SIEMENS

Data sheet 3RV2041-4JA10



Circuit breaker size S3 for motor protection, CLASS 10 A-release 45...63 A N-release 819 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	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 	34 W	
 at AC in hot operating state per pole 	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)		
 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	
Weight	2.234 kg	
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 %	
Environmental footprint		
global warming potential [CO2 eq] total	283.24 kg	
global warming potential [CO2 eq] during manufacturing	18.5 kg	
global warming potential [CO2 eq] during sales	1.24 kg	
global warming potential [CO2 eq] during operation	265 kg	
global warming potential [CO2 eq] after end of life	-1.5 kg	
Siemens Eco Profile (SEP)	Siemens EcoTech	
Main circuit		

According to Section 1 According to Common	number of poles for main current circuit	3
e. at AC-3 erated value maximum 600 V 50 60 Hz 50	operating voltage	
### ### ### ### ### ### ### ### ### ##	rated value	20 690 V
operational current rated value 69 A operational current rated value 63 A a ACA-3 at 400 V rated value 63 A operating power	 at AC-3 rated value maximum 	690 V
	 at AC-3e rated value maximum 	690 V
Special Current	operating frequency rated value	50 60 Hz
* at AC-3 at 400 V rated value 63 A * at AC-3 at 400 V rated value 63 A * at AC-3 at 400 V rated value 18.5 kW - at 40.3 value 30 kW - at 200 V rated value 30 kW - at 500 V rated value 55 kW - at 500 V rated value 30 kW - at 500 V rated value 37 kW - at 500 V rated value 55 kW operating frequency 55 kW - at AC-3 maximum 15 th - at AC-3 maximum 15 th - at AC-3 maximum 15 th - at AC-3 maximum 25 th - at AC-3 th	operational current rated value	63 A
• al AC-3e al 400 V rated value 83 A operating power	operational current	
# # # # # # # # # # # # # # # # # # #	 at AC-3 at 400 V rated value 	63 A
* all AC-3	at AC-3e at 400 V rated value	63 A
— at 230 V rated value	operating power	
	• at AC-3	
at 500 V rated value	— 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 690 V rated value 55 kW operating frequency • at AC-3e maximum 15 t/h • at AC-3e maximum 15 t/h Protective and monitoring functions product function • ground fault detection No • phase failure detection Yes class CLASS 10 design of the overload release thermal maximum short-circuit current breaking capacity (Icu) • at AC at 240 V rated value 65 kA • at AC at 400 V rated value 65 kA • at AC at 500 V rated value 12 kA • at AC at 500 V rated value 6 kA • at 400 V rated value 30 kA • at 400 V rated value 30 kA • at 400 V rated value 30 kA • at 600 V rated value 30 kA • at 600 V rated value 30 kA • at 600 V rated value 35 kA • at 600 V rated value 36 kA • at 800 V rated value 56 kA • at 800 V rated value 57 kBB SB S	— at 400 V rated value	30 kW
AC-3 maximum	— at 500 V rated value	37 kW
• at AC-3 maximum 15 1/h 15 1/h 15 1/h 15 1/h 16 1/	— at 690 V rated value	55 kW
• at AC-3e maximum product function • ground fault detection • phase failure detection • product five overload release maximum short-circuit current breaking capacity (Icu) • at AC at 240 V rated value • at AC at 400 V rated value • at AC at 500 V rated value • at AC at 500 V rated value • at AC at 650 V rated value • at AC at 650 V rated value • at 400 V rated value • at 800 V rated value • 63 A product function short oricuit protection • 60 hp product function short-circuit trip product function short-circuit trip magnetic maximum short-circuit reverse short-circuit reverse short-circuit reverse short-circuit trip magnetic maximum short-circuit reverse short-circuit reve	operating frequency	
Protective and monitoring functions product function • ground fault detection • phase failure detection • prose failure detection • at AC at 240 V rated value • at AC at 240 V rated value • at AC at 500 V rated value • at AC at 500 V rated value • at 240 V rated value • at 400 V rated value • at 400 V rated value • at 600 V rated value • at 480 V rated value • at 600 V	• at AC-3 maximum	15 1/h
product function		15 1/h
ground fault detection phase failure detection trip class CLASS 10 design of the overload release maximum short-circuit current breaking capacity (Icu) at AC at 240 V rated value at AC at 400 V rated value bat AC at 500 V rated value at AC at 690 V rated value bat AC at 690 V rated value at AC at 690 V rated value bat AC at 400 V rated value bat AC at 400 V rated value bat AC at 690 V rated value bat 600 V rated	Protective and monitoring functions	
phase failure detection trip class CLASS 10 design of the overload release maximum short-circuit current breaking capacity (Icu) at AC at 240 V rated value at AC at 400 V rated value at AC at 500 V rated value at AC at 500 V rated value at AC at 500 V rated value at AC at 400 V rated value at AC at 400 V rated value at AC at 400 V rated value at 40 or rated value at 40 or rated value at 400 V rated value at 600 V rated value at 600 V rated value at 600 V rated value at 480 V rated value at 200 V rated value at 500 V rated value at 500 V rated value at 200 V rated value at 500 V rated value at 200 V rated value at 200 V rated value at 400 V rated value at 500 V rated value at 500 V rated value at 600 V rated value at 60	product function	
