SIEMENS

Data sheet

3RV2021-1CA20





Start On Start	
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 	7.25 W
 at AC in hot operating state per pole 	2.4 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	0.402 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	
Environmental Product Declaration(EPD)	Yes
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	
number of poles for main current circuit	3
adjustable current response value current of the current- dependent overload release	1.8 2.5 A
type of voltage for main current circuit	AC
operating voltage	
rated value	20 690 V
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operating frequency rated value	50 60 Hz
operational current rated value	2.5 A
operational current	
at AC-3 at 400 V rated value	2.5 A
at AC-3e at 400 V rated value	2.5 A
operating power	
• at AC-3	
— at 230 V rated value	0.4 kW
— at 400 V rated value	0.8 kW
- at 500 V rated value	1.1 kW
— at 690 V rated value	1.5 kW
• at AC-3e	
- at 230 V rated value	0.4 kW
— at 200 V rated value	0.4 KW
— at 500 V rated value	1.1 kW
— at 690 V rated value	1.5 kW
operating frequency	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
Auxiliary circuit	
type of voltage for auxiliary and control circuit	AC/DC
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of CO contacts for auxiliary contacts	0
Protective and monitoring functions	
product function	
ground fault detection	No
phase failure detection	Yes
trip class	CLASS 10
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	
at AC at 240 V rated value	100 kA
at AC at 400 V rated value	100 kA
at AC at 500 V rated value	100 kA
at AC at 690 V rated value	10 kA
operating short-circuit current breaking capacity (Ics) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	100 kA
• at 500 V rated value	100 kA
• at 690 V rated value	10 kA
response value current of instantaneous short-circuit trip unit	33 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	2.5 A
at 600 V rated value	2.5 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
- at 230 V rated value	0.17 hp
• for 3-phase AC motor	
- at 200/208 V rated value	0.5 hp
 — at 220/230 V rated value 	0.5 hp
 — at 220/230 V rated value — at 460/480 V rated value 	0.5 hp 1 hp

product functional product functional product functional head circuit trip magnetic meaning particle magnetic fastering method serve and step on mounting onto 35 mm DIN rail according to DIN EN 60715 height 119 mm width 46 mm depth 97 mm required spacing 0 mm • of or grounded parts at 400 V 0 mm - upwards 30 mm - upwards 50 mm	— at 575/600 V rated value	1.5 hp
product function abort circuit protection Yes design of the short-short if typ magnetic meuning position any fastening method server and snap-on mounting onto 35 mm DIN rail according to DIN EN 6011 height 119 mm width 46 mm depth 97 mm required spacing 0 mm • for grounded parts al 400 V 30 mm - downwards 30 mm - upwards 30 mm - at the side 9 mm • for grounde parts al 500 V - - downwards 30 mm - upwards 30 mm - at the side 9 mm • for grounde parts al 500 V - - downwards 30 mm - at the side 9 mm • for grounde parts al 500 V - - downwards		
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Instanting conting of dimensions any meaning position any fistering method screw and snap-or mounting onto 35 mm DNI rail according to DNI EN 00715 height 119 mm witch 44 mm depth 97 mm reculied spacing orm • for grounded parts at 400 V orm - downwards 30 mm - downwards 30 mm - or downwards 30 mm - upwards 30 mm - downwards 30 mm - upwards 30 mm - downwards 50 mm <tr< td=""><td></td><td></td></tr<>		
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height10 mmwidth45 mmdepth97 mmrequired spacing97 mm		
width 45 mm doph 97 mm required spacing 97 mm • with side-by-side muniting at the side 0 mm • downwards 30 mm - upwards 30 mm - at the side 9 mm • for grounded parts at 400 V - - downwards 30 mm - downwards 30 mm - downwards 30 mm - downwards 30 mm - upwards 30 mm - downwards 30 mm - upwards 30 mm - downwards 30 mm - upwards 30 mm - the side 30 mm - at the side 0 mm - downwards 50 mm - at the side		
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- dithe side 9 mm • for live parts at 400 V - upwards 30 mm - upwards 30 mm - at the side 9 mm • for grounded parts at 500 V - downwards 30 mm - upwards 30 mm - upwards 30 mm • at the side 9 mm • for live parts at 500 V - downwards 30 mm - at the side 9 mm • for grounded parts at 680 V - upwards 30 mm - upwards 30 mm • for grounded parts at 680 V - downwards 50 mm • for grounded parts at 680 V - downwards 50 mm • for grounded parts at 680 V - downwards 50 mm • for grounded parts at 680 V - downwards 50 mm • for grounded parts at 680 V - upwards 50 mm • for grounded parts at 680 V - backwards 50 mm - upwards 50 mm - upwards 50 mm - backwards 50 mm - backwards 50 mm - backwards 0 mm - forwards 0 mm - upwards 50 mm - forwards 0 mm - forwards 0 mm - forwards 0 mm - forwards 0 mm - upwards 50 m	— downwards	30 mm
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	— downwards	30 mm
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	— downwards	50 mm
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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	design of screwdriver shaft	
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	size of the screwdriver tip	3,0 x 0,5 mm
suitability for useNo• safety-related switching onNo• safety-related switching OFFYesservice life maximum10 atest wear-related service life necessaryYes	Safety related data	
• safety-related switching on No • safety-related switching OFF Yes service life maximum 10 a test wear-related service life necessary Yes	product function suitable for safety function	Yes
• safety-related switching OFF Yes service life maximum 10 a test wear-related service life necessary Yes	suitability for use	
• safety-related switching OFF Yes service life maximum 10 a test wear-related service life necessary Yes	 safety-related switching on 	No
test wear-related service life necessary Yes		Yes
	service life maximum	10 a
proportion of dangerous failures	test wear-related service life necessary	Yes
	proportion of dangerous failures	

