SIEMENS

Data sheet

3RV2021-1KA10



Circuit breaker size S0 for motor protection, CLASS 10 A-release 9...12.5 A N-release 163 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	SO
size of contactor can be combined company-specific	S00, S0
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	9.25 W
 at AC in hot operating state per pole 	3.1 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
mechanical service life (operating cycles)	
 of the main contacts typical 	100 000
 of auxiliary contacts typical 	100 000
electrical endurance (operating cycles) typical	100 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
SVHC substance name	Lead - 7439-92-1
Weight	0.355 kg
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 %
Environmental footprint	
Global Warming Potential [CO2 eq] total	75.078 kg
Global Warming Potential [CO2 eq] during manufacturing	2.68 kg
global warming potential [CO2 eq] during sales	0.143 kg
Global Warming Potential [CO2 eq] during operation	72.7 kg
Global Warming Potential [CO2 eq] after end of life	-0.445 kg
Siemens Eco Profile (SEP)	Siemens EcoTech
Main circuit	

Induse of poins of notion to to the current 0 1.25 A operating voltage 2 0.00 V • at AC 3 make value maximum 000 V 000 V • at AC 3 make value maximum 000 V 000 V • at AC 3 make value maximum 000 V 000 V • at AC 3 make value maximum 000 V 000 V • at AC 3 make value maximum 000 V 000 V • at AC 3 make value maximum 000 V 000 V • at AC 3 make value maximum 000 V 000 V • at AC 3 make value maximum 12.5 A 000 V • at AC 3 make value maximum 12.5 A 000 V • at AC 3 make value 3.5 W 000 V • at AC 3 make value 3.5 W 000 V • at AC 3 make value 7.5 W 000 V • at AC 3 make value 7.5 W 000 V • at AC 3 make value 0.0 000 V • at AC 3 make value 0.0 000 V • at AC 3 make value 0.0 000 V • at AC 3 make value 0.0 000 V <tr< th=""><th>number of polos for main ourrant circuit</th><th>3</th></tr<>	number of polos for main ourrant circuit	3
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full-load current (FLA) for 3-phase AC motor• at 480 V rated value12.5 A• at 600 V rated value12.5 Ayielded mechanical performance [hp]-• for single-phase AC motor0.5 hp at 110/120 V rated value0.5 hp at 230 V rated value2 hp• for 3-phase AC motor at 200/208 V rated value3 hp at 220/230 V rated value3 hp at 460/480 V rated value8 hp at 575/600 V rated value10 hp	· · · ·	163 A
• at 480 V rated value 12.5 A • at 600 V rated value 12.5 A yielded mechanical performance [hp] - • for single-phase AC motor - - at 110/120 V rated value 0.5 hp - at 230 V rated value 2 hp • for 3-phase AC motor - - at 200/208 V rated value 3 hp - at 200/208 V rated value 3 hp - at 220/230 V rated value 3 hp - at 460/480 V rated value 10 hp	UL/CSA ratings	
• at 600 V rated value 12.5 A yielded mechanical performance [hp] - • for single-phase AC motor - - at 110/120 V rated value 0.5 hp - at 230 V rated value 2 hp • for 3-phase AC motor - - at 200/208 V rated value 3 hp - at 220/230 V rated value 3 hp - at 220/230 V rated value 3 hp - at 460/480 V rated value 8 hp - at 575/600 V rated value 10 hp	full-load current (FLA) for 3-phase AC motor	
yielded mechanical performance [hp]• for single-phase AC motor0.5 hp- at 110/120 V rated value0.5 hp- at 230 V rated value2 hp• for 3-phase AC motor at 200/208 V rated value3 hp- at 220/230 V rated value3 hp- at 460/480 V rated value8 hp- at 575/600 V rated value10 hp	• at 480 V rated value	12.5 A
 for single-phase AC motor at 110/120 V rated value 0.5 hp at 230 V rated value 2 hp for 3-phase AC motor at 200/208 V rated value 3 hp at 220/230 V rated value 3 hp at 460/480 V rated value 8 hp at 575/600 V rated value 	• at 600 V rated value	12.5 A
- at 110/120 V rated value0.5 hp- at 230 V rated value2 hp• for 3-phase AC motor at 200/208 V rated value3 hp- at 220/230 V rated value3 hp- at 220/230 V rated value8 hp- at 460/480 V rated value10 hp	yielded mechanical performance [hp]	
	 for single-phase AC motor 	
for 3-phase AC motor		
at 200/208 V rated value3 hp at 220/230 V rated value3 hp at 460/480 V rated value8 hp at 575/600 V rated value10 hp		0.5 hp
	— at 110/120 V rated value	
— at 460/480 V rated value 8 hp — at 575/600 V rated value 10 hp	— at 110/120 V rated value — at 230 V rated value	
- at 575/600 V rated value 10 hp	 at 110/120 V rated value at 230 V rated value for 3-phase AC motor 	2 hp
	 at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value 	2 hp 3 hp
Short-circuit protection	 at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value 	2 hp 3 hp 3 hp
	 at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value 	2 hp 3 hp 3 hp 8 hp

