



Circuit breaker size S3 for motor protection, Class 20 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	
• 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
Net Weight	2.247 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 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	45 ... 63 A
type of voltage for main current circuit	AC
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	63 A
operational current	
• at AC-3 at 400 V rated value	63 A
• at AC-3e at 400 V rated value	63 A
operating power	
• at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value	18.5 kW 30 kW 37 kW 55 kW
• at AC-3e — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value	18.5 kW 30 kW 37 kW 55 kW
operating frequency	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
Auxiliary circuit	
type of voltage for auxiliary and control circuit	AC/DC
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of CO contacts for auxiliary contacts	0
Protective and monitoring functions	
product function	
• ground fault detection	No
• phase failure detection	Yes
trip class	CLASS 20
design of the overload release	thermal
maximum short-circuit current breaking capacity (I_{cu})	
• 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	15 kA
• at AC at 690 V rated value	7.5 kA
operating short-circuit current breaking capacity (I_{cs}) at AC	
• 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]	
• for single-phase AC motor — at 110/120 V rated value — at 230 V rated value	5 hp 15 hp
• 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	20 hp 25 hp 50 hp 60 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
• 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
— 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 mm ²)
— solid or stranded	2x (2.5 ... 50 mm ²), 1x (10 ... 70 mm ²)
— finely stranded with core end processing	2x (2.5 ... 35 mm ²), 1x (2.5 ... 50 mm ²)
— finely stranded without core end processing	2x (10 ... 35 mm ²), 1x (10 ... 50 mm ²)
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	
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	
Environmental Product Declaration - global warming potential [CO2 eq] / during manufacturing - global warming potential [CO2 eq] / during sales - global warming potential [CO2 eq] / during operation - global warming potential [CO2 eq] / after end of life - global warming potential [CO2 eq] / total	18.5 kg 1.24 kg 265 kg -1.5 kg 283.24 kg
Environment	General Product Approval



Siemens
EcoTech



[Environmental Con-
firmations](#)



General Product Approval

Test Certificates



[Type Test Certi-
ficates/Test Report](#)

[Special Test Certi-
ficate](#)

Maritime application



other

Railway

[Miscellaneous](#)



[Confirmation](#)



[Special Test Certi-
ficate](#)

[Confirmation](#)

Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

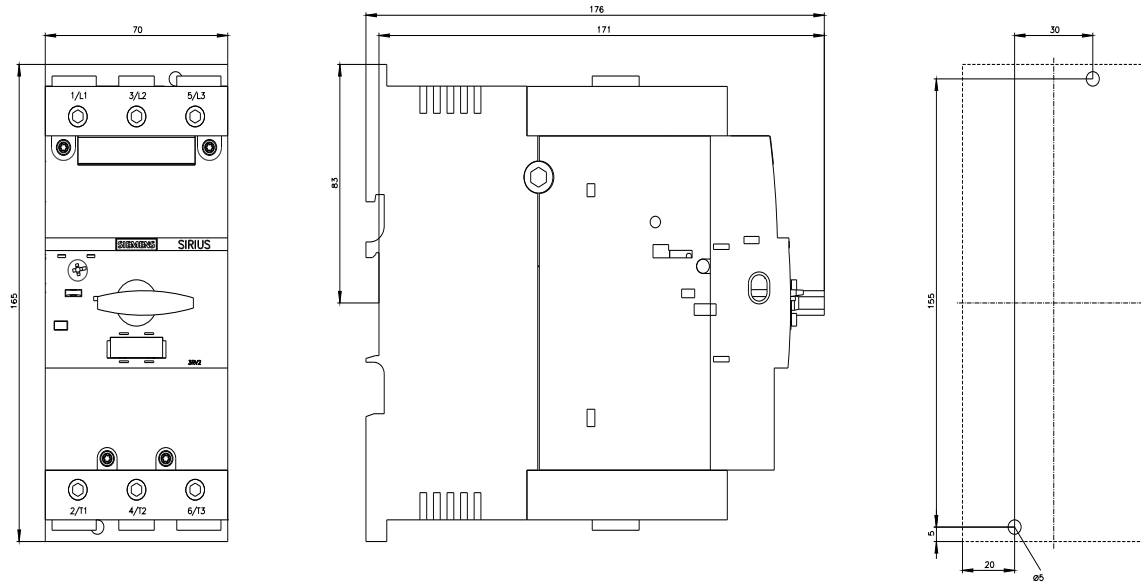
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2042-4JB10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4JB10>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2042-4JB10&lang=en





last modified:

11/11/2025