SIEMENS

Data sheet

3RV2042-4YA10



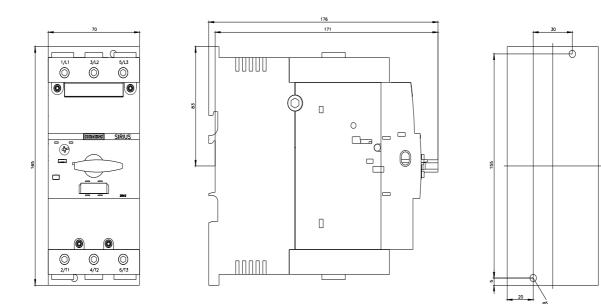
Circuit breaker size S3 for motor protection, CLASS 10 A-release 75...93 A N-release 1300 A screw terminal Increased switching capacity 100 kA $\,$

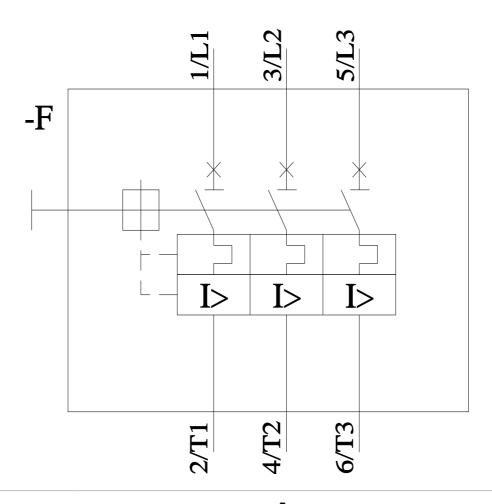
product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For motor protection
product type designation	3RV2
General technical data	
size of the circuit-breaker	S3
size of contactor can be combined company-specific	S3
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	39 W
 at AC in hot operating state per pole 	13 W
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
shock resistance according to IEC 60068-2-27	25g / 11 ms Sinus
mechanical service life (operating cycles)	
 of the main contacts typical 	25 000
 of auxiliary contacts typical 	25 000
electrical endurance (operating cycles) typical	25 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	03/01/2017
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 +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	75 93 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

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operational current rated value	93 A
operational current	
 at AC-3 at 400 V rated value 	93 A
 at AC-3e at 400 V rated value 	93 A
operating power	
• at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value	45 kW
— at 500 V rated value	55 kW
— at 690 V rated value	90 kW
• at AC-3e	
— at 230 V rated value	22 kW
— at 400 V rated value	45 kW
— at 500 V rated value	55 kW
— at 690 V rated value	90 kW
operating frequency	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
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 	10 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	50 kA
• at 500 V rated value	5 kA
• at 690 V rated value	3 kA
response value current of instantaneous short-circuit trip unit	1 300 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	93 A
• at 600 V rated value	93 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	7.5 hp
— at 230 V rated value	20 hp
• for 3-phase AC motor	
- at 200/208 V rated value	30 hp
— at 220/230 V rated value	40 hp
— at 460/480 V rated value	75 hp
— at 575/600 V rated value	100 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
Installation/ mounting/ dimensions	
	2014
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	165 mm
width	70 mm
depth	176 mm
required spacing	
• with side-by-side mounting at the side	0 mm
 for grounded parts at 400 V 	

— downwards	70 mm			
— upwards	70 mm			
— at the side	10 mm			
 for live parts at 400 V 				
— downwards	70 mm			
— upwards	70 mm			
— at the side	10 mm			
 for grounded parts at 500 V 				
— downwards	110 mm			
— upwards	110 mm			
— at the side	10 mm			
• for live parts at 500 V				
— downwards	110 mm			
— upwards	110 mm			
•	10 mm			
— at the side	10 mm			
• for grounded parts at 690 V				
— downwards	150 mm			
— upwards	150 mm			
— at the side	30 mm			
• for live parts at 690 V				
— downwards	150 mm			
— upwards	150 mm			
— at the side	30 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	2x (2.5 16 mm²)			
— solid or stranded	2x (2,5 50 mm²), 1x (10 70 mm²)			
 — finely stranded with core end processing 	2x (2.5 35 mm²), 1x (2.5 50 mm²)			
 finely stranded without core end processing 	2x (10 35 mm²), 1x (10 50 mm²)			
tightening torque				
 for main contacts for ring cable lug 	4.5 6 N·m			
outer diameter of the usable ring cable lug maximum	19 mm			
tightening torque				
 for main contacts with screw-type terminals 	4.5 6 N·m			
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 51320	500 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 interval or service life according to IEC 61508 	10 a			
Electrical Safety				

protection class IP on	the front according to					
touch protection on the front according to IEC 60529		EC 60529 finge	r-safe, for vertical contact	from the front		
Display		Hand				
display version for switching status Approvals Certificates			lle			
General Product Appr	oval					
General Product Appr	ovai					
~ ~	UK	Confirmation	(m)	ŝ	KC	
	UK		<u>m</u>	Ŵ		
EG-Konf.	СН		ccc	UL		
General Product Ap-	For use in hazardou	is locations	Test Certificates		Marine / Shipping	
proval			Test Certificates		Marine / Shipping	
	1505		Type Test Certific-	Special Test Certific-		
FHI	IECEX	(Ex)	ates/Test Report	ate		
LIIL	IECEx	ATEX			ABS	
Marine / Shipping					other	
	å.t	Llovdis	6		Miscellaneous	
	DNV	Register				
BUREAU	DNV	LRS	PRS	RINA		
other		Railway		Environment		
Confirmation	\wedge	Special Test Certific-	Confirmation			
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Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2042-4YA10						
Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2042-4YA10						
Service&Support (Manuals, Certificates, Characteristics, FAQs,)						
https://support.industry.s Image database (produ		/ <u>ps/3RV2042-4YA10</u> sion drawings, 3D models	, device circuit diagram	s, EPLAN macros)		
http://www.automation.s	iemens.com/bilddb/cax	de.aspx?mlfb=3RV2042-4	IYA10⟨=en	-, <u></u>		
Characteristic: Trippin https://support.industry.s		Let-through current /ps/3RV2042-4YA10/char				
Further characteristics	(e.g. electrical endur	ance, switching frequenc	y)	440 111 1 1		
http://www.automation.s	iemens.com/bildab/inde	ex.aspx?view=Search&mlfb		uype-14agilaview=view1		





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