product function short circuit protection	Yes
design of the short-circuit trip	magnetic
Installation/ mounting/ dimensions	inagioto
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	97 mm
width	45 mm
depth	97 mm
required spacing	o, min
with side-by-side mounting at the side	0 mm
• for grounded parts at 400 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for live parts at 400 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
 for grounded parts at 500 V 	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for live parts at 500 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
 for grounded parts at 690 V 	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
• for live parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
Connections/ Terminals	
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	
— solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
 — finely stranded with core end processing 	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
 for AWG cables for main contacts 	2x (16 12), 2x (14 8)
tightening torque	
 for main contacts with screw-type terminals 	2 2.5 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	M4
Safety related data	
product function suitable for safety function	Yes
suitability for use	
 safety-related switching on 	No
 safety-related switching OFF 	Yes
service life maximum	10 a
test wear-related service life necessary	Yes

proportion of dangerou	us failures						
	rate according to SN 319	20 40) %				
	÷						
with high demand rate according to SN 31920			50 % 5 000				
	B10 value with high demand rate according to SN 31920						
failure rate [FIT] with low demand rate according to SN 31920) FIT				
ISO 13849							
device type according to ISO 13849-1			3				
overdimensioning according to ISO 13849-2 necessary			Yes				
IEC 61508							
	fety device type according to IEC 61508-2			Туре А			
 T1 value ● for proof test inter 61508 	val or service life accord	ing to IEC 10	10 a				
Electrical Safety							
protection class IP on	the front according to	IEC 60529	20				
touch protection on the			ger-safe, for vertical contact	from the front			
Display							
display version for switcl	hing status	Ha	andle				
Approvals Certificates							
General Product Appro	oval						
	CE	UK	Confirmation	(UL)	KC		
ccc	EG-Konf.	CA		UL			
General Product Approval	For use in hazardous	locations	Test Certificates		Marine / Shipping		
EHC	K ATEX	IECEx IECEx	<u>Type Test Certific-</u> ates/Test Report	<u>Special Test Certific-</u> <u>ate</u>	ABS		
Marine / Shipping					other		
BUREAU VERITAS		Hoyds Register Us	PRS	RINA	<u>Miscellaneous</u>		
other		Railway		Environment			
		runnuy		Littlesimont			
<u>Confirmation</u>	VDE	<u>Special Test Certific</u> <u>ate</u>	<u>⊱ Confirmation</u>	EPD	Siemens EcoTech		
Environment							
Environmental Con- firmations							
Further information	kaging						
Information on the pac https://support.industry.s Information- and Down https://www.siemens.com	siemens.com/cs/ww/en/v Iloadcenter (Catalogs,						
Industry Mall (Online o	rdering system)						

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-1KA10 Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1KA10

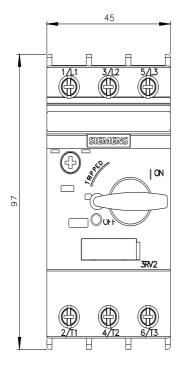
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1KA10

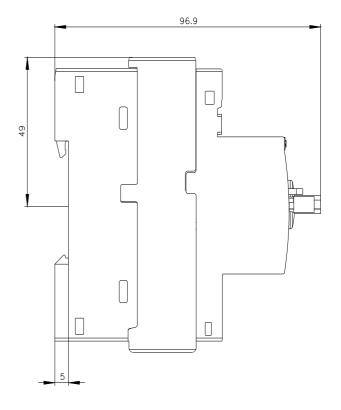
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1KA10&lang=en

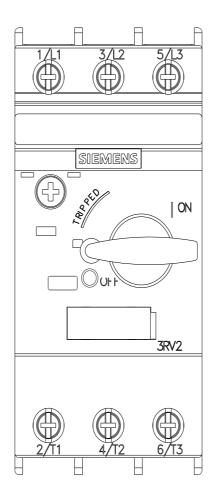
Characteristic: Tripping characteristics, I2t, Let-through current

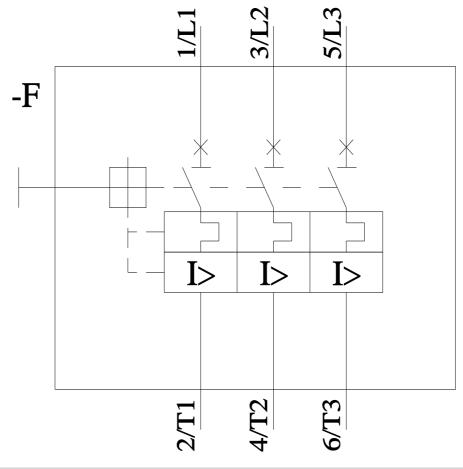
https://support.indu emens.com/cs/ww/en/ps/3RV202 I-1KA10/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1KA10&objecttype=14&gridview=view1









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