SIEMENS

Data sheet 3RV2042-4KB10



Circuit breaker size S3 for motor protection, Class 20 A-release 57...75 A N-release 975 A screw terminal Increased switching capacity 100 kA



product designation design of the product	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	38 W
at AC in hot operating state per pole	12.7 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	57 75 A
operating voltage	
	20 690 V
rated value	
rated valueat AC-3 rated value maximum	690 V
	690 V 690 V

operational current rated value	75 A
operational current rated value operational current	10 /
at AC-3 at 400 V rated value	75 A
at AC-3 at 400 V rated value at AC-3e at 400 V rated value	75 A
	75 A
operating power • at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value — at 400 V rated value	37 kW
— at 500 V rated value — at 500 V rated value	45 kW
— at 690 V rated value — at 690 V rated value	55 kW
at AC-3e	33 KVV
	22 kW
— at 230 V rated value	22 KW 37 kW
— at 400 V rated value	
— at 500 V rated value	45 kW
— at 690 V rated value	55 kW
operating frequency	45 4 lb
• at AC-3 maximum	15 1/h
at AC-3e maximum	15 1/h
Protective and monitoring functions	
product function	Me
ground fault detection	No V
phase failure detection	Yes
trip class	CLASS 20
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	400.1.4
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 (lcs) 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	975 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	75 A
at 600 V rated value	75 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	7.5 hp
— at 230 V rated value	15 hp
• for 3-phase AC motor	
— at 200/208 V rated value	25 hp
— at 220/230 V rated value	30 hp
— at 460/480 V rated value	60 hp
— at 575/600 V rated value	75 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
Installation/ mounting/ dimensions	
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

— 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
— 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 circuit	Top and bottom
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 31920	50 FIT
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	Type A
T1 value	
 for proof test interval or service life according to IEC 61508 	10 a
Electrical Safety	

IP20 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front Display display version for switching status Handle Approvals Certificates

General Product Approval





Confirmation





<u>KC</u>

General Product Approval

Test Certificates

Marine / Shipping



Type Test Certificates/Test Report

Special Test Certific-







Marine / Shipping

other







Miscellaneous

Confirmation



Railway

Environment

Special Test Certific-<u>ate</u>

Confirmation



EcoTech



Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2042-4KB10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2042-4KB10

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

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

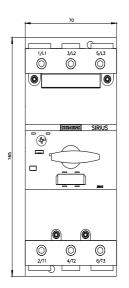
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2042-4KB10&lang=en

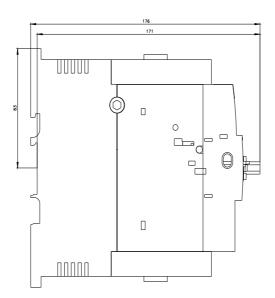
Characteristic: Tripping characteristics, I2t, Let-through current

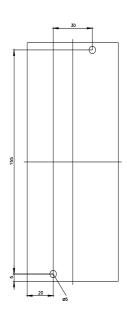
https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4KB10/char

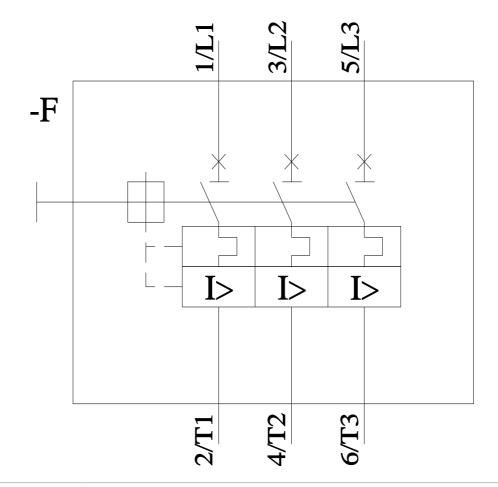
Further characteristics (e.g. electrical endurance, switching frequency)

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