SIEMENS

Data sheet

3RV2021-4EA10



Circuit breaker size S0 for motor protection, CLASS 10 A-release 27...32 A N-release 400 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 	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		
maximum permissible voltage for safe isolation in networks with grounded star point			
 between main and auxiliary circuit 	400 V		
 between main and auxiliary circuit 	400 V		
shock resistance acc. 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 acc. to IEC 81346-2	Q		
Ambient conditions			
installation altitude at height above sea level maximum	2 000 m		
 ambient temperature during operation 	-20 +60 °C		
ambient temperature during storage	-50 +80 °C		
ambient temperature during transport	-50 +80 °C		
temperature compensation	-20 +60 °C		
relative humidity during operation	10 95 %		
Main circuit			
number of poles for main current circuit	3		
adjustable current response value current of the	27 32 A		

current-dependent overload release	
 operating voltage rated value 	690 V
 operating voltage at AC-3 rated value maximum 	690 V
operating frequency rated value	50 60 Hz
operational current rated value	32 A
operational current at AC-3 at 400 V rated value	32 A
operating power at AC-3	
 at 230 V rated value 	7 500 W
 at 400 V rated value 	15 000 W
• at 500 V rated value	18 500 W
 at 690 V rated value 	30 000 W
operating frequency at AC-3 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 operating short-circuit current (lcs)	liema
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
breaking capacity maximum short-circuit current (Icu)	
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
response value current of instantaneous short-circuit trip unit	400 A
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 32 A
	SZ A
yielded mechanical performance [hp] • for single-phase AC motor	
tor single-phase AC motor — at 110/120 V rated value	2 hp
	2 hp
— at 230 V rated value	5 hp
for 3-phase AC motor at 200/208 V reted value	7.5 hp
— 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
● at 500 V	gL/gG 63 A
• at 690 V	gL/gG 63 A
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail

	according to DIN EN 60715
height	97 mm
width	45 mm
depth	97 mm
required spacing	
• for grounded parts at 400 V	
 downwards 	30 mm
— upwards	30 mm
— upwards — at the side	9 mm
	9 11111
• for live parts at 400 V	20 mm
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for grounded parts at 500 V	20
— 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	
product function removable terminal for auxiliary and control circuit	No
type of electrical connection	
 for main current circuit 	screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
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 2
design of the thread of the connection screw	
 for main contacts 	M4
Safety related data	
B10 value	
 with high demand rate acc. to SN 31920 	5 000
proportion of dangerous failures	
with low demand rate acc. to SN 31920	50 %
• with high demand rate acc. to SN 31920	50 %
failure rate [FIT]	
with low demand rate acc. to SN 31920	50 FIT

IEC 61508		-0.00500				
protection class IP on the front acc. to IEC 60529 touch protection on the front acc. to IEC 60529 display version for switching status			IP20 finger-safe, for vertical contact from the front Handle			
ertificates/ approval	-	i idi		_		
	15					
General Product A	oproval				For use in hazardous locations	
(S) M			<u>KC</u>	EHC	IECEx IECEx	
For use in hazardous locations	Declaration of Co	nformity	Test Certificates		Marine / Shipping	
K ATEX	CE EG-Konf.	<u>Miscellaneous</u>	<u>Type Test</u> <u>Certificates/Test</u> <u>Report</u>	<u>Special Test</u> <u>Certificate</u>	ABS	
Marine / Shipping						
B UREAU VERITAS	Lloyd's Register urs	PRS	RINA	KMRS	DNV-GL DINU-GL	
other		Railway				
Confirmation		Confirmation	Vibration and Shock			

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-4EA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4EA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA10

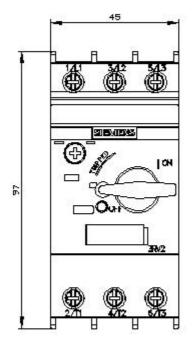
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

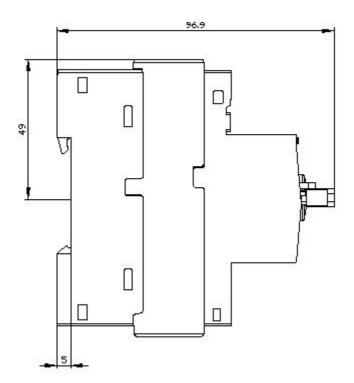
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4EA10&lang=en

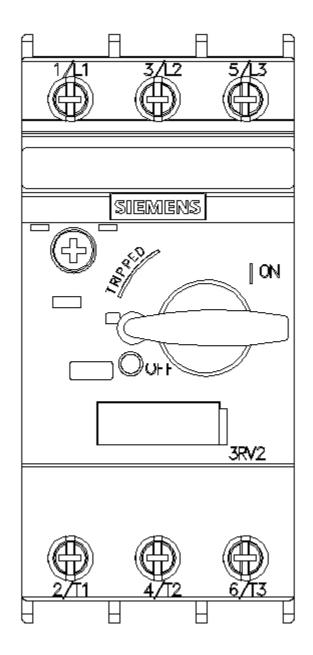
Characteristic: Tripping characteristics, I²t, Let-through current

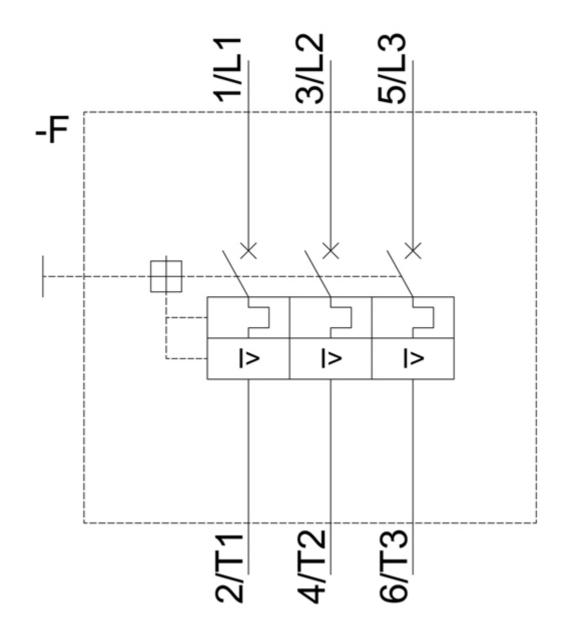
https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA10/char Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4EA10&objecttype=14&gridview=view1









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