trip class design of the overload release maximum short-circuit current breaking capacity (Icu) • at AC at 240 V rated value • at AC at 400 V rated value • at AC at 500 V rated value • at AC at 500 V rated value • at AC at 690 V rated value • at AC at 400 V rated value • at 240 V rated value • at 240 V rated value • at 240 V rated value • at 400 V rated value • at 500 V rated value • at 600 V rated value • at 800 V rated value • at 300 V rated value • at 800 V rated value • at 800 V rated value • at 200 V rated value • at 300 V rated value • at 200 V rated value • at 200 V rated value • at 200 V rated value • 5 hp - at 230 V rated value • 5 hp - at 200 V rated value • 5 hp - at 200/208 V rated value • 5 hp - at 200/208 V rated value • 5 hp - at 460/480 V rated value • 50 hp - at 470/400 V rated value • 50 hp - at 470/400 V rated value • 50 hp - at 470/400 V rated value • 50 hp - at 575/600 V rated value • 60 hp Short-circuit protection product function short circuit protection design of the short-circuit trip magnetic installation/ mounting/ dimensions	ground fault detection	No
design of the overload release thermal maximum short-circuit current breaking capacity (Icu) 100 kA e at AC at 240 V rated value 65 kA e at AC at 500 V rated value 12 kA e at AC at 690 V rated value 6 kA operating short-circuit current breaking capacity (Ics) at AC 100 kA e at 240 V rated value 30 kA e at 400 V rated value 3 kA e at 500 V rated value 3 kA e at 500 V rated value 3 kA e response value current of instantaneous short-circuit trip unit 819 A JUCSA ratings 5 full-load current (FLA) for 3-phase AC motor 63 A e at 480 V rated value 63 A e at 690 V rated value 63 A e at 100 V rated value 5 hp e for single-phase AC motor 5 hp — at 230 V rated value 20 hp e for 3-phase AC motor 20 hp — at 200/208 V rated value 25 hp e for 3-phase AC motor 25 hp — at 460/480 V rated value 60 hp e at 460/480 V rated value 60 hp <td>phase failure detection</td> <td>Yes</td>	phase failure detection	Yes
maximum short-circuit current breaking capacity (icu) at AC at 240 V Yated value at AC at 400 V rated value bat AC at 500 V rated value at AC at 500 V rated value bat 240 V rated value bat 240 V rated value bat 250 V rated value bat	trip class	CLASS 10
at AC at 240 V rated value at AC at 400 V rated value at AC at 500 V rated value at AC at 500 V rated value be at AC at 500 V rated value at AC at 690 V rated value at AC at 690 V rated value be at 240 V rated value at 240 V rated value at 400 V rated value at 500 V rated value at 500 V rated value at 500 V rated value at 600 V rated value at 480 V rated value be at 63 A at 63 A at 63 A yielded mechanical performance [hp] of or single-phase AC motor at 110/120 V rated value be for 3-phase AC motor at 220 V rated value be for 3-phase AC motor at 220 V rated value be for 3-phase AC motor at 220 V rated value be for 3-phase AC motor at 220 V rated value be for 3-phase AC motor at 220 V rated value be for 3-phase AC motor at 220 V rated value be for 3-phase AC motor at 220 V rated value be for 3-phase AC motor at 220 V rated value be for 3-phase AC motor at 220 V rated value be for 3-phase AC motor at 220 V rated value be for 3-phase AC motor at 250 ph at 250 ph at 460/480 V rated value be for phase AC motor at 250 phase A	design of the overload release	thermal
at AC at 400 V rated value at AC at 500 V rated value at AC at 500 V rated value at AC at 690 V rated value be at AC at 690 V rated value at 400 V rated value at 500 V rated value at 690 V rated value be at 690 V rated value be at 690 V rated value at 690 V rated value at 690 V rated value be at 690 V rated value at 690 V rated value be at 690 V rated value at 690 V rated value be for single-phase AC motor at 100/120 V rated value be for 3-phase AC motor at 200/208 V rated value be for 3-phase AC m	maximum short-circuit current breaking capacity (Icu)	
at AC at 500 V rated value at AC at 690 V rated value operating short-circuit current breaking capacity (Ics) at AC at 240 V rated value at 400 V rated value at 500 V rated value at 690 V rated value at 800 V rated value brown at 110/120 V rated value at 110/120 V rated value for single-phase AC motor at 110/120 V rated value for 3-phase AC motor at 220/230 V rated value at 220/230 V rated value brown at 220/230 V rated value at 460/480 V rated value brown at 460/480	at AC at 240 V rated value	100 kA
at AC at 690 V rated value operating short-circuit current breaking capacity (Ics) at AC at 240 V rated value at 400 V rated value at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit bulces ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 63 A at 690 V rated value for single-phase AC motor - at 110/120 V rated value for single-phase AC motor - at 220/208 V rated value for 3-phase AC motor - at 220/208 V rated value at 220/208 V rated value 5 hp - at 220/230 V rated value 25 hp - at 460/480 V rated value 50 hp - at 575/600 V rated value 50 hp brot-circuit protection product function short circuit protection product function short circuit trip magnetic installation/ mounting/ dimensions	at AC at 400 V rated value	65 kA
operating short-circuit current breaking capacity (Ics) at AC at 240 V rated value at 400 V rated value at 500 V rated value at 690 V rated value at 690 V rated value at 690 V rated value sylvated value at 480 V rated value at 480 V rated value at 480 V rated value at 63 A at 690 V rated value 63 A at 690 V rated value 63 A if or single-phase AC motor at 110/120 V rated value 5 hp at 220 V rated value 5 for 3-phase AC motor at 220 V rated value 5 for 3-phase AC motor at 220/230 V rated value 5 hp at 220/230 V rated value 5 hp at 250/500 V rated value 60 hp short-circuit protection product function short circuit protection design of the short-circuit trip magnetic installation/mounting/dimensions	at AC at 500 V rated value	12 kA
