SIEMENS

Data sheet 3RV2031-4BA15



Circuit breaker size S2 for motor protection, CLASS 10 A-release 14...20 A N-release 260 A screw terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC

product type designation design of the product product type designation 3RV2 General technical data 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 surge voltage resistance rated value • of the main contacts typical • of the main contacts typical • of auxiliary contacts typical • of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code 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 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-3 rated	product brand name	SIRIUS
product type designation General technical data size of the circuit-breaker size of contactor can be combined company-specific product extension auxiliary switch yes power loss [W] for rated value of the current • at AC in hot operating state • 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 (b) for the main contacts typical • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical • of auxiliary contacts typical celectrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code 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 • rated value • at AC-3 rated value maximum 3RV2 S2 25 25 25 27 25 27 25 27 25 27 25 27 25 27 27	product designation	Circuit breaker
Semeral technical data	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 so 000 selectrical endurance (switching cycles) typical so 000 type of protection according to ATEX directive 2014/34/EU certificate of suitability according to BEC 81346-2 Q Substance Prohibitance (Date) 10/15/2014 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-3 rated value maximum 690 V	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 • at AC in hot operating state per pole • at A	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 • 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 so 000 electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU reference code according to ATEX directive 2014/34/EU 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 • at AC:3 rated value • at AC:3 rated value maximum 14.5 W 14.5 W 4.8 W 4. W	size of contactor can be combined company-specific	S2
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 25g / 11 ms Sinus mechanical service life (switching cycles) of the main contacts typical of auxiliary contacts typical electrical endurance (switching cycles) type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature olduring storage olduring transport elduring 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 at AC-3 rated value at AC-3 rated value maximum 690 V	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 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 type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to IEC 81346-2 Queen code according to	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 of auxiliary contacts typical source lectrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code according to IEC 81346-2 Quultiput reference code according to ATEX directive 20	 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 electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code according to IEC 81346-2 Q Substance Prohibitance (Date) installation altitude at height above sea level maximum ambient temperature oldring operation oldring storage oldring storage oldring storage oldring 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 690 V	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 the main contacts typical of auxiliary contacts typical lelectrical endurance (switching cycles) typical stype of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code according to IEC 81346-2 Q Substance Prohibitance (Date) installation altitude at height above sea level maximum ambient temperature of during operation of during storage of 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 or rated value or rated value or at AC-3 rated value maximum 250 000 250 000 EX II (2) GD DMT 02 ATEX F 001 2015/2014 DMT 02 ATEX F 001 2015/2014 Ambient conditions 10/15/2014 Amb	0 0 1	690 V
mechanical service life (switching cycles) • of the main contacts typical • of auxillary contacts typical so 000 electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage • during transport relative 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 50 000 50 000 EX II (2) GD DMT 02 ATEX F 001 20 II (2) GD 20 III (2) GD	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 type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code according to IEC 81346-2 Quabitance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature ouring operation during storage ouring 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 rated value at AC-3 rated value maximum 50 000 Ex II (2) GD DMT 02 ATEX F 001 Ex II (2) GD DMT 02 ATEX F 001 20 00 DMT 02 ATEX F 001 20 00 DMT 02 ATEX F 001 20 00 Ex II (2) GD 20 01 Ex II (2) GD 20 00 Ex II (2) GD 20 01 Ex II	shock resistance according to IEC 60068-2-27	25g / 11 ms Sinus
of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code 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 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 50 000 EX II (2) GD DMT 02 ATEX F 001 DMT 02 ATEX F 001 2 01/15/2014 EX II (2) GD ODM TOM TOM TOM TOM TOM TOM TO	mechanical service life (switching cycles)	
electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code 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 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 50 000 Ex II (2) GD EX II (of the main contacts typical 	50 000
type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum 2 000 m ambient temperature • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C 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	of auxiliary contacts typical	50 000
2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU 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 DMT 02 ATEX F 001 201 02		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 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 10/15/2014 2 000 m 3 000 m 4 0		Ex II (2) GD
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport 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 10 0.15/2014 2 0.00 m 3 0.00 m 4 0.00 m 4 0.00 m 5 0.00 m 6 0 0 m 6 0	, ,	DMT 02 ATEX F 001
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 2 000 m -20 +60 °C -50 +80 °C -50 +80 °C 10 95 % 14 20 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 -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 2 000 m -20 +60 °C -50 +80 °C -50 +80 °C 10 95 % 14 20 A	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 -20 +60 °C -50 +80 °C 10 95 % 11 20 A 12 20 A	Ambient conditions	
 during operation during storage 50 +80 °C 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 -20 +60 °C -50 +80 °C 10 95 % 11 20 A 12 20 A 14 20 A 690 V 	installation altitude at height above sea level maximum	2 000 m
 during storage	ambient temperature	
 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 -50 +80 °C 10 95 % 14 20 A 20 A 690 V 	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 10 95 % 14 20 A 14 20 A 20 690 V	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 3 14 20 A 14 20 A 20 690 V	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 3 14 20 A 20 690 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 14 20 A 20 690 V	Main circuit	
current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum current-dependent overload release 20 690 V 690 V	number of poles for main current circuit	3
 rated value at AC-3 rated value maximum 20 690 V 690 V 	·	14 20 A
• at AC-3 rated value maximum 690 V	operating voltage	
	rated value	20 690 V
• at AC-3e rated value maximum 690 V	 at AC-3 rated value maximum 	690 V
	 at AC-3e rated value maximum 	690 V

