SIEMENS

Data sheet

3RV2042-4JB10



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 $\,$

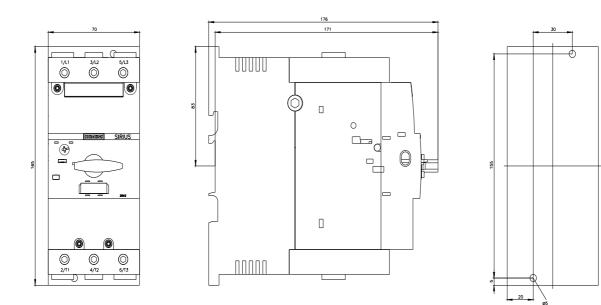
size of the circuit-breaker\$3size of contactor can be combined company-specific\$3product extension auxiliary switchYespower loss [VI] for rated value of the current*********************************	419	
design of the product For motor protection product type designation 3RV2 Seneral technical data size of the circuit-breaker size of the circuit-breaker S3 size of contactor can be combined company-specific S3 product extension auxiliary switch Yes product extension auxiliary switch Yes power loss RV[for rated value of the current 44 W et at C in hot operating state per pole 11.3 W insulation voltage with degree of pollution 3 at AC rated value 8 kV stree voltage resistance according to IEC 60068-2-27 Z5 (27) (11 ms Sinus mechanical service life (operating cycles) 25 000 of the main contacts typical 25 000 electrical endurance (operating cycles) typical 25 000 efforence code according to IEC 60068-2-27 Q Substance Prohibitance (Date) 03/01/2017 Substance Prohibitance (Date) 03/01/2017 Substance Prohibitance (Date) 20/01 m installation attitude at height above sea level maximum 2000 m eduring operation -20+60 °C	product brand name	SIRIUS
product type designation 3RV2 Sonoral technical data	product designation	Circuit breaker
Peneral technical data size of the circuit-breaker S3 size of contactor can be combined company-specific S3 size of contactor can be combined company-specific S3 power loss [W] for rated value of the current ************************************	design of the product	For motor protection
size of the circuit-breaker \$3 size of contactor can be combined company-specific \$3 product extension auxiliary switch Yes prover loss [VI] for rated value of the current • at AC in hot operating state per pole 11.3 W • at AC in hot operating state per pole 11.3 W • at AC in hot operating state per pole 11.3 W • at AC in hot operating state per pole 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 m ambient temperature • during storage -50 +80 °C • during transport -50 +80 °C • during transport -50 +80 °C • calced value 20 690 V • at AC-3 rated value maximum 690 V • at AC-3 rated value maximum 690 V	product type designation	3RV2
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 1000 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 substance nome Lead - 7439-92-1 while transport 0 subtance name 200 m ambient temperature - • during operation -20 +60 °C • during storage -50 +80 °C • during tansport -50 +80 °C <t< th=""><th>General technical data</th><th></th></t<>	General technical data	
product extension auxiliary switch Yes power loss [W] for rated value of the current 34 W • at AC in hot operating state per pole 11.3 W • insulation voltage with degree of pollution 3 at AC rated value 100 V surge voltage resistance rated value 8 kV shock resistance according to IEC 60068-2-27 25g / 11 ms Sinus mechanical service IIfe (operating cycles) - • of the main contacts typical 25 000 • of auxiliary contacts typical 25 000 electrical endurance (operating cycles) typical 25 000 voltatece name Lead - 7439-92-1 voltatece name Lead - 7439-92-1 voltation attitude at height above sea level maximum 2 000 m ambient temperature -20 +60 °C • during strage -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 %	size of the circuit-breaker	S3
power loss [W] for rated value of the current 34 W • at AC in hot operating state 34 W • at AC in hot operating state 34 W • at AC in hot operating state 11.3 W insulation voltage with degree of pollution 3 at AC rated value 1000 V surge voltage resistance rated value 8 kV shock resistance according to IEC 60068-2-27 25g / 11 ms Sinus mechanical service Iffe (operating cycles) 6 • 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 whient conditions 2000 m ambient temperature -20 +60 °C • during operation -20 +60 °C • during transport -50 +80 °C • during transport -50 +80 °C • during transport -50 +80 °C • during transports -50 +80 °C • during transport -50 +	size of contactor can be combined company-specific	S3
• at AC in hot operating state34 W• at AC in hot operating state per pole11.3 Winsulation voltage with degree of pollution 3 at AC rated value1000 Vsurge voltage resistance rated value8 kVshock resistance according to IEC 60068-2-2725g / 11 ms Sinusmechanical service life (operating cycles) of the main contacts typical25 000- of auxiliary contacts typical25 000electrical endurance (operating cycles) typical25 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)03/01/2017SVHC substance nameLead - 7439-92-1whilent conditions-20 +60 °C- during operation-20 +60 °C- during storage-50 +80 °C- during storage-50 +80 °C- during transport-50 +80 °C- during transport3adjustable current circuit3adjustable current circuit3adjustable current circuit3- operating voltage-60 oV- intel value20 690 V- intel value20 690 V- intel Coltare maximum690 V	product extension auxiliary switch	Yes
• at AC in hot operating state per pole11.3 Winsulation voltage with degree of pollution 3 at AC rated value1 000 Vsurge voltage resistance rated value8 kVshock resistance according to IEC 60068-2-2725 000• of the main contacts typical25 000• of the main contacts typical25 000• of auxiliary contacts typical25 000• of auxiliary contacts typical03 001/2017Substance Prohibitance (Date)03001/2017Substance Prohibitance (Date)03001/2017Substance Prohibitance (Date)02 0	power loss [W] for rated value of the current	
insulation voltage with degree of pollution 3 at AC rated value 1000 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 electrical endurance (operating cycles) 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 2 000 m ambient temperature - • during operation -20 +60 °C • during storage -50 +60 °C • during transport -50 +60 °C	 at AC in hot operating state 	34 W
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 electrical endurance (operating cycles) typical 25 000 substance Prohibitance (Date) 03/01/2017 SVHC substance Iname Lead - 7439-92-1 Vmblent conditions installation altitude at height above sea level maximum 2 000 m amblent temperature • during operation - 20 +60 °C • during storage -50 +80 °C relative humidity during operation 10 95 % Atin circuit number of poles for main current circuit 3 adjustable current response value current of the current- dependent overload release • operating voltage • rated value • at AC-3 rated value maximum 690 V	 at AC in hot operating state per pole 	11.3 W