	at AC at 690 V rated value	6 kA
at 400 V rated value at 500 V rated value at 690 V rated value at 690 V rated value at 690 V rated value state of the state of instantaneous short-circuit trip unit ### AUL/CSA ratings ### Full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value at 600 V rated value for single-phase AC motor - at 110/120 V rated value at 230 V rated value at 230 V rated value at 200/208 V rated value at 220/230 V rated value - at 220/230 V rated value - at 460/480 V rated value at 60 hp #### Full-load current (FLA) for 3-phase AC motor - at 200/208 V rated value at 25 hp - at 460/480 V rated value at 60 hp #### Short-circuit protection #### Product function short circuit protection #### Product function short circuit trip magnetic ###################################	operating short-circuit current breaking capacity (Ics) at AC	
at 500 V rated value at 690 V rated value bfor single-phase AC motor at 110/120 V rated value at 230 V rated value at 230 V rated value at 230 V rated value at 200/208 V rated value at 200/208 V rated value at 690 V rated value bfor 400 V rated value at 690 V rated value bfor 400 V rated value at 690 V rated value bfor 400	at 240 V rated value	100 kA
at 690 V rated value response value current of instantaneous short-circuit trip unit ### SIDL/CSA ratings Full-load current (FLA) for 3-phase AC motor • at 480 V rated value	at 400 V rated value	30 kA
response value current of instantaneous short-circuit trip unit DUCSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • 63 A • at 600 V rated value • for single-phase AC motor — at 110/120 V rated value • for 3-phase AC motor — at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 220/330 V rated value — at 575/600 V rated value — at 575/600 V rated value product function short circuit protection response value value value product function short circuit protection response value value value value product function short circuit protection response value va	• at 500 V rated value	6 kA
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value • for single-phase AC motor — at 110/120 V rated value • for 3-phase AC motor — at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value — at 575/600 V rated value — at 575/600 V rated value Product function short circuit protection product function short circuit protection Yes design of the short-circuit trip magnetic Installation/ mounting/ dimensions	at 690 V rated value	3 kA
full-load current (FLA) for 3-phase AC motor	<u> </u>	819 A
at 480 V rated value at 600 V rated value bfor single-phase AC motor - at 110/120 V rated value bfor 3-phase AC motor - at 230 V rated value bfor 3-phase AC motor - at 200/208 V rated value - at 220/230 V rated value bfor 3-phase AC motor - at 460/480 V rated value bfor 3-phase AC motor - at 270/208 V rated value bfor 3-phase AC motor - at 270/208 V rated value bfor 3-phase AC motor - at 270/208 V rated value bfor 3-phase AC motor - at 270/208 V rated value bfor 450 hp - at 460/480 V rated value bfor 450 hp - at 575/600 V rated value bfor 450 hp Short-circuit protection product function short circuit protection Yes design of the short-circuit trip magnetic installation/ mounting/ dimensions	JL/CSA ratings	
at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor — at 110/120 V rated value — at 230 V rated value 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 product function short circuit protection product function short-circuit trip magnetic installation/ mounting/ dimensions	full-load current (FLA) for 3-phase AC motor	
yielded mechanical performance [hp] • for single-phase AC motor — 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	• at 480 V rated value	63 A
for single-phase AC motor — at 110/120 V rated value		63 A
- 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	yielded mechanical performance [hp]	
— at 230 V rated value • 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	• for single-phase AC motor	
for 3-phase AC motor — at 200/208 V rated value	— at 110/120 V rated value	·
- 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	— at 230 V rated value	15 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	• for 3-phase AC motor	
- 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		
— at 575/600 V rated value 60 hp Short-circuit protection product function short circuit protection design of the short-circuit trip magnetic Installation/ mounting/ dimensions		
product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions	— at 460/480 V rated value	50 hp
product function short circuit protection design of the short-circuit trip magnetic installation/ mounting/ dimensions		60 hp
design of the short-circuit trip magnetic Installation/ mounting/ dimensions	Short-circuit protection	
Installation/ mounting/ dimensions	product function short circuit protection	Yes
		magnetic
mounting position any	nstallation/ 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
 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
	110 mm
— upwards — at the side	10 mm
	TO THILL
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
onnections/ 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	0(0.5 40
— 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
afety 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	
150 13649	