operating frequency rated value	50 60 Hz
operating frequency fated value	20 A
operational current	2071
at AC-3 at 400 V rated value	20 A
at AC-3e at 400 V rated value	20 A
operating power	2071
• at AC-3	
— at 230 V rated value	5.5 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	11 kW
— at 690 V rated value	15 kW
• at AC-3e	
— at 230 V rated value	5.5 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	11 kW
— at 690 V rated value	15 kW
operating frequency	
at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
Auxiliary circuit	
design of the auxiliary switch	transverse
number of NC contacts for auxiliary contacts	1
number of NO contacts for auxiliary contacts	1
operational current of auxiliary contacts at AC-15	
• at 24 V	2 A
● at 230 V	0.5 A
operational current of auxiliary contacts at DC-13	
• at 24 V	1 A
● at 60 V	0.15 A
● at 110 V	0 A
● at 125 V	0 A
• at 220 V	0 A
Protective and monitoring functions	
product function	
 ground fault detection 	No
phase failure detection	Yes
trip class	CLASS 10
design of the overload release	thermal
breaking capacity maximum short-circuit current (lcu)	
 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 at 400 V rated value	30 kA
at 500 V rated value at 500 V rated value	6 kA
at 690 V rated value at 690 V rated value	3 kA
response value current of instantaneous short-circuit trip	260 A
unit	
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
	20 A
• at 480 V rated value	20 A
	20 A
• at 480 V rated value	
at 480 V rated valueat 600 V rated value	
at 480 V rated value at 600 V rated value yielded mechanical performance [hp]	
 at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor 	20 A
 at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value 	20 A 1.5 hp

— at 200/208 V rated value	7.5 hp
 at 220/230 V rated value 	7.5 hp
 — at 460/480 V rated value 	15 hp
— at 575/600 V rated value	20 hp
contact rating of auxiliary contacts according to UL	C300 / R300
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
design of the fuse link	
for short-circuit protection of the auxiliary switch required	fuse gG: 10 A, miniature circuit breaker C 6 A (short-circuit current lk < 400 A)
design of the fuse link for IT network for short-circuit protection of the main circuit	
● 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 	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for grounded parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for live parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
for auxiliary and control circuit	screw-type terminals
arrangement of electrical connectors for main current	Top and bottom
circuit	TOP GITA DOLLOTT
type of connectable conductor cross-sections	
• for main contacts	0(4 05 mm²) 4(4 05 2)
— 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)
type of connectable conductor cross-sections	

 for auxiliary contacts 	
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 at AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14)
tightening torque	
 for main contacts with screw-type terminals 	3 4.5 N·m
 for auxiliary contacts with screw-type terminals 	0.8 1.2 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
 of the auxiliary and control contacts 	M3
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>



For use in hazardous locations

Declaration of Conformity

Test Certificates











Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping













Marine / Shipping

other

Railway



Confirmation



Vibration and Shock

Confirmation

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2031-4BA15

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4BA15

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4BA15

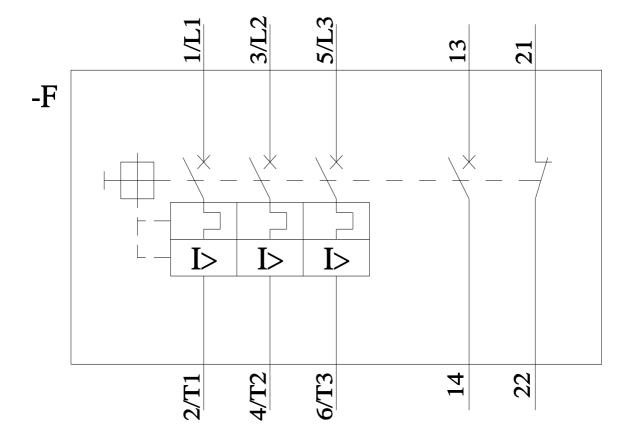
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4BA15&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4BA15/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4BA15&objecttype=14&gridview=view1



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