

CIRCUIT BREAKER, SIZE S2, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 49...59A, N-RELEASE 845A, SCREW TERMINAL, INCREASED SWITCHING CAPACITY W. TRANSV. AUX. SWITCH 1NO+1NC



Figure similar

product brand name	SIRIUS
Product designation	3RV2 circuit breaker

General technical data:

Size of the circuit-breaker	S2
Size of contactor can be combined company-specific	S2
Product extension	
• Auxiliary switch	Yes
Power loss [W] total typical	19 W
Insulation voltage with degree of pollution 3 rated value	690 V
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
• in networks with grounded star point between main and auxiliary circuit	400 V
• in networks with grounded star point between main and auxiliary circuit	400 V
Protection class IP	
• on the front	IP20
• of the terminal	IP00

Shock resistance	
<ul style="list-style-type: none"> • acc. to IEC 60068-2-27 	25g / 11 ms Sinus
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • of the main contacts typical 	20 000
<ul style="list-style-type: none"> • of auxiliary contacts typical 	20 000
Electrical endurance (switching cycles)	
<ul style="list-style-type: none"> • typical 	20 000
Protection against electrical shock	finger-safe when touched vertically from front acc. to IEC 60529
Equipment marking acc. to DIN EN 81346-2	Q

Ambient conditions:

Installation altitude at height above sea level maximum	2 000 m
Ambient temperature	
<ul style="list-style-type: none"> • during operation 	-20 ... +60 °C
<ul style="list-style-type: none"> • during storage 	-50 ... +80 °C
<ul style="list-style-type: none"> • during transport 	-50 ... +80 °C
Temperature compensation	-20 ... +60 °C
Relative humidity during operation	10 ... 95 %

Main circuit:

Number of poles for main current circuit	3
Adjustable pick-up value current of the current-dependent overload release	49 ... 59 A
Operating voltage	
<ul style="list-style-type: none"> • rated value 	690 V
<ul style="list-style-type: none"> • at AC-3 rated value maximum 	690 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	59 A
Operating current	
<ul style="list-style-type: none"> • at AC-3 	
<ul style="list-style-type: none"> — at 400 V rated value 	59 A
Operating power	
<ul style="list-style-type: none"> • at AC-3 	
<ul style="list-style-type: none"> — at 230 V rated value 	15 000 W
<ul style="list-style-type: none"> — at 400 V rated value 	30 000 W
<ul style="list-style-type: none"> — at 500 V rated value 	37 000 W
<ul style="list-style-type: none"> — at 690 V rated value 	55 000 W
Operating frequency	
<ul style="list-style-type: none"> • at AC-3 maximum 	15 1/h

Auxiliary circuit:

Design of the auxiliary switch	transverse
Number of NC contacts	

<ul style="list-style-type: none"> • for auxiliary contacts — Note 	1 1
Number of NO contacts	
<ul style="list-style-type: none"> • for auxiliary contacts — Note 	1 1
Operating current of auxiliary contacts at AC-15	
<ul style="list-style-type: none"> • at 24 V • at 230 V 	2 A 0.5 A
Operating current of auxiliary contacts at DC-13	
<ul style="list-style-type: none"> • at 24 V • at 60 V • at 110 V • at 125 V • at 220 V 	1 A 0.15 A 0 A 0 A 0 A

Protective and monitoring functions:

Trip class	Class 10
Design of the overload release	thermal
Operational short-circuit current breaking capacity (Ics) at AC	
<ul style="list-style-type: none"> • at 240 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value 	100 kA 50 kA 5 kA 4 kA
Maximum short-circuit current breaking capacity (Icu)	
<ul style="list-style-type: none"> • at AC at 240 V rated value • at AC at 400 V rated value • at AC at 500 V rated value • at AC at 690 V rated value • at 480 AC Y/277 V acc. to UL 489 rated value 	100 kA 100 kA 10 kA 6 kA 42 A

UL/CSA ratings:

