SIEMENS

Data sheet

3RV2021-1FA10



Circuit breaker size S0 for motor protection, CLASS 10 A-release 3.5...5 A N release 65 A screw terminal Standard switching capacity

4/12 4/15	
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
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	3.5 5 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
operational current rated value	5 A

operational current	5 A
 at AC-3 at 400 V rated value at AC-3e at 400 V rated value 	5 A
	5 A
operating power • at AC-3	
- at 230 V rated value	1.1 kW
— at 400 V rated value	1.5 kW
— at 500 V rated value	2.2 kW
— at 690 V rated value	4 kW
• at AC-3e	
— at 230 V rated value	1.1 kW
— at 400 V rated value	1.5 kW
— at 500 V rated value	2.2 kW
— at 690 V rated value	4 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
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 	6 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	4 kA
response value current of instantaneous short-circuit trip unit	65 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
 at 480 V rated value 	5 A
at 600 V rated value	5 A
yielded mechanical performance [hp]	
for single-phase AC motor	0.47 hz
- at 110/120 V rated value	0.17 hp
— at 230 V rated value	0.5 hp
 for 3-phase AC motor — at 200/208 V rated value 	1 hp
— at 220/200 V rated value	1 hp
— at 460/480 V rated value	3 hp
— at 575/600 V rated value	3 hp
Short-circuit protection	
	Yes
product function short circuit protection design of the short-circuit trip	res magnetic
Installation/ mounting/ dimensions	
mounting position fastening method	any screw and spap-on mounting onto 35 mm DIN rail according to DIN EN
rastening 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

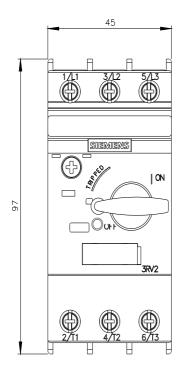
new find an editor	
required spacing	
• with side-by-side mounting at the side	0 mm
 for grounded parts at 400 V 	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
 for live parts at 400 V 	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
 for grounded parts at 500 V 	
— downwards	30 mm
— upwards	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
— at the side — forwards	0 mm
 for live parts at 690 V 	0 mm
	F0 mm
— 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
 at 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	
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 %
with high demand rate according to SN 31920	50 %
failure rate [FIT]	
	50 FIT
with low demand rate according to SN 31920 T1 value for proof text interval or convice life according to	
T1 value for proof test interval or service life according to IEC 61508	10 у
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
display version for switching status	Handle
Certificates/ approvals	
General Product Approval	

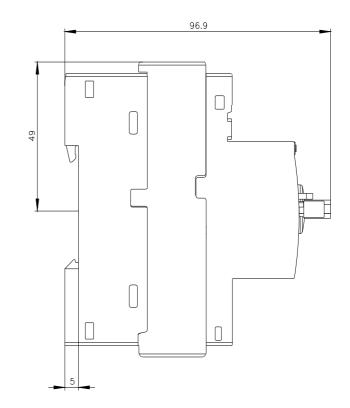
(SP) CEA		<u>Confirmation</u>		<u>KC</u>	EHC	
For use in hazardou	is locations	Declaration of Con	formity	Test Certificates		
IECEx	K ATEX	CE EG-Konf.	UK CA	Special Test Certific- ate	Type Test Certific- ates/Test Report	
Marine / Shipping						
ABS	B UREAU VERITAS		Lloyd's Register uis	PRS	RINA	
Marine / Shipping	other		Railway			
RMRS	<u>Confirmation</u>		Vibration and Shock	<u>Confirmation</u>		
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http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1FA10⟨=en Characteristic: Tripping characteristics, I ² t, Let-through current https://support.industry.siemens.com/cs/ww/en/ns/3RV2021-1FA10/char						

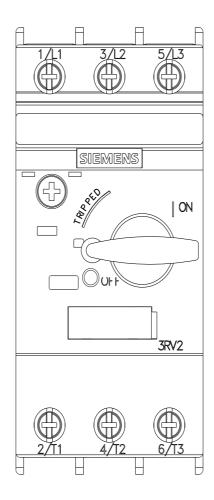
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 Further characteristics (e.g. electrical endurance, switching frequency)

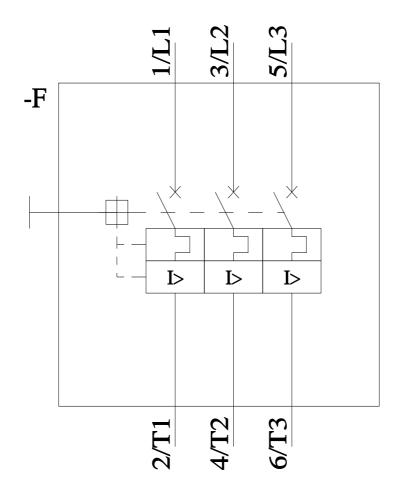
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