## **SIEMENS**

3RV2042-4JA10 **Data sheet** 



Circuit breaker size S3 for motor protection, CLASS 10 A-release 45...63 A N-release 819 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	
<ul> <li>at AC in hot operating state</li> </ul>	34 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	11.3 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)	
<ul> <li>of the main contacts typical</li> </ul>	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	
<ul> <li>during operation</li> </ul>	-20 +60 °C
<ul> <li>during storage</li> </ul>	-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	45 63 A
operating voltage	
rated value	20 690 V
<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V
at AC-3e rated value maximum	690 V
operating frequency rated value	50 60 Hz

	00 A
operational current rated value	63 A
operational current	
<ul> <li>at AC-3 at 400 V rated value</li> </ul>	63 A
at AC-3e at 400 V rated value	63 A
operating power	
• at AC-3	
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	55 kW
• at AC-3e	
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	55 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)	ulcilla
• at AC at 240 V rated value	100 kA
at AC at 240 V rated value     at AC at 400 V rated value	100 kA
at AC at 500 V rated value	15 kA
at AC at 690 V rated value	7.5 kA
operating short-circuit current breaking capacity (Ics) at AC	100 1 4
at 240 V rated value	100 kA
at 400 V rated value	50 kA
at 500 V rated value	7.5 kA
at 690 V rated value	4 kA
response value current of instantaneous short-circuit trip unit	819 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	63 A
at 600 V rated value	63 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	5 hp
— at 230 V rated value	15 hp
• for 3-phase AC motor	
— at 200/208 V rated value	20 hp
— at 220/230 V rated value	25 hp
— at 460/480 V rated value	50 hp
— at 575/600 V rated value	60 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
Installation/ mounting/ dimensions	magnetio
	2004
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	
<ul> <li>with side-by-side mounting at the side</li> </ul>	0 mm
<ul> <li>for grounded parts at 400 V</li> </ul>	

— downwards	70 mm
— upwards	70 mm
— at the side	10 mm
<ul><li>for live parts at 400 V</li></ul>	
— 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)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (2.5 35 mm²), 1x (2.5 50 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (10 35 mm²), 1x (10 50 mm²)
tightening torque	
<ul> <li>for main contacts for ring cable lug</li> </ul>	4.5 6 N·m
outer diameter of the usable ring cable lug maximum	19 mm
tightening torque	
<ul> <li>for main contacts with screw-type terminals</li> </ul>	4.5 6 N·m
Safety related data	
product function suitable for safety function	Yes
suitability for use	
<ul> <li>safety-related switching on</li> </ul>	No
safety-related switching OFF	Yes
service life maximum	10 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	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	
<ul> <li>for proof test interval or service life according to IEC 61508</li> </ul>	10 a
Electrical Safety	

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

For use in hazardous locations

Test Certificates

Marine / Shipping







Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping











**Miscellaneous** 

other

other

Railway

Environment

Confirmation



Special Test Certificate

Confirmation



Siemens EcoTech



## **Further information**

Information on the packaging

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

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2042-4JA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2042-4JA10

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

https://support industry siemens com/cs/ww/en/ps/3RV/2042-4.IA10

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

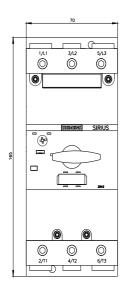
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2042-4JA10&lang=en

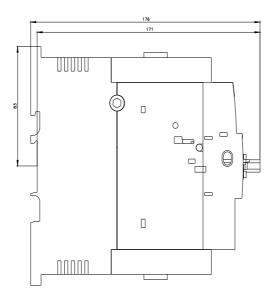
Characteristic: Tripping characteristics,  $I^2t$ , Let-through current

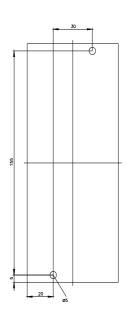
https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4JA10/char

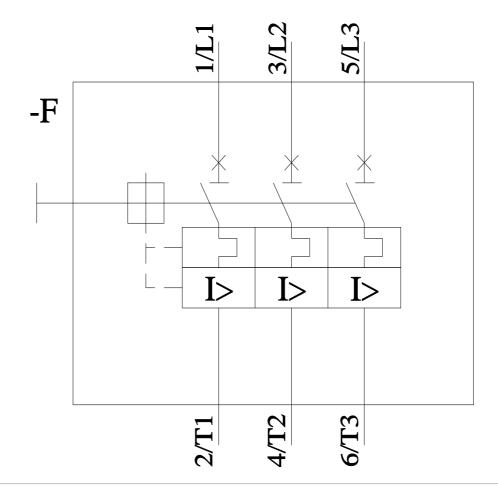
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2042-4JA10&objecttype=14&gridview=view1









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