SIEMENS

Data sheet 3RV2031-4JA10



Circuit breaker size S2 for motor protection, CLASS 10 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 product extension auxiliary switch power loss [W] for rated value 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 surge voltage resistance rated value • between main and auxiliary circuit • between deviate service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical • of protection according to ATEX directive 2014/34/EU certificate of suitability according	product brand name	SIRIUS
Septemble Sept	product designation	Circuit breaker
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 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 maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • between main and suxiliary circuit • between main and suxiliary circuit • of lot mean 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 2014/34/4EU certificate of suitability according to ATEX directive 20	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 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 maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit 400 V shock resistance acc. 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) type of protection according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date) 10.04.2015 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during storage • during transport temperature compensation relative humidity during operation -20 +60 °C erelative humidity during operation -20 +60 °C relative humidity during operation -20 +60 °C relative humidity during operation -20 +60 °C relative humidity during operation -20 +60 °C -40 +60 °C relative humidity during operation -20 +60 °C -40	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 maximum permissible voltage for safe isolation in networks with grounded star point 400 V • between main and auxiliary circuit 400 V shock resistance acc. to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (switching cycles) • of the main contact typical 20 000 electrical endurance (switching cycles) typical 20 000 electrical endurance (switching cycles) typical 20 400 V type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date) 10.04.2015 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during torage - 50 +80 °C eluring transport 50 +80 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	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 surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point between main and auxiliary circuit between main contacts typical between m	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 maximum permissible voltage for safe isolation in networks with grounded star point between main and auxiliary circuit between main and auxiliary circ	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 Insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point between main and auxiliary circuit	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 surge voltage resistance rated value between main and auxiliary circuit contains service life (switching cycles) of the main contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 20	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 maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • between main and auxiliary circuit • between main and auxiliary circuit • both resistance acc. to IEC 60068-2-27 mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical • of protection according to ATEX directive 20 4000 type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Quustance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport temperature compensation relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	 at AC in hot operating state 	26 W
surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit * shock resistance acc. 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 acc. to IEC 81346-2 Q Substance Prohibitance (Date) installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during torage • during transport - 50 +80 °C • during transport - 20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	at AC in hot operating state per pole	8.7 W
maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • between main and auxiliary circuit • between main and auxiliary circuit shock resistance acc. 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 creference code acc. to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage • during transport temperature compensation relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	ŭ ,	690 V
networks with grounded star point • between main and auxiliary circuit • between main and auxiliary circuit shock resistance acc. 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 20	surge voltage resistance rated value	6 kV
between main and auxiliary circuit shock resistance acc. to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical		
shock resistance acc. 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 acc. to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature olduring storage olduring storage olduring transport during transport -50+80°C temperature compensation relative humidity during operation Main circuit number of poles for main current circuit 20 000 Ex II (2) GD 20 000 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 00 ATEX F 001 20 00 Ex II (2) GD 20 00 ATEX F 001 20 00 Ex II (2) GD 20 00 ATEX F 001 20 00 Ex II (2) GD 20 00 ATEX F 001 20 00 Ex II (2) GD 2	 between main and auxiliary circuit 	400 V
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 acc. 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 temperature compensation relative humidity during operation Main circuit number of poles for main current circuit 20 000 Ex II (2) GD 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 20 01 20 01 20 01 20 01 20 01 20 01 20 02 4 01 20 00 Co 10 95 % Main circuit number of poles for main current circuit 3	between main and auxiliary circuit	400 V
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 acc. to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature oduring operation during storage during transport during transport temperature compensation relative humidity during operation Main circuit number of poles for main current circuit 20 000 EX II (2) GD DMT 02 ATEX F 001 DMT 02 ATEX F 001 20 00 EX II (2) GD O O O O O O O O O O O O O	shock resistance acc. 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 acc. to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature o during operation during storage during transport emperature compensation relative humidity during operation Main circuit number of poles for main current circuit 20 000 Ex II (2) GD DMT 02 ATEX F 001 20 10.04.2015 DMT 02 ATEX F 001 20 00 Ex II (2) GD 20 01 Ex II	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 acc. 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 temperature compensation relative humidity during operation Main circuit number of poles for main current circuit 20 000 Ex II (2) GD Ex II (2)	 of the main contacts typical 	20 000
type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. 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 temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	of auxiliary contacts typical	20 000
2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. 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 temperature compensation relative humidity during operation Main circuit number of poles for main current circuit DMT 02 ATEX F 001 DMT 02 ATEX F 001 DMT 02 ATEX F 001 20 0 0 0 10.04.2015	electrical endurance (switching cycles) typical	20 000
reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date) 10.04.2015 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 • during transport -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3		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 • during transport -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	, ,	DMT 02 ATEX F 001
Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	reference code acc. to IEC 81346-2	Q
installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	Substance Prohibitance (Date)	10.04.2015
ambient temperature • during operation • during storage • during transport -50 +80 °C • during transport -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	Ambient conditions	
 during operation during storage temperature compensation relative humidity during operation mumber of poles for main current circuit during storage -50 +80 °C -50 +80 °C 10 95 % 	installation altitude at height above sea level maximum	2 000 m
 ● during storage -50 +80 °C ● during transport -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3 	ambient temperature	
● during transport -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	during operation	-20 +60 °C
temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	 during storage 	-50 +80 °C
relative humidity during operation 10 95 % Main circuit 3	during transport	-50 +80 °C
Main circuit number of poles for main current circuit 3	temperature compensation	-20 +60 °C
number of poles for main current circuit 3	relative humidity during operation	10 95 %
· ·	Main circuit	
adjustable current response value current of the 54 65 A	number of poles for main current circuit	3
	adjustable current response value current of the	54 65 A

