SIEMENS

Data sheet 3RV2142-4YA10

CIRCUIT-BREAKER SIZE S3, FOR MOTOR PROTECTION, CLASS 10, WITH OVERLOAD RELAY FUNCTION A-REL. 75...93A,N-REL. 1300A SCREW CONNECTION INCREASED BREAKING CAPACITY

Figure similar

Product brand name	SIRIUS
Product designation	Circuit breaker
Design of the product	For motor protection with overload relay function
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] total typical	34 W
Insulation voltage with degree of pollution 3 rated value	1 000 V
Surge voltage resistance rated value	8 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
Mechanical service life (switching cycles)	
• of the main contacts typical	25 000
• of auxiliary contacts typical	25 000
Electrical endurance (switching cycles)	
• typical	25 000
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

Ambient temperature	
• during operation	-20 ... +60 °C
• during storage	-50 ... +80 °C
• during transport	-50 ... +80 °C
Temperature compensation	-20 ... +60 °C

Main circuit

Number of poles for main current circuit	3
Adjustable pick-up value current of the current-dependent overload release	75 ... 93 A
Operating voltage	
• rated value	690 V
• at AC-3 rated value maximum	690 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	93 A
Operating current	
• at AC-3	
— at 400 V rated value	93 A
Operating power	
• **at AC-3**	
— at 400 V rated value	45 000 W
— at 500 V rated value	55 000 W
— at 690 V rated value	90 000 W
Operating frequency	
• at AC-3 maximum	15 1/h

Auxiliary circuit

Number of NC contacts	
• for auxiliary contacts	
— Note	1
Number of NO contacts	
• for auxiliary contacts	

— Note	1

Protective and monitoring functions

Product function	
• Ground fault detection	No
• Phase failure detection	Yes
Trip class	CLASS 10
Design of the overload release	thermal
Operational short-circuit current breaking capacity (Ics) at AC	
• at 240 V rated value	100 000 A
• at 400 V rated value	50 000 A
• at 500 V rated value	5 000 A
• at 690 V rated value	3 000 A
Maximum short-circuit current breaking capacity (Icu)	
• 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	10 kA
• at AC at 690 V rated value	6 kA

UL/CSA ratings

Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	93 A
• at 600 V rated value	93 A
Yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	7.5 hp
— at 230 V rated value	20 hp
• for three-phase AC motor	
— at 200/208 V rated value	30 hp
— at 220/230 V rated value	40 hp
— at 460/480 V rated value	75 hp
— at 575/600 V rated value	100 hp

Short-circuit protection

Product function Short circuit protection	Yes
Design of the short-circuit trip	magnetic

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	165 mm
Width	90 mm
Depth	176 mm

Required spacing	
• with side-by-side mounting	
— forwards	0 mm
— Backwards	0 mm
— upwards	150 mm
— downwards	150 mm
— at the side	0 mm
• for grounded parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	150 mm
— at the side	30 mm
— downwards	150 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	150 mm
— downwards	150 mm
— at the side	30 mm

Connections/Terminals

Product function	
• removable terminal for auxiliary and control circuit	No
Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control 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 mm²)
— single or multi-stranded	2x (2,5 ... 50 mm²), 1x (10 ... 70 mm²)
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— finely stranded with core end processing	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
• at AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)
Tightening torque	
• for ring cable lug	
— for main contacts	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

• for auxiliary contacts with screw-type terminals	0.8 ... 1.2 N·m

Safety related data

Proportion of dangerous failures	
• with low demand rate acc. to SN 31920	50 %
• with high demand rate acc. to SN 31920	50 %
T1 value for proof test interval or service life acc. to IEC 61508	10 y
Display version	
• for switching status	Handle

Certificates/approvals

General Product Approval				Declaration of Conformity	Test Certificates
CCC	CSA	UL	EAC	EG-Konf.	Special Test Certificate

Test Certificates	other				Railway
Declaration of the Compliance with the order	Confirmation	Environmental Confirmations	VDE	Miscellaneous	Vibration and Shock

