Shipping

other











Confirmation

other

Railway



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=3RV2031-4JB10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4JB10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4JB10

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4JB10&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4JB10/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4JB10&objecttype=14&gridview=view1

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