SIEMENS

Data sheet 3RV2431-4UA10



Circuit breaker size S2 for transformer protection A-release 32...40 A N-release 820 A screw terminal Standard switching capacity



	SIRIUS
product designation	Circuit breaker
design of the product	For transformer protection
product type designation	3RV2
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] for rated value of the current	
 at AC in hot operating state 	20 W
 at AC in hot operating state per pole 	6.7 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 Sinus
mechanical service life (operating cycles)	
 of the main contacts typical 	50 000
of auxiliary contacts typical	50 000
electrical endurance (operating cycles) typical	50 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/15/2014
SVHC substance name	Lead - 7439-92-1
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
	32 40 A
adjustable current response value current of the current- dependent overload release	
dependent overload release	20 690 V
dependent overload release operating voltage	20 690 V 690 V
dependent overload release operating voltage • rated value	

operational current rated value	40 A
operational current	
 at AC-3 at 400 V rated value 	40 A
at AC-3e at 400 V rated value	40 A
operating power	
• at AC-3	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	22 kW
— at 690 V rated value	37 kW
• at AC-3e	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	22 kW
— at 690 V rated value	37 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
· · · · · · · · · · · · · · · · · · ·	
Protective and monitoring functions	
product function	N-
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 	10 kA
at AC at 690 V rated value	4 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	5 kA
at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	820 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	40 A
at 600 V rated value	40 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	3 hp
— at 230 V rated value	
	7.5 hp
• for 3-phase AC motor	45 hn
— at 200/208 V rated value	15 hp
— at 220/230 V rated value	15 hp
— at 460/480 V rated value	30 hp
— at 575/600 V rated value	40 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	140 mm
width	55 mm
depth	149 mm

required spacing	
 with side-by-side mounting at the side 	0 mm
 for grounded parts at 400 V 	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
 for live parts at 400 V 	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
 for grounded parts at 500 V 	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for live parts at 500 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for grounded parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— upwards — backwards	0 mm
	0 mm
— at the side — forwards	0 mm
	O min
• for live parts at 690 V	50
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	10 mm
— forwards	0 mm
Connections/ Terminals	
Connections/ Terminals	
type of electrical connection	
type of electrical connection • for main current circuit	screw-type terminals
type of electrical connection • for main current circuit arrangement of electrical connectors for main current	screw-type terminals Top and bottom
type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit	
type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections	
type of electrical connection	Top and bottom
type of electrical connection	Top and bottom 2x (1 25 mm²), 1x (1 35 mm²)
type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts — solid or stranded — finely stranded with core end processing	Top and bottom 2x (1 25 mm²), 1x (1 35 mm²) 2x (1 16 mm²), 1x (1 25 mm²)
type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts — solid or stranded — finely stranded with core end processing • for AWG cables for main contacts	Top and bottom 2x (1 25 mm²), 1x (1 35 mm²)
type of electrical connection	Top and bottom 2x (1 25 mm²), 1x (1 35 mm²) 2x (1 16 mm²), 1x (1 25 mm²) 2x (18 3), 1x (18 2)
type of electrical connection	Top and bottom 2x (1 25 mm²), 1x (1 35 mm²) 2x (1 16 mm²), 1x (1 25 mm²) 2x (18 3), 1x (18 2) 3 4.5 N·m
type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts — solid or stranded — finely stranded with core end processing • for AWG cables for main contacts tightening torque • for main contacts with screw-type terminals design of screwdriver shaft	Top and bottom 2x (1 25 mm²), 1x (1 35 mm²) 2x (1 16 mm²), 1x (1 25 mm²) 2x (18 3), 1x (18 2) 3 4.5 N·m Diameter 5 to 6 mm
type of electrical connection	Top and bottom 2x (1 25 mm²), 1x (1 35 mm²) 2x (1 16 mm²), 1x (1 25 mm²) 2x (18 3), 1x (18 2) 3 4.5 N·m
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type of electrical connection	Top and bottom 2x (1 25 mm²), 1x (1 35 mm²) 2x (1 16 mm²), 1x (1 25 mm²) 2x (18 3), 1x (18 2) 3 4.5 N·m Diameter 5 to 6 mm
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type of electrical connection	Top and bottom 2x (1 25 mm²), 1x (1 35 mm²) 2x (1 16 mm²), 1x (1 25 mm²) 2x (18 3), 1x (18 2) 3 4.5 N·m Diameter 5 to 6 mm Pozidriv size 2 M6 Yes
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type of electrical connection	Top and bottom 2x (1 25 mm²), 1x (1 35 mm²) 2x (1 16 mm²), 1x (1 25 mm²) 2x (18 3), 1x (18 2) 3 4.5 N·m Diameter 5 to 6 mm Pozidriv size 2 M6 Yes No Yes 10 a
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type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts	Top and bottom 2x (1 25 mm²), 1x (1 35 mm²) 2x (1 16 mm²), 1x (1 25 mm²) 2x (18 3), 1x (18 2) 3 4.5 N·m Diameter 5 to 6 mm Pozidriv size 2 M6 Yes No Yes 10 a Yes 40 % 50 % 5 000

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	

General Product Approval







Confirmation



KC

General Product Ap-

Test Certificates

Marine / Shipping



Special Test Certific-

Type Test Certificates/Test Report







Marine / Shipping

other







Miscellaneous

Confirmation



Railway

Environment

Special Test Certificate

Confirmation



Siemens **EcoTech**

Environmental Confirmations

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=3RV2431-4UA10

Cax online generator

 $\underline{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RV2431-4UA10}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2431-4UA10

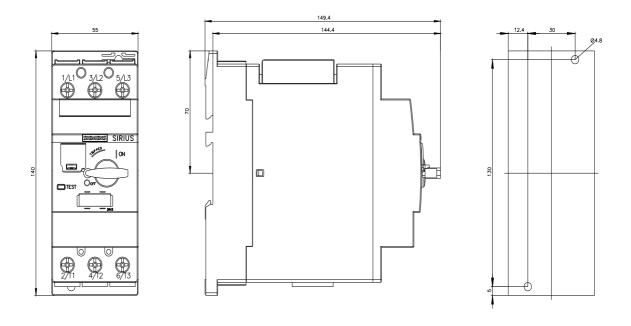
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

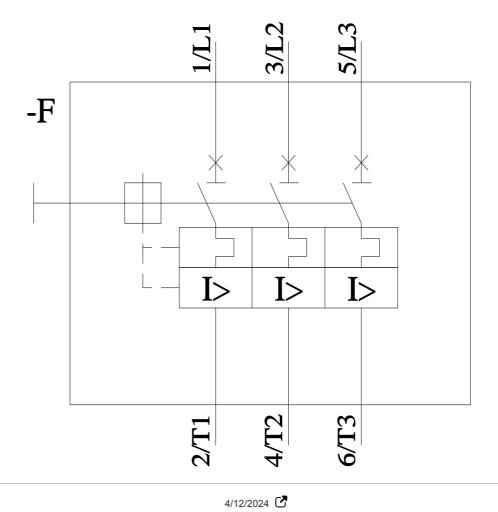
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2431-4UA10&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2431-4UA10/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2431-4UA10&objecttype=14&gridview=view1





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