Further information

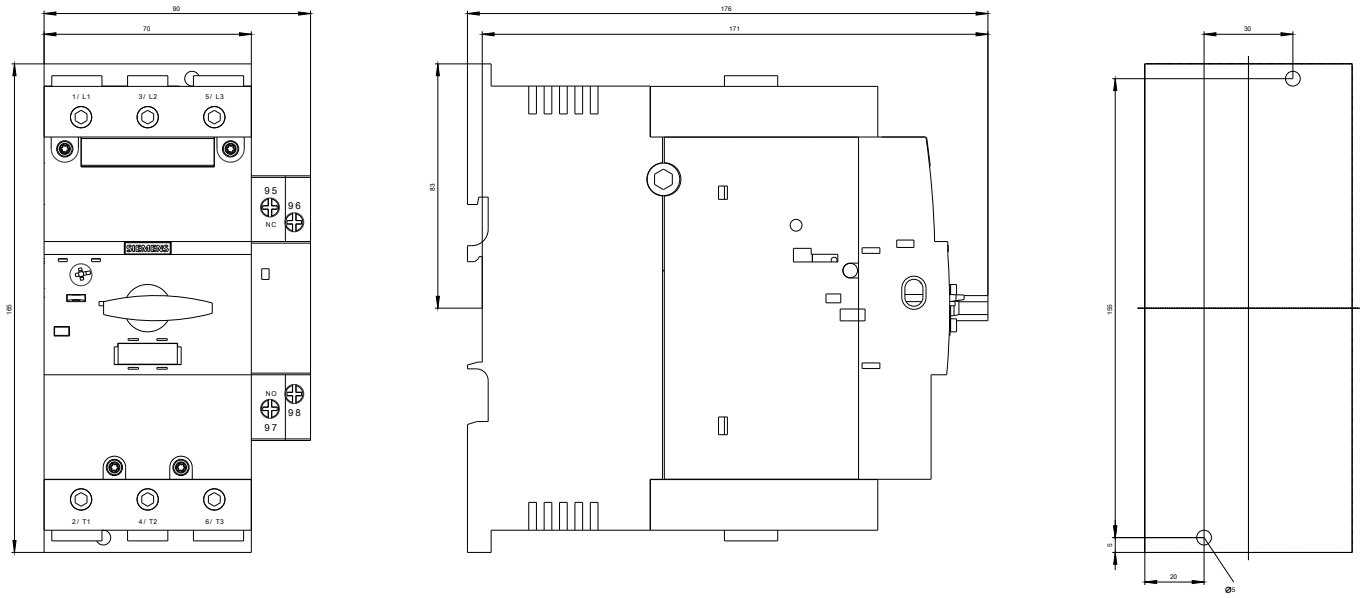
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

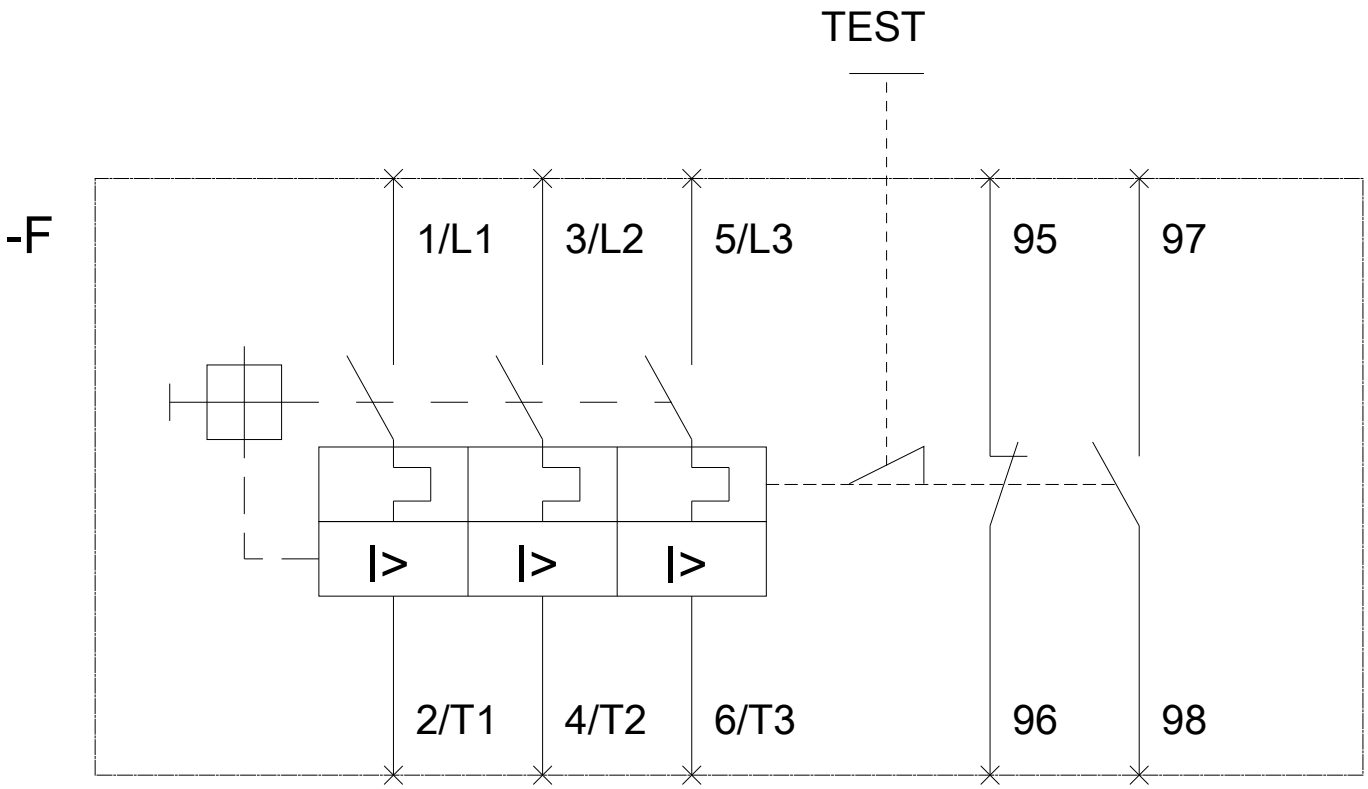
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2142-4