Full-load current (FLA) for three-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	59 A 59 A
Yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 110/120 V rated value — at 230 V rated value • for three-phase AC motor <ul style="list-style-type: none"> — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value 	5 hp 10 hp 20 hp 40 hp 50 hp





Contact rating of auxiliary contacts according to UL	C300 / R300
Short-circuit protection	
Design of the short-circuit trip	magnetic
Design of the fuse link	Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I _k < 400 A)
<ul style="list-style-type: none"> • for short-circuit protection of the auxiliary switch required 	
Design of the fuse link for IT network for short-circuit protection of the main circuit	none required
<ul style="list-style-type: none"> • at 240 V • at 400 V • at 500 V • at 690 V 	160 125 100
Installation/ mounting/ dimensions:	
Mounting position	any
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
Height	140 mm
Width	55 mm
Depth	149 mm
Required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side 	0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 0 mm 50 mm 50 mm 10 mm
Connections/ Terminals:	
Product function	

<ul style="list-style-type: none"> removable terminal for auxiliary and control circuit 	No
Type of electrical connection <ul style="list-style-type: none"> for main current circuit for auxiliary and control current circuit 	screw-type terminals 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"> single or multi-stranded finely stranded with core end processing at AWG conductors for main contacts 	2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²) 2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²) 2x (18 ... 2), 1x (18 ... 1)
Type of connectable conductor cross-sections <ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> single or multi-stranded finely stranded with core end processing at AWG conductors for auxiliary contacts 	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14)
Tightening torque <ul style="list-style-type: none"> for main contacts with screw-type terminals for auxiliary contacts with screw-type terminals 	3 ... 4.5 N·m 0.8 ... 1.2 N·m
Design of screwdriver shaft	Diameter 5 to 6 mm
Design of the thread of the connection screw <ul style="list-style-type: none"> for main contacts of the auxiliary and control contacts 	M6 M3

Safety related data:

B10 value	
<ul style="list-style-type: none"> with high demand rate acc. to SN 31920 	5 000
Proportion of dangerous failures	
<ul style="list-style-type: none"> with low demand rate acc. to SN 31920 with high demand rate acc. to SN 31920 	40 % 50 %
Failure rate [FIT]	
<ul style="list-style-type: none"> with low demand rate acc. to SN 31920 	50 FIT
T1 value for proof test interval or service life acc. to IEC 61508	10 y
Display version	
<ul style="list-style-type: none"> for switching status 	Handle

Certificates/approvals

General Product Approval			Declaration of Conformity	Test Certificates	
 CCC	 CSA	 UL	 EG-Konf.	spezielle Prüfbescheinigung <u>n</u>	Typprüfbescheinigung/Werkszeugnis

other	Railway	
Umweltbestätigung	Bestätigungen	Schwingen/Schocke <u>n</u>

Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV20324XA15>

Cax online generator

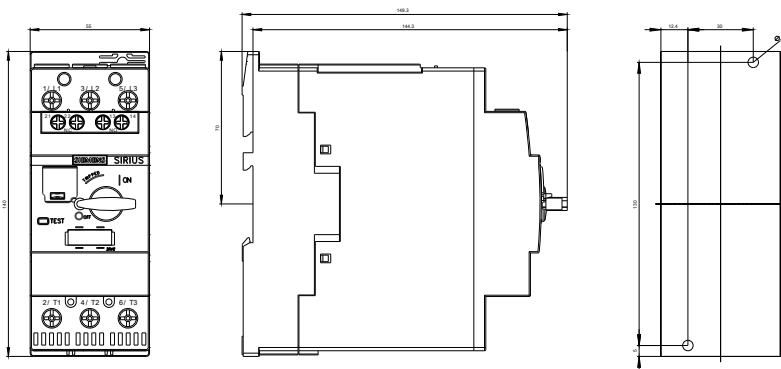
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV20324XA15>

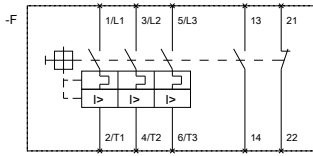
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RV20324XA15>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV20324XA15&lang=en





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