SIEMENS

Data sheet

3RV2021-4FA10



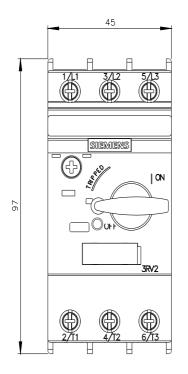
Circuit breaker size S0 for motor protection, CLASS 10 A-release 34...40 A N-release 480 A screw terminal Standard switching capacity

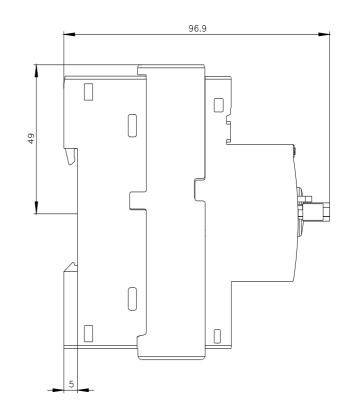
product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For motor protection
product type designation	3RV2
General technical data	
size of the circuit-breaker	SO
size of contactor can be combined company-specific	S00, S0
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	16.25 W
 at AC in hot operating state per pole 	5.4 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
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-20 +40 °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	34 40 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	40 A

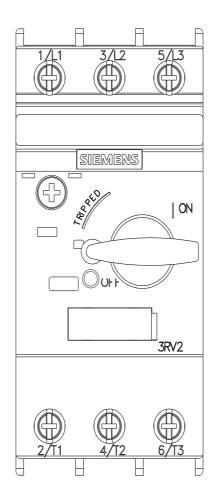
operational current	
• at AC-3 at 400 V rated value	40 A
operating power	
• at AC-3	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	22 kW
— at 690 V rated value	39 kW
operating frequency	
• at AC-3 maximum	15 1/h
Auxiliary circuit	15 1/11
	0
number of NC contacts for 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	20 kA
• at AC at 500 V rated value	6 kA
 at AC at 690 V rated value 	3 kA
operating short-circuit current breaking capacity (Ics) at AC	
at 240 V rated value	100 kA
• at 400 V rated value	10 kA
• at 500 V rated value	3 kA
at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	480 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	40 A
at 400 V rated value at 600 V rated value	40 A 40 A
	40 A
yielded mechanical performance [hp]	
 for single-phase AC motor 	
— at 110/120 V rated value	3 hp
— at 230 V rated value	3 hp 7.5 hp
— at 230 V rated valuefor 3-phase AC motor	7.5 hp
 — at 230 V rated value for 3-phase AC motor — at 200/208 V rated value 	7.5 hp 10 hp
— at 230 V rated valuefor 3-phase AC motor	7.5 hp
 — at 230 V rated value for 3-phase AC motor — at 200/208 V rated value 	7.5 hp 10 hp
 at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value 	7.5 hp 10 hp 10 hp
 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 	7.5 hp 10 hp 10 hp
 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 Short-circuit protection	7.5 hp 10 hp 10 hp 30 hp
 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 Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit 	7.5 hp 10 hp 10 hp 30 hp Yes
 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 Short-circuit protection product function short circuit protection design of the short-circuit trip 	7.5 hp 10 hp 10 hp 30 hp Yes magnetic
 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 Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 400 V 	7.5 hp 10 hp 10 hp 30 hp Yes
 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 Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit	7.5 hp 10 hp 10 hp 30 hp Yes magnetic
 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 Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 400 V 	7.5 hp 10 hp 10 hp 30 hp Yes magnetic gG 63 A
 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 Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 400 V at 500 V 	7.5 hp 10 hp 10 hp 30 hp Yes magnetic gG 63 A gG 63 A
 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 Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 400 V at 500 V at 690 V 	7.5 hp 10 hp 10 hp 30 hp Yes magnetic gG 63 A gG 63 A
 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 Short-circuit protection groduct function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 400 V at 500 V at 690 V 	7.5 hp 10 hp 10 hp 30 hp Yes magnetic gG 63 A gG 63 A gG 63 A
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 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 Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 400 V at 500 V at 690 V Installation/ mounting/ dimensions mounting position fastening method 	7.5 hp 10 hp 10 hp 30 hp Yes magnetic gG 63 A gG 63 A gG 63 A gG 63 A gG 63 A
 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 Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 400 V at 500 V at 690 V Installation/ mounting/ dimensions mounting position fastening method height width 	7.5 hp 10 hp 10 hp 30 hp Yes magnetic gG 63 A gG 63 A
 at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 420/480 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 400 V at 500 V at 690 V Installation/ mounting/ dimensions mounting position fastening method height width depth 	7.5 hp 10 hp 10 hp 30 hp Yes magnetic gG 63 A gG 63 A gG 63 A gG 63 A gG 63 A gG 63 A
 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 Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 400 V at 690 V Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing 	7.5 hp 10 hp 10 hp 30 hp Yes magnetic gG 63 A gG 63 A
 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 Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 400 V at 500 V at 690 V Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing with side-by-side mounting at the side 	7.5 hp 10 hp 10 hp 30 hp Yes magnetic gG 63 A gG 63 A
 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 Short-circuit protection product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit at 400 V at 690 V Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing 	7.5 hp 10 hp 10 hp 30 hp Yes magnetic gG 63 A gG 63 A