shock resistance according to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (operating cycles) 25 000 • 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 wholent conditions 2000 m ambient temperature -20 460 °C • during operation -20 460 °C • during storage -50 +80 °C • during transport 50 +80 °C relative humidity during operation 10 95 % Atain circuit 3 adjustable current response value current of the current- 45 63 A operating voltage 20 690 V • rated value 20 690 V • at AC-3 rated value maximum 690 V	insulation voltage with degree of pollution 3 at AC rated value	1 000 V
mechanical service life (operating cycles) o • 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 Vmbient conditions 2000 m ambient temperature 2000 m • during operation -20 +60 °C • during strage -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Afain circuit 3 adjustable current response value current of the current-dependent overload release 45 63 A operating voltage 20 690 V • at AC-3 rated value maximum 690 V	surge voltage resistance rated value	8 kV
• of the main contacts typical25 000• of auxiliary contacts typical25 000electrical endurance (operating cycles) typical25 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)03/01/2017SVHC substance nameLead - 7439-92-1unbient conditions2 000 mambient temperature2 000 m• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation10 95 %Aain circuit3adjustable current response value current of the current- dependent overload release3operating voltage20 690 V• at AC-3 rated value maximum690 V• at AC-3 rated value maximum690 V	shock resistance according to IEC 60068-2-27	25g / 11 ms Sinus
• of auxiliary contacts typical25 000electrical endurance (operating cycles) typical25 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)03/01/2017SVHC substance nameLead - 7439-92-1Ambient conditions2 000 mambient temperature-20 +60 °C• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation01 95 %Atain circuit3adjustable current response value current of the current dependent overload release3operating voltage20 600 V• at AC-3 rated value maximum20 690 V• at AC-3 rated value maximum690 V• at AC-3 rated value maximum690 V	mechanical service life (operating cycles)	
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 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 % Atain circuit 3 adjustable current response value current of the current-dependent overload release 45 63 A operating voltage - • rated value 20 690 V • at AC-3 rated value maximum 690 V	 of the main contacts typical 	25 000
reference code according to IEC 81346-2 Substance Prohibitance (Date) SVHC substance name Lead - 7439-92-1 Mbient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage • during transport relative humidity during operation trelative humidity during operation 10 95 % Alain circuit number of poles for main current circuit adjustable current response value current of the current- dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maxi	 of auxiliary contacts typical 	25 000
Substance Prohibitance (Date) 03/01/2017 SVHC substance name Lead - 7439-92-1 Ambient conditions 2 000 m installation altitude at height above sea level maximum 2 000 m ambient temperature -20 +60 °C • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Ahin circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current- 45 63 A operating voltage - • rated value 20 690 V • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V	electrical endurance (operating cycles) typical	25 000
SVHC substance name Lead - 7439-92-1 Ambient conditions 2 000 m installation altitude at height above sea level maximum 2 000 m ambient temperature -20 +60 °C • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Aain circuit 3 adjustable current response value current of the current- dependent overload release 45 63 A operating voltage - • rated value 20 690 V • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V	reference code according to IEC 81346-2	Q
Ambient conditions 2 000 m ambient temperature 2 000 m • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Anin circuit 3 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 • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V	Substance Prohibitance (Date)	03/01/2017
installation altitude at height above sea level maximum 2 000 m ambient temperature -20 +60 °C • during operation -20 +60 °C • during storage -50 +80 °C • during transport -50 +80 °C relative humidity during operation 10 95 % Alain circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current- dependent overload release 45 63 A operating voltage 20 690 V • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V	SVHC substance name	Lead - 7439-92-1
ambient temperature-20 +60 °C• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation10 95 %Alain circuit3number of poles for main current circuit3adjustable current response value current of the current- dependent overload release45 63 Aoperating voltage20 690 V• rated value20 690 V• at AC-3 rated value maximum690 V• at AC-3e rated value maximum690 V	Ambient conditions	
• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation10 95 %Main circuit3Adjustable current response value current of the current- dependent overload release3operating voltage-• rated value20 690 V• at AC-3 rated value maximum690 V• at AC-3e rated value maximum690 V	installation altitude at height above sea level maximum	2 000 m
	ambient temperature	
• during transport -50 +80 °C relative humidity during operation 10 95 % Aain circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current- dependent overload release 45 63 A operating voltage 20 690 V • rated value 20 690 V • at AC-3 rated value maximum 690 V	 during operation 	-20 +60 °C
relative humidity during operation 10 95 % Aain circuit 3 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 at AC-3 rated value maximum 690 V at AC-3e rated value maximum 690 V 690 V	during storage	-50 +80 °C
Alain circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current- dependent overload release 45 63 A operating voltage 20 690 V • rated value 690 V • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V	during transport	-50 +80 °C
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 at AC-3 rated value maximum eat AC-3e rated value maximum 690 V 690 V	relative humidity during operation	10 95 %
adjustable current response value current of the current- 45 63 A operating voltage 20 690 V • rated value 20 690 V • at AC-3 rated value maximum 690 V • at AC-3e rated value maximum 690 V	Main circuit	
dependent overload release operating voltage • rated value • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum • at AC-3e rated value maximum	number of poles for main current circuit	3
• rated value20 690 V• at AC-3 rated value maximum690 V• at AC-3e rated value maximum690 V		45 63 A
at AC-3 rated value maximum 690 V at AC-3e rated value maximum 690 V	operating voltage	
• at AC-3e rated value maximum 690 V	rated value	20 690 V
	 at AC-3 rated value maximum 	690 V
operating frequency rated value 50 60 Hz	 at AC-3e rated value maximum 	690 V
	operating frequency rated value	50 60 Hz