current-dependent overload release	
operating voltage	
rated value	690 V
rated value	20 690 V
at AC-3 rated value maximum	690 V
operating frequency rated value	50 60 Hz
operational current rated value	65 A
operational current	
• at AC-3 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
operating frequency	
• at AC-3 maximum	15 1/h
Protective and monitoring functions	
product function	
•	No
ground fault detection phase failure detection	No Voc
phase failure detection	Yes
trip class	CLASS 10
design of the overload release	thermal
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	4 kA
• at 690 V rated value	2 kA
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	8 kA
at AC at 690 V rated value	4 kA
response value current of instantaneous short-circuit trip	845 A
unit	040 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	
	anv
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
height	140 mm
noignt	THIII OF T

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	
product component removable terminal for auxiliary	No
and control circuit	
type of electrical connection	
for main current circuit	screw-type terminals
arrangement of electrical connectors for main current	Top and bottom
circuit	
type of connectable conductor cross-sections	
for main contacts	0 (4 05 0) 4 (4 50 0)
— 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 acc. to SN 31920	5 000
proportion of dangerous failures	
 with low demand rate acc. to SN 31920 	50 %
with high demand rate acc. to SN 31920	50 %
failure rate [FIT]	
 with low demand rate acc. to SN 31920 	50 FIT
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. 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





UK Declaration of Conformity



Special Test Certificate Type Test Certificates/Test Report

Marine / Shipping













Marine / Shipping

other

Railway



Confirmation



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=3RV2031-4JA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4JA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4JA10

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

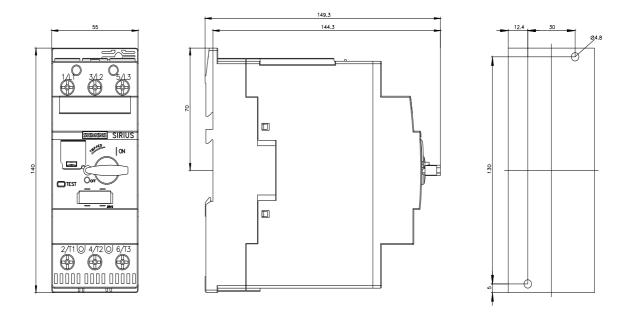
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4JA10&lang=en

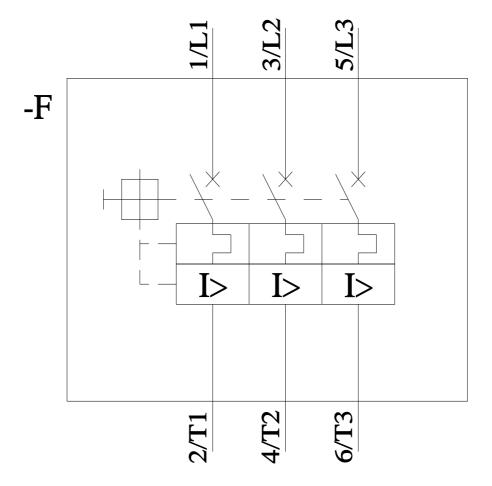
Characteristic: Tripping characteristics, I^2t , Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4JA10/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4JA10&objecttype=14&gridview=view1





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