SIEMENS

Data sheet

3RV2031-4RA10



Circuit breaker size S2 for motor protection, CLASS 10 A-release 70...80 A N-release 1040 A screw terminal Standard switching capacity

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For motor protection
product type designation	3RV2
General technical data	
size of the circuit-breaker	S2
size of contactor can be combined company-specific	S2
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	29.5 W
 at AC in hot operating state per pole 	9.8 W
insulation voltage with degree of pollution 3 at AC 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 (operating cycles)	
 of the main contacts typical 	20 000
 of auxiliary contacts typical 	20 000
electrical endurance (operating cycles) typical	20 000
type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
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
 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	70 80 A
operating voltage	
 rated value 	20 690 V
 at AC-3 rated value maximum 	690 V
operating frequency rated value	50 60 Hz
operational current rated value	80 A
operational current	

• el Al-C3 al 400 V ratel valueB0 A• el Al-C3- al 230 V ratel value22 kW- al 400 V ratel value7 KW- al 400 V ratel value7 KW- al 600 V ratel value7 KW• el Al-C3 maximum15 1hPotective and moltoning functions-product functionYes• grand fault detectionYes• grand fault detectionKA• grand fault detectionYes• al AC-3 maximum Societal detectionYes• al AC-4 100 V ratel value15 KA• al AC-4 100 V ratel value16 KA• al AC-4 100 V ratel value10 KA <t< th=""><th></th><th></th></t<>				
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	• at 400 V rated value	30 kA		
	• at 500 V rated value	5 kA		
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Short-circuit protection Yes product function short circuit protection Yes design of the short-circuit trip magnetic design of the fuse link for IT network for short-circuit none required e at 240 V none required e at 400 V 160 e at 500 V 125 e at 690 V 100 Installation/ mounting/ dimensions any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 60715 height 140 mm width 55 mm depth 149 mm required spacing 0 mm • with side-by-side mounting at the side 0 mm - downwards 50 mm - upwards 50 mm - at the side 10 mm	— at 460/480 V rated value	60 hp		
Short-circuit protection Yes product function short circuit protection Yes design of the short-circuit trip magnetic design of the fuse link for IT network for short-circuit mone required e at 240 V none required e at 400 V 160 e at 500 V 125 e at 690 V 100 Installation/ mounting/ dimensions any mounting position any fastening method screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 height 140 mm width 55 mm depth 149 mm required spacing 0 mm • with side-by-side mounting at the side 0 mm • for grounded parts at 400 V 50 mm - downwards 50 mm - upwards 50 mm - at the side 10 mm	— at 575/600 V rated value			
product function short circuit protection design of the short-circuit trip Yes magnetic design of the fuse link for IT network for short-circuit protection of the main circuit none required • at 240 V none required • at 400 V 160 • at 690 V 100 Installation/ mounting/ dimensions 100 mounting position fastening method any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 height width 140 mm of grounded parts at 400 V 0 mm • of or grounded parts at 400 V 50 mm - downwards 50 mm - downwards 50 mm - downwards 50 mm - at the side 10 mm	Short-circuit protection			
design of the short-circuit tripmagneticdesign of the fuse link for IT network for short-circuit protection of the main circuitnone required• at 240 Vnone required• at 400 V160• at 500 V125• at 690 V100Installation/ mounting/ dimensionsmounting position fastening methodany screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715height width depth140 mmvidth depth55 mmdepth • for grounded parts at 400 V0 mm- downwards - upwards50 mm- downwards - upwards50 mm- at the side10 mm		Yes		
design of the fuse link for IT network for short-circuit protection of the main circuitnone required• at 240 Vnone required• at 400 V160• at 500 V125• at 690 V100Installation/ mounting/ dimensionsmounting position fastening methodany screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715height width depth140 mmvidth for grounded parts at 400 V55 mm• with side-by-side mounting at the side • for grounded parts at 400 V0 mm- downwards - upwards - at the side50 mm- at the side10 mm				
protection of the main circuitnone required• at 240 Vnone required• at 400 V160• at 500 V125• at 690 V100Installation/ mounting/ dimensionsmounting positionanyfastening methodanyfastening methodanywidth5crew and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715height140 mmwidth55 mmdepth149 mmrequired spacing-• with side-by-side mounting at the side0 mm• for grounded parts at 400 V downwards50 mm- upwards50 mm- at the side10 mm		magnette		
• at 240 Vnone required• at 400 V160• at 500 V125• at 690 V100Installation/ mounting/ dimensionsmounting positionanyfastening methodscrew and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715height140 mmwidth55 mmdepth149 mmrequired spacingonm• with side-by-side mounting at the side0 mm• for grounded parts at 400 V50 mm- downwards50 mm- upwards50 mm- upwards50 mm- at the side10 mm				
• at 400 V160• at 500 V125• at 690 V100Installation/ mounting/ dimensionsmounting positionanyfastening method60715height140 mmwidth55 mmdepth149 mmrequired spacing0 mm• with side-by-side mounting at the side0 mm• for grounded parts at 400 V50 mm- downwards50 mm- upwards50 mm- at the side10 mm	-	none required		
• at 500 V125• at 690 V100Installation/ mounting/ dimensionsmounting positionanyfastening methodscrew and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715height140 mmwidth55 mmdepth149 mmrequired spacing• with side-by-side mounting at the side0 mm• for grounded parts at 400 V50 mm- downwards50 mm- upwards50 mm- at the side10 mm				
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Installation/ mounting/ dimensions mounting position any fastening method screw and snap-on mounting onto 35 mm DIN rail according to DIN EN height 140 mm width 55 mm depth 149 mm required spacing 0 mm • with side-by-side mounting at the side 0 mm - downwards 50 mm - upwards 50 mm - at the side 10 mm				
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fastening methodscrew and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715height140 mmwidth55 mmdepth149 mmrequired spacing0 mm• with side-by-side mounting at the side0 mm• for grounded parts at 400 V50 mm- downwards50 mm- upwards50 mm- upwards50 mm- at the side10 mm	mounting position	any		
height60715height140 mmwidth55 mmdepth149 mmrequired spacing0 mm• with side-by-side mounting at the side0 mm• for grounded parts at 400 V0 mm- downwards50 mm- upwards50 mm- at the side10 mm		•		
width55 mmdepth149 mmrequired spacing0 mm• with side-by-side mounting at the side0 mm• for grounded parts at 400 V	-			
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depth149 mmrequired spacing0 mm• with side-by-side mounting at the side0 mm• for grounded parts at 400 V0 mm- downwards50 mm- upwards50 mm- at the side10 mm	-	55 mm		
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 with side-by-side mounting at the side for grounded parts at 400 V downwards upwards at the side 50 mm 10 mm 	-			
 for grounded parts at 400 V downwards upwards at the side 50 mm 10 mm 		0 mm		
		U TITIT		
— upwards 50 mm — at the side 10 mm		50		
— at the side 10 mm				
	•			
for live parts at 400 V		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
	50 mm
— upwards	
— 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 mm ²), 1x (1 35 mm ²)
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
	Diameter 5 to 6 mm
design of screwdriver shaft	
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 %
	50 % 50 %
 with high demand rate according to SN 31920 	
• with high demand rate according to SN 31920 failure rate [FIT]	50 %
 with high demand rate according to SN 31920 failure rate [FIT] with low demand rate according to SN 31920 T1 value for proof test interval or service life according to 	
 with high demand rate according to SN 31920 failure rate [FIT] 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 	50 % 50 FIT
 with high demand rate according to SN 31920 failure rate [FIT] 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 	50 % 50 FIT 10 a IP20
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status 	50 % 50 FIT 10 a IP20
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status Certificates/ approvals 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status Certificates/ approvals 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front Handle
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status Certificates/ approvals General Product Approval 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front Handle
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status Certificates/ approvals General Product Approval 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front Handle
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status Certificates/ approvals General Product Approval 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front Handle
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status Certificates/ approvals General Product Approval 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front Handle
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status Certificates/ approvals General Product Approval 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front Handle
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status Certificates/ approvals General Product Approval 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front Handle EFFC
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status Certificates/ approvals General Product Approval 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front Handle
 with high demand rate according to SN 31920 failure rate [FIT] 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 touch protection on the front according to IEC 60529 display version for switching status Certificates/ approvals General Product Approval 	50 % 50 FIT 10 a IP20 finger-safe, for vertical contact from the front Handle EFFC