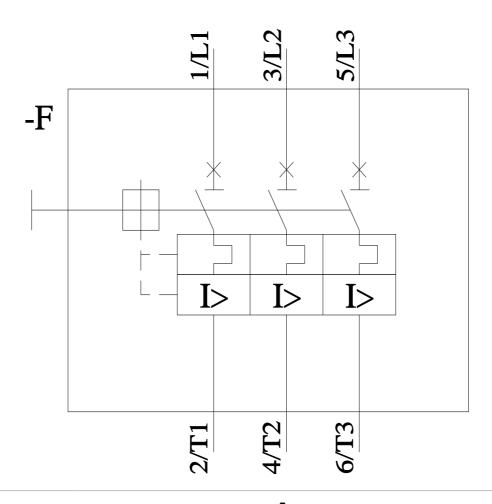
operational current rated value	63 A
operational current	
 at AC-3 at 400 V rated value 	63 A
 at AC-3e at 400 V rated value 	63 A
operating power	
• at AC-3	
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	55 kW
● at AC-3e	
— at 230 V rated 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
-	Yes
phase failure detection	CLASS 20
trip class	
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	15 kA
at AC at 690 V rated value	7.5 kA
operating short-circuit current breaking capacity (Ics) 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	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	
	Vos
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			
	10 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	Top and bottom			
circuit				
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	100			
	40.9/			
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	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			r-safe, for vertical contact f	rom the front		
Display						
display version for switch	ning status	Hand	lle			
Approvals Certificates						
General Product Appro	oval					
	UK CA	CE EG-Konf.	<u>Confirmation</u>		KC	
General Product Approval	Test Certificates		Marine / Shipping			
EHC	Type Test Certific- ates/Test Report	Special Test Certific- ate	ABS	BUREAU VERITAS		
Marine / Shipping			other			
Lloyd's Register uis	PRS	RINA	<u>Miscellaneous</u>	<u>Confirmation</u>	UDE VDE	
Railway		Environment				
<u>Special Test Certific-</u> <u>ate</u>	<u>Confirmation</u>	EPD	Siemens EcoTech	Environmental Con- firmations		
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=3RV2042-4JB10						
Cax online generator						
http://support.automation		Korder/default.aspx?lang=	en&mlfb=3RV2042-4JB10			
Service&Support (Man https://support.industry.s						
Image database (produ http://www.automation.si Characteristic: Trippin https://support.industry.si	ict images, 2D dimensi iemens.com/bilddb/cax g characteristics, I²t, Lo iemens.com/cs/ww/en/p	on drawings, 3D models de.aspx?mlfb=3RV2042-4 et-through current		, EPLAN macros,)		

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2042-4JB10&objecttype=14&gridview=view1





4/12/2024 🖸

Subject to change without notice © Copyright Siemens