SIEMENS

Data sheet 3RV2321-1FC20



Circuit breaker size S0 for starter combination Rated current 5 A N release 65 A Spring-type terminal Standard switching capacity

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For starter combinations
product type designation	3RV2
General technical data	O.V.E
size of the circuit-breaker	S0
size of contactor can be combined company-specific	S00, S0
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
at AC in hot operating state	7.25 W
at AC in hot operating state per pole	2.4 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
shock resistance according to IEC 60068-2-27	25g / 11 ms
mechanical service life (operating cycles)	
of the main contacts typical	100 000
of auxiliary contacts typical	100 000
electrical endurance (operating cycles) typical	100 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
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
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	5 A
operational current	
• at AC-3 at 400 V rated value	5 A
at AC-3e at 400 V rated value	5 A
operating power	
• at AC-3	

10001/ 1 1 1	
— at 230 V rated value	1.1 kW
— at 400 V rated value	1.5 kW
— at 500 V rated value	2.2 kW
— at 690 V rated value	4 kW
• at AC-3e	
— at 230 V rated value	1.1 kW
— at 400 V rated value	1.5 kW
— at 500 V rated value	2.2 kW
— at 690 V rated value	4 kW
operating frequency	
• at AC-3 maximum	15 1/h
at AC-3e maximum	15 1/h
Auxiliary circuit	
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	
•	No
ground fault detection phase failure detection	No No
phase failure detection	No
maximum short-circuit current breaking capacity (Icu)	400 l.A
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 	100 kA
at AC at 690 V rated value	6 kA
operating short-circuit current breaking capacity (Ics) at AC	
at 240 V rated value	100 kA
 at 400 V rated value 	100 kA
 at 500 V rated value 	100 kA
at 690 V rated value	4 kA
response value current of instantaneous short-circuit trip unit	65 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
full-load current (FLA) for 3-phase AC motor • at 480 V rated value	5 A
	5 A 5 A
• at 480 V rated value	
at 480 V rated value at 600 V rated value	
at 480 V rated value at 600 V rated value yielded mechanical performance [hp]	
at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor	5 A
at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value	5 A 0.17 hp
at 480 V rated value 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	5 A 0.17 hp
at 480 V rated value 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	5 A 0.17 hp 0.5 hp
 at 480 V rated value 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 	5 A 0.17 hp 0.5 hp 1 hp
at 480 V rated value 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 at 220/230 V rated value	5 A 0.17 hp 0.5 hp 1 hp 1 hp
at 480 V rated value 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 at 220/230 V rated value at 460/480 V rated value	5 A 0.17 hp 0.5 hp 1 hp 1 hp 3 hp
at 480 V rated value 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 at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value Short-circuit protection	5 A 0.17 hp 0.5 hp 1 hp 1 hp 3 hp
at 480 V rated value 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 at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value Short-circuit protection	5 A 0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp
at 480 V rated value 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 at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip	5 A 0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp
at 480 V rated value 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 at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp Yes magnetic
at 480 V rated value 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 at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position	5 A 0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp Yes magnetic any
at 480 V rated value 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 at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp Yes magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
at 480 V rated value 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 — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method height	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp 3 hp Yes magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 119 mm
at 480 V rated value 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 — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method height width	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp 3 hp Yes magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 119 mm 45 mm
at 480 V rated value 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 — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method height width depth	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp 3 hp Yes magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 119 mm
at 480 V rated value 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 — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp 3 hp Yes magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 119 mm 45 mm 97 mm
at 480 V rated value 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 — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing • with side-by-side mounting at the side	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp 3 hp 3 magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 119 mm 45 mm
at 480 V rated value 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 at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value at 575/600 V rated value short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing with side-by-side mounting at the side for grounded parts at 400 V	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp 3 hp Yes magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 119 mm 45 mm 97 mm 0 mm
at 480 V rated value 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 at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value at 575/600 V rated value short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing with side-by-side mounting at the side for grounded parts at 400 V — downwards	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp Yes magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 119 mm 45 mm 97 mm 0 mm 30 mm
at 480 V rated value 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 at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing with side-by-side mounting at the side for grounded parts at 400 V downwards upwards	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp 3 hp Yes magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 119 mm 45 mm 97 mm 0 mm 30 mm 30 mm
at 480 V rated value 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 at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing with side-by-side mounting at the side for grounded parts at 400 V — downwards	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp Yes magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 119 mm 45 mm 97 mm 0 mm 30 mm