KEX ATEX	IECEx	UK CA	CE EG-Konf.	<u>Type Test Certific-</u> ates/Test Report
Marine / Shipping				
ABS	BUREAU VERITAS		Lloyd's Register uis	PRS
Marine / Shipping	other		Railway	

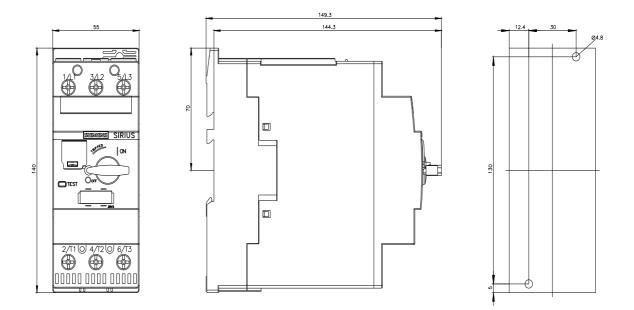
Confirmation

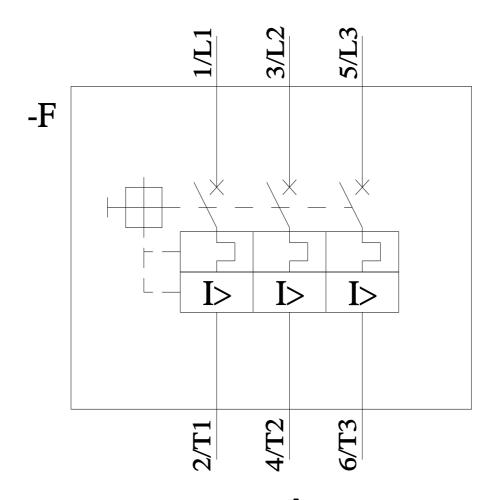
Further information
Information on the packaging
https://support.industry.siemens.com/cs/ww/en/view/109813875
Information- and Downloadcenter (Catalogs, Brochures,)
https://www.siemens.com/ic10
Industry Mall (Online ordering system)
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https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4RA10
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4RA10⟨=en
Characteristic: Tripping characteristics, I ² t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4RA10/char
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4RA10&objecttype=14&gridview=view1

Confirmation

Special Test Certificate

Vibration and Shock





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