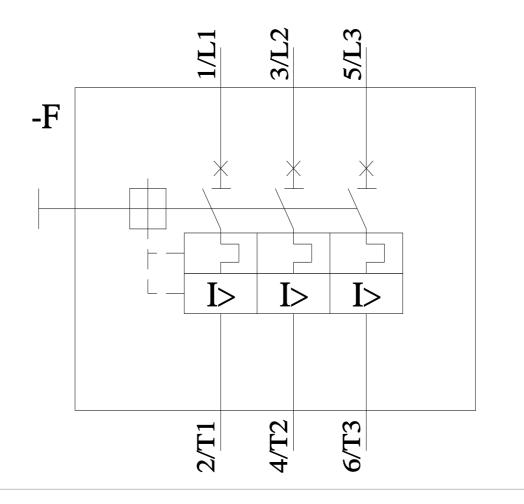
	20		
— upwards	30 mm		
— at the side	9 mm		
• for live parts at 400 V			
— downwards	30 mm		
— upwards	30 mm		
— at the side	9 mm		
 for grounded parts at 500 V 			
— downwards	30 mm		
— upwards	30 mm		
— at the side	9 mm		
 for live parts at 500 V 			
— downwards	30 mm		
— upwards	30 mm		
— at the side	9 mm		
 for grounded parts at 690 V 			
— downwards	70 mm		
— upwards	70 mm		
— backwards	0 mm		
— at the side	30 mm		
— forwards	0 mm		
• for live parts at 690 V			
— downwards	70 mm		
— upwards	70 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 dangerous failures			
 with low demand rate according to SN 31920 	40 %		
 with high demand rate according to SN 31920 	50 %		
B10 value with high demand rate according to SN 31920	5 000		
failure rate [FIT] with low demand rate according to SN	50 FIT		
31920			
ISO 13849			
device type according to ISO 13849-1	3		
overdimensioning according to ISO 13849-2 necessary	Yes		
IEC 61508			
safety device type according to IEC 61508-2	Туре А		
T1 value			

 for proof test inter 61508 	rval or service life accord	ling to IEC 1	0 a				
Electrical Safety							
protection class IP on the front according to IEC 60529		IEC 60529	P20				
touch protection on the front according to IEC 60529		C 60529 fi	nger-safe, for vertical contact	from the front			
Display							
display version for switc	hing status	F	landle				
Approvals Certificates							
General Product Appr	oval						
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EG-Konf.	CH	ccc		UL			
General Product Ap-							
proval	For use in hazardous	slocations	Test Certificates		Marine / Shipping		
гпг	IECEx		<u>Type Test Certific-</u> ates/Test Report	<u>Special Test Certific-</u> <u>ate</u>	- W		
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other		Railway		Environment			
Confirmation	\wedge	Special Test Certifi	<u>c-</u> <u>Confirmation</u>				
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	VDE			FPD	EcoTech		
	VDC						
Further information							
Information on the pac							
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)							
https://mail.industry.siemens.com/mail/en/en/Catalog/product?mlfb=3RV2021-4FA10 Cax online generator							
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4FA10							
Service&Support (Manuals, Certificates, Characteristics, FAQs,) https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4FA10							
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,)							
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4FA10⟨=en Characteristic: Tripping characteristics, I ² t, Let-through current							
https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4FA10/char							
Further characteristics	s (e.g. electrical endura	ince, switching frequ	ency)				
http://www.automation.s	http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4FA10&objecttype=14&gridview=view1						









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