touch protection on the front according to IEC 60529 display version for switching status Certificates/ approvals General Product Approval	finger-safe, for vertical contact from the front Handle Declaration of Conformity
display version for switching status	
_	
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
protection class IP on the front according to IEC 60529	IP20
T1 value for proof test interval or service life according to IEC 61508	10 a
 with low demand rate according to SN 31920 	50 FIT
failure rate [FIT]	
 with high demand rate according to SN 31920 	50 %
with low demand rate according to SN 31920	50 %
proportion of dangerous failures	
 with high demand rate according to SN 31920 	5 000
B10 value	
Safety related data	
size of the screwdriver tip	3,0 x 0,5 mm
design of screwdriver shaft	Diameter 3 mm
for AWG cables for main contacts	2x (18 8)
finely stranded without core end processing	2x (1 6 mm²)
finely stranded with core end processing	2x (1 6 mm²)
— solid or stranded	2x (1 10 mm²)
• for main contacts	
type of connectable conductor cross-sections	
arrangement of electrical connectors for main current circuit	Top and bottom
for main current circuit	spring-loaded terminals
type of electrical connection	
Connections/ Terminals	
— forwards	0 mm
— at the side	30 mm
— backwards	0 mm
— upwards	50 mm
— downwards	50 mm
• for live parts at 690 V	
— forwards	0 mm
— at the side	30 mm
— backwards	0 mm
— upwards	50 mm
— downwards	50 mm
• for grounded parts at 690 V	
— at the side	9 mm
— upwards	30 mm
— downwards	30 mm
• for live parts at 500 V	
— at the side	9 mm
— upwards	30 mm
— downwards	30 mm
● for grounded parts at 500 V	
— at the side	9 mm
— upwards	30 mm
— downwards	30 mm

Confirmation











Test Certificates

Marine / Shipping









Marine / Shipping

other

Railway





Confirmation



Confirmation

Vibration and Shock

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RV2321-1FC20

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2321-1FC20

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2321-1FC20

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

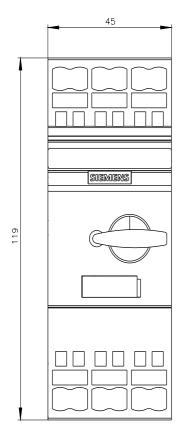
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2321-1FC20&lang=en

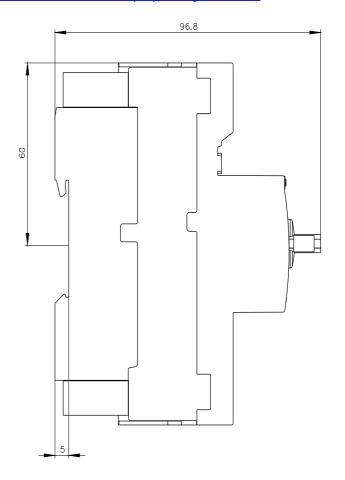
Characteristic: Tripping characteristics, I2t, Let-through current

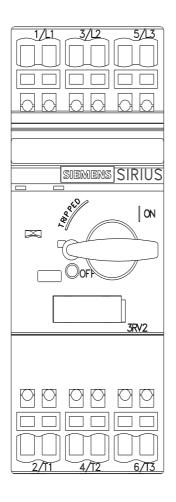
https://support.industry.siemens.com/cs/ww/en/ps/3RV2321-1FC20/char

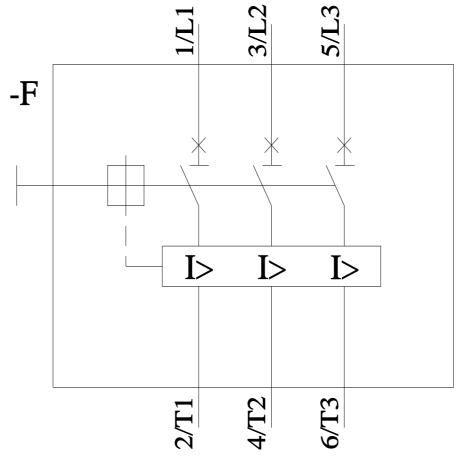
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2321-1FC20&objecttype=14&gridview=view1









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