

Siemens
EcoTech



Circuit breaker size S3 for motor protection, CLASS 10 A-release 57...75 A N-release 975 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	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
Weight	2.235 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	

number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	57 ... 75 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
operational current rated value	75 A
operational current	
• at AC-3 at 400 V rated value	75 A
• at AC-3e at 400 V rated value	75 A
operating power	
• at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	45 kW
— at 690 V rated value	55 kW
• at AC-3e	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	45 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)	
• at AC at 240 V rated value	100 kA
• at AC at 400 V rated value	65 kA
• at AC at 500 V rated value	8 kA
• at AC at 690 V rated value	5 kA
operating short-circuit current breaking capacity (Ics) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	30 kA
• at 500 V rated value	4 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	
<ul style="list-style-type: none"> ● with side-by-side mounting at the side ● for grounded parts at 400 V <ul style="list-style-type: none"> — downwards — upwards — at the side ● for live parts at 400 V <ul style="list-style-type: none"> — downwards — upwards — at the side ● for grounded parts at 500 V <ul style="list-style-type: none"> — downwards — upwards — at the side ● for live parts at 500 V <ul style="list-style-type: none"> — downwards — upwards — at the side ● for grounded parts at 690 V <ul style="list-style-type: none"> — downwards — upwards — at the side ● for live parts at 690 V <ul style="list-style-type: none"> — downwards — upwards — at the side 	<ul style="list-style-type: none"> 0 mm 70 mm 70 mm 10 mm 70 mm 70 mm 10 mm 110 mm 110 mm 10 mm 110 mm 110 mm 10 mm 150 mm 150 mm 30 mm 150 mm 150 mm 30 mm

Connections/ Terminals

type of electrical connection	
<ul style="list-style-type: none"> ● for main current circuit 	screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> ● for main contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing — finely stranded without core end processing 	<ul style="list-style-type: none"> 2x (2.5 ... 16 mm²) 2x (2.5 ... 50 mm²), 1x (10 ... 70 mm²) 2x (2.5 ... 35 mm²), 1x (2.5 ... 50 mm²) 2x (10 ... 35 mm²), 1x (10 ... 50 mm²)
tightening torque	
<ul style="list-style-type: none"> ● 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	
<ul style="list-style-type: none"> ● 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	
<ul style="list-style-type: none"> ● safety-related switching on ● safety-related switching OFF 	<ul style="list-style-type: none"> No Yes
service life maximum	10 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
<ul style="list-style-type: none"> ● with low demand rate according to SN 31920 ● with high demand rate according to SN 31920 	<ul style="list-style-type: none"> 40 % 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	10 a
<ul style="list-style-type: none"> for proof test interval or service life according to IEC 61508 	
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](#)



[KC](#)

General Product Approval	For use in hazardous locations	Test Certificates	Marine / Shipping
--------------------------	--------------------------------	-------------------	-------------------



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other
-------------------	-------



[Miscellaneous](#)

other	Railway	Environment
-------	---------	-------------

[Confirmation](#)



[Special Test Certificate](#)

[Confirmation](#)



Siemens EcoTech



Environment

[Environmental Certifications](#)

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=3RV2041-4KA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2041-4KA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4KA10>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2041-4KA10&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4KA10/char>

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



