SIEMENS

Data sheet

3RV2021-4EA20



Circuit breaker size S0 for motor protection, CLASS 10 A-release 27...32 A N-release 400 A Spring-type 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 	13.25 W
 at AC in hot operating state per pole 	4.4 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 (switching cycles)	
 of the main contacts typical 	100 000
 of auxiliary contacts typical 	100 000
electrical endurance (switching cycles) typical	100 000
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)	10/01/2009
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	27 32 A
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
operating frequency rated value operational current rated value	32 A
operational current	SZ A
at AC-3 at 400 V rated value	32 A
 at AC-3e at 400 V rated value 	32 A 32 A
operating power	52 A
• at AC-3	
- at 230 V rated value	7.5 kW
— at 200 V rated value	15 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	30 kW
• at AC-3e	JU KW
- at 230 V rated value	7.5 kW
— at 200 V rated value	15 kW
— at 500 V rated value	18.5 kW
at 690 V rated value	30 kW
operating frequency	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
Auxiliary circuit	
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
breaking capacity maximum short-circuit current (lcu)	
 at AC at 240 V rated value 	100 kA
 at AC at 400 V rated value 	55 kA
 at AC at 500 V rated value 	10 kA
• at AC at 690 V rated value	4 kA
breaking capacity operating short-circuit current (lcs) at AC	
 at 240 V rated value 	100 kA
 at 400 V rated value 	25 kA
• at 500 V rated value	5 kA
at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip	400 A
unit	
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	32 A
• at 600 V rated value	32 A
yielded mechanical performance [hp]	
 for single-phase AC motor 	
— at 110/120 V rated value	2 hp
— at 230 V rated value	5 hp
 for 3-phase AC motor 	
— at 200/208 V rated value	7.5 hp
— at 220/230 V rated value	10 hp
— at 460/480 V rated value	20 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 400 V	gL/gG 63 A

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with low demand rate according to SN 31920 50 % with high demand rate according to SN 31920 50 % failure rate [FIT] with low demand rate according to SN 31920 50 FIT	 with high demand rate according to SN 31920 	5 000		
with high demand rate according to SN 31920 failure rate [FIT] with low demand rate according to SN 31920 50 FIT	proportion of dangerous failures			
failure rate [FIT] • with low demand rate according to SN 31920 50 FIT	 with low demand rate according to SN 31920 	50 %		
with low demand rate according to SN 31920 50 FIT		50 %		
T1 value for proof test interval or service life according to 10 y				
	T1 value for proof test interval or service life according to	10 y		

IEC 61508						
protection class IP on the front according to IEC 60529		g to IEC	IP20			
touch protection on the front according to IEC 60529		to IEC 60529	finger-safe, for vertical contact from the front			
display version for switching status			Handle			
Certificates/ approval	S					
General Product Ap	-					
(SP)	<u>Confirmation</u>		U	<u>KC</u>	EHC	
For use in hazardo	us locations	Declaration of	Conformity	Test Certificates		
IFCE.		~ ~	ЦK	Type Test Certific-	Special Test Certific	
IECEX		EG-Konf.	UK CA	<u>ates/Test Report</u>	<u>ate</u>	
Marine / Shipping						
ABS	B D R E A U VERITAS		Hoyds Register urs	PRS	RINA	
Marine / Shipping	other		Railway			
RMRS RMRS	<u>Confirmation</u>		Confirmation	Vibration and Shock		
- 41 - 1 - 6 41						
https://www.siemens.		ogs, Brochures,)				
Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-4EA20						
Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4EA20						
Service&Support (Manuals, Certificates, Characteristics, FAQs,)						
	ry.siemens.com/cs/ww					
Image database (pro	oduct images, 2D din	ension drawings,	3D models, device circui		cros,)	

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4EA20&lang=en Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA20/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4EA20&objecttype=14&gridview=view1

last modified:

6/25/2022 🖸