	ate according to SN 31		40 %		
-	rate according to SN 3		50 %		
B10 value with high de			5 000		
failure rate [FIT] with lo 31920	w demand rate accor	ding to SN	50 FIT		
ISO 13849					
device type according	to ISO 13849-1		3		
overdimensioning acco	ording to ISO 13849-2	necessary	Yes		
IEC 61508					
safety device type acco	ording to IEC 61508-2		Туре А		
T1 value					
 for proof test interv 61508 	val or service life accore	ding to IEC	10 a		
Electrical Safety					
protection class IP on t	he front according to	IEC 60529	IP20		
touch protection on the	e front according to IE	C 60529	finger-safe, for vertical contact	t from the front	
Display					
display version for switch Approvals Certificates	ning status	_	Handle		
General Product Appro	oval				
	CE EG-Konf.	UK CA		KC	EAC
General Product Approval	For use in hazardou	s locations	Test Certificates		Marine / Shipping
<u>BIS CRS</u>	XEx ATEX	IECEx	Type Test Certific- ates/Test Report	<u>Special Test Certific-</u> <u>ate</u>	ABS
Marine / Shipping					other
BUREAU VERITAS		Lloyd's Register uis	PRS	RINA	<u>Miscellaneous</u>
other		Railway		Environment	
<u>Confirmation</u>		Special Test Certi ate	ific- <u>Confirmation</u>	EPD	Siemens EcoTech
Environment					
Environmental Con- firmations					
Further information Information on the pack https://support.industry.s					

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1CA20

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

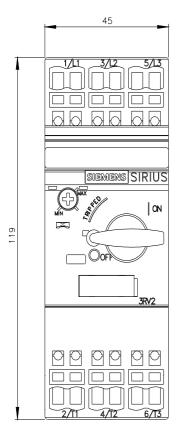
https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1CA20

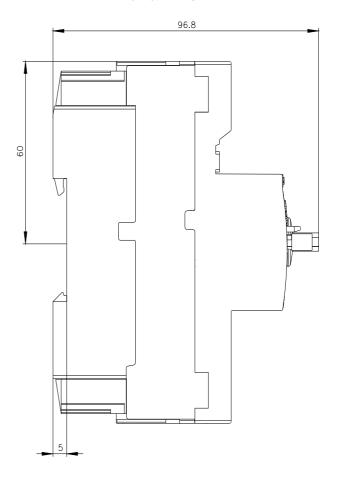
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1CA20&lang=en

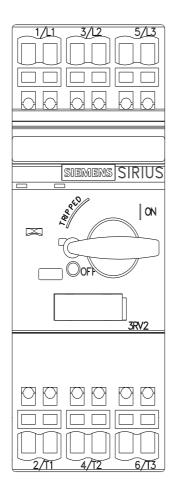
Characteristic: Tripping characteristics, I2t, Let-through current

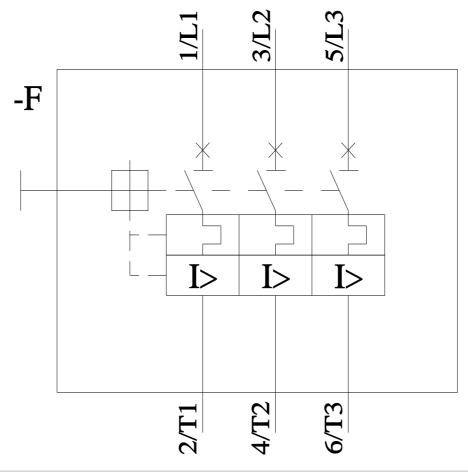
https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1CA20/char Further characteristics (e.g. electrical endurance, switching frequency)

earch&mlfb=3RV2021-1CA20&objecttype=14&gridview=view1 http://www.automation.siemens.com/bilddb/index.aspx?view=Se









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