SIEMENS

Data sheet 3RV2031-4UB10



Circuit breaker size S2 for motor protection, Class 20 A-release 32...40 A N-release 585 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 size of contact syntam 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 shock resistance according to IEC 80068-2-27 gery of the main contacts typical of auxiliary contacts typical for 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 storage during storage -50 +80 °C eluting 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-3 rated value maximum et at AC-3 rated value et AC-3 rated valu	product brand name	SIRIUS
Seneral technical data	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 auxiliary contacts typical of auxiliary contacts typical of auxiliary contacts (witching cycles) of auxiliary contacts (witching cycles) veference code according to IEC 81346-2 Substance Prohibitance (Date) Amblent conditions installation altitude at height above sea level maximum aduring storage of during poration 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 requency rated value at AC-3 areted value maximum operation current 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 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 rated value operational current rated value operational current rated value operational current rated value	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 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 autiliation altitude at height above sea level maximum autiliation altitude at height above sea level maximum el 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 • operating frequency rated value operational current 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 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 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 • of auxiliary contacts typical 50 000 electrical endurance (switching cycles) 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 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 operational current rated value operational current	General technical data	
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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 number of poles for main current circuit 3 adjustable current response value current of the current-dependent overload release operating voltage art AC-3e rated value maximum 690 V at AC-3e rated value maximum 690 V operational current rated value operation operational current rated value operation operation operation operation operation	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 get by a contact stypical of the main contacts typical of auxiliary contacts typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical get by a contact typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical get by a contact typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical freence code according to IEC 81346-2 Q Substance Prohibitance (Date) 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 adjustable current response value current of the current-dependent overload release operating voltage rated value at AC-3 rated value maximum end operational current rated value operational current of the current o	power loss [W] for rated value of the current	
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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 source lelectrical endurance (switching cycles) typical reference code according to IEC 81346-2 Qusubstance Prohibitance (Date) Interview of the main contacts typical reference code according to IEC 81346-2 Qusubstance Prohibitance (Date) Interview of the main contacts typical reference code according to IEC 81346-2 Qusubstance Prohibitance (Date) Interview of the main contact (Date) Interview of the main contact typical reference code according to IEC 81346-2 Qusubstance Prohibitance (Date) Interview of the main contact to Interview of the contact	at AC in hot operating state per pole	6.7 W
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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 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 e at AC-3 rated value maximum operational current rated value operational current so 000 conditions 10/15/2014 2000 m ambient emaximum so 000 C -20 +60 °C -20 +60 °C -20 +80 °C -30 +80 °C -40 °C	mechanical service life (switching cycles)	
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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 40 A operational current 10/15/2014 2 0 +60 °C -20 +60 °C -50 +80 °C -60 °	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 operating frequency rated value operational current rated value operational current rated value operational current rated value operational current 2 0 00 m 20 +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 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 operational current rated value operational current rated value operational current rated value operational current rated value operational current -20 +60 °C -20 +60 °C -30 +80 °C -50 +80 °C -60 +90 V -	Substance Prohibitance (Date)	10/15/2014
ambient temperature • during operation • during storage • during transport • 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 40 A operational current	Ambient conditions	
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 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 et AC-3e rated value maximum operating frequency rated value operational current rated value 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 40 A operational current -50 +80 °C 10 95 % 32 40 A 32 40 A	during operation	-20 +60 °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 40 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 • rated value maximum • at AC-3 rated value maximum • at AC-3e rated value maximum operating frequency rated value operational current rated value 40 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 operational current 32 40 A 22 40 A 20 690 V 690 V 690 V 40 A	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 32 40 A 20 690 V 690 V 690 V 40 A	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 		32 40 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 40 A 	• rated value	20 690 V
operating frequency rated value 50 60 Hz operational current rated value 40 A operational current	 at AC-3 rated value maximum 	690 V
operational current rated value 40 A operational current	at AC-3e rated value maximum	690 V
operational current	operating frequency rated value	50 60 Hz
	operational current rated value	40 A
• at AC-3 at 400 V rated value 40 A	operational current	
	at AC-3 at 400 V rated value	40 A

at AC-3e at 400 V rated value	40 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	37 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	37 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)	urormal
at AC at 240 V rated value	100 kA
at AC at 240 V rated value at AC at 400 V rated value	65 kA
at AC at 400 V rated value at AC at 500 V rated value	10 kA
at AC at 500 V rated value at AC at 690 V rated value	4 kA
	4 KA
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
response value current of instantaneous short-circuit trip	585 A
unit	
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	40 A
at 600 V rated value	40 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	·
— 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	13.14
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
design of the short-circuit trip design of the fuse link for IT network for short-circuit	magnetic
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
	WITH
tastening method	·
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	143 11111
• for grounded parts at 400 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for live parts at 400 V	10 111111
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for grounded parts at 500 V	10 111111
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for live parts at 500 V	10 111111
— downwards	50 mm
— downwards — upwards	50 mm
— upwards — at the side	10 mm
at the side for grounded parts at 690 V	IV IIIII
— downwards	50 mm
— downwards — upwards	50 mm
— at the side	10 mm
• for live parts at 690 V	10 111111
— downwards	50 mm
— 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	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 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
Certificates/ approvals	
General Product Approval	





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=3RV2031-4UB10

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RV2031-4UB10}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4UB10

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

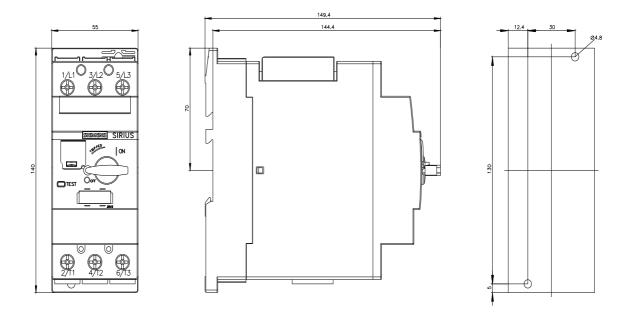
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4UB10&lang=en

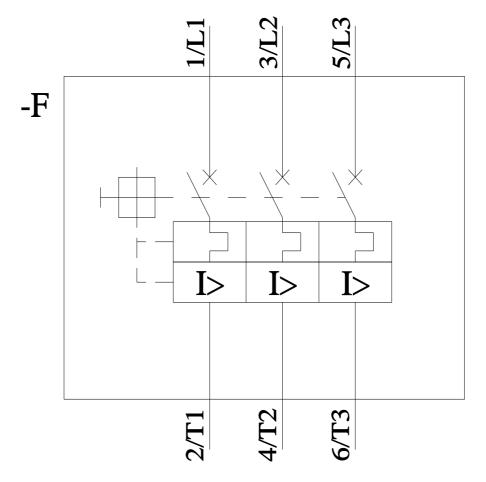
Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4UB10/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4UB10&objecttype=14&gridview=view1





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