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 IEC 60529	IP20
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







Special Test Certificate Type Test Certificates/Test Report



Marine / Shipping











Miscellaneous

other

Confirmation

other



Special Test Certificate

Railway

Confirmation



Environment

Siemens EcoTech



Environment

Environmental Confirmations

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=3RV2041-4JA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2041-4JA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4JA10

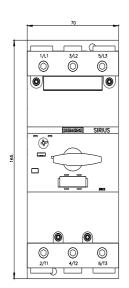
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

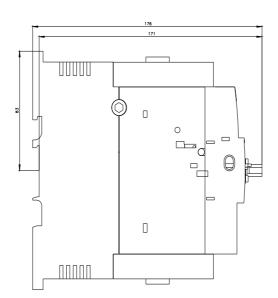
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2041-4JA10&lang=en

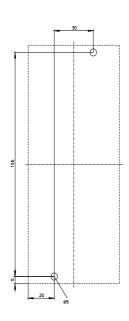
Characteristic: Tripping characteristics, I2t, Let-through current

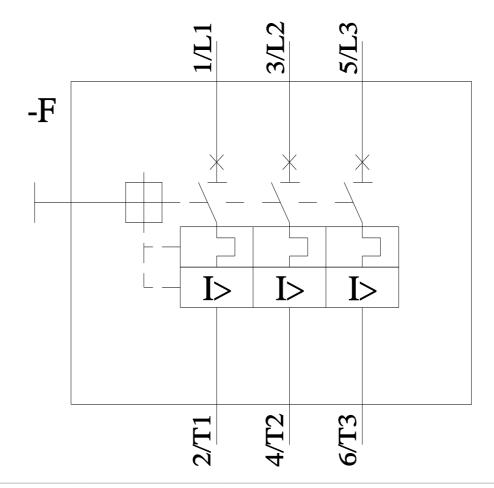
https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4JA10/char

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









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