SIEMENS

Data sheet 3RV2031-4DB10



Circuit breaker size S2 for motor protection, Class 20 A-release 18...25 A N-release 325 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 14.5 W surge voltage resistance rated value surge voltage resistance rated value surge voltage resistance rated value 6 kV shock resistance according to IEC 60068-2-27 shock resistance according to IEC 60068-2-27 shock resistance according to IEC 81346-2 of auxiliary contacts typical electrical endurance (switching cycles) typical reference code according to IEC 81346-2 Substance Prohibitance (Date) 10/15/2014 Ambient conditions installation altitude at height above sea level maximum ambient temperature 4 during storage 4 during storage 5 during transport relative humidity during operation 4 during storage 5 on +80 °C 4 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 1 at AC-3 at at 400 V rated value 5 0 60 V coparation 2 0 60 V coparating frequency rated value 9 at AC-3 rated value maximum 680 V 0 operating frequency rated value 9 5 0 60 Hz 0 operational current 9 at AC-3 at 400 V rated value 9 operational current 9 at AC-3 at 400 V rated value 9 operational current 9 at AC-3 at 400 V rated value 9 operational current 9 at AC-3 at 400 V rated value 9 operational current 9 at AC-3 at 400 V rated value 9 operational current 9 at AC-3 at 400 V rated value 9 operational current 9 at AC-3 at 400 V rated value 9 operational current 9 at AC-3 at 400 V rated value 9 operational current 9 at AC-3 at 400 V rated value 9 operational current 9 at 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 • 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 solution 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-3 rated value maximum • at AC-3 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	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 • of auxiliary contacts typical electrical endurance (switching cycles) typical of auxiliary contacts typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical of unitiary contacts typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical of unitiary contacts typical electrical endurance (switching cycles) typical of unitiary contacts typical outside (switching cycles) typical o	size of the circuit-breaker	S2
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at AC in hot operating state 4.8 W at AC in hot operating state per pole 4.8 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 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 of during operation 2-20 +60 °C of during storage 5-50 +80 °C eluring transport 5-50 +80 °C relative humidity during operation 10 95 % Main circuit 3 adjustable current response value current of the current-dependent overload release operating voltage orated value 20 690 V at AC-3e rated value maximum 690 V operational current rated value 50 60 Hz	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 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 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 20 000 m elective humidity during operation 20 000 m elective humidity during operation 10 95 % Main circuit 3 adjustable current response value current of the current-dependent overload release operating voltage at AC-3e rated value maximum 690 V e at AC-3e rated value maximum 690 V operational current rated value operation 25 A operations current rated value operational current operation operational current operation operational current operation ope	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 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 or rated value at AC-3e rated value maximum operational current rated value operational current 25 A operational current 26	 at AC in hot operating state 	14.5 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 lelectrical endurance (switching cycles) typical reference code according to IEC 81346-2 Qusubstance Prohibitance (Date) Into Into Into Into Into Into Into Into	at AC in hot operating state per pole	4.8 W
shock resistance according to IEC 60068-2-27 mechanical service life (switching cycles) of atxiliary 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 operational current rated value operational current rated value operational current rated value 25 A overations over 1 ms Sinus 50 000 50 000 000 000 000 000 0		690 V
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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 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	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 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 25 A operational current rated value 25 A	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 25 A operational current rated value 25 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 20 690 V operational current rated value 25 A operational current rated value	reference code according to IEC 81346-2	Q
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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 25 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 to 460 °C cour +80 °C maximatical service description at account of the current of the	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 operational current 50 60 Hz operational current 	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 operational current rated value 25 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 25 A operational current	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 25 A operational current	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 25 A operational current	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 18 25 A 20 690 V 690 V 690 V 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 20 690 V 690 V operating frequency rated value 50 60 Hz 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 		18 25 A
 at AC-3 rated value maximum at AC-3e rated value maximum operating frequency rated value operational current rated value operational current 25 A operational current	operating voltage	
 at AC-3e rated value maximum operating frequency rated value operational current rated value operational current 25 A operational current	• rated value	20 690 V
operating frequency rated value 50 60 Hz operational current rated value 25 A operational current	 at AC-3 rated value maximum 	690 V
operational current rated value 25 A operational current	 at AC-3e rated value maximum 	690 V
operational current	operating frequency rated value	50 60 Hz
	operational current rated value	25 A
• at AC-3 at 400 V rated value 25 A	operational current	
	• at AC-3 at 400 V rated value	25 A

at AC-3e at 400 V rated value	25 A
operating power	
• at AC-3	
— at 230 V rated value	5.5 kW
— at 400 V rated value	11 kW
— at 500 V rated value	15 kW
— at 690 V rated value	22 kW
• at AC-3e	
— at 230 V rated value	5.5 kW
— at 400 V rated value	11 kW
— at 500 V rated value	15 kW
— at 690 V rated value	22 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)	
• 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	12 kA
	· - ·- ·
at AC at 690 V rated value	5 kA
breaking capacity operating short-circuit current (Ics) at AC	
at 240 V rated value	100 kA
at 400 V rated value	30 kA
at 500 V rated value	6 kA
at 690 V rated value	3 kA
response value current of instantaneous short-circuit trip	325 A
unit	02071
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	25 A
at 600 V rated value	25 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	2 hp
— at 230 V rated value	5 hp
for 3-phase AC motor	₹
— at 200/208 V rated value	7.5 hp
— at 200/208 V rated value — at 220/230 V rated value	·
— at 220/230 V rated value — at 460/480 V rated value	10 hp
	20 hp
— at 575/600 V rated value	25 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	wana na su ira d
• at 240 V	none required
• at 400 V	100
• at 500 V	80
● at 690 V	63
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	10 111111
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
for grounded parts at 690 V	10 111111
— downwards	50 mm
— upwards	50 mm
— upwards — at the side	10 mm
at the side for live parts at 690 V	10 111111
for live parts at 690 v downwards	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





<u>KC</u>



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=3RV2031-4DB10

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RV2031-4DB10}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4DB10

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

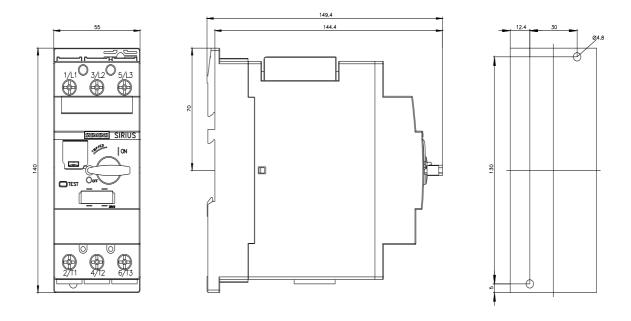
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4DB10&lang=en

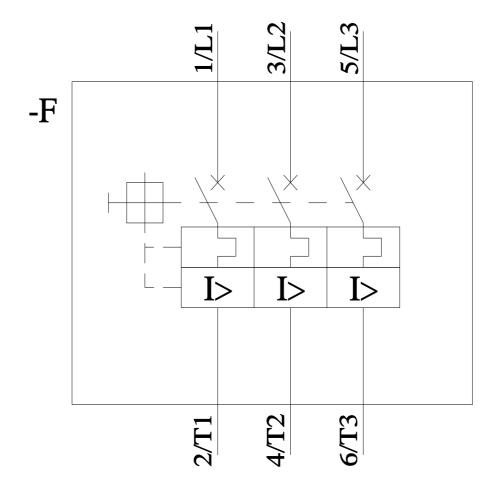
Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4DB10/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4DB10&objecttype=14&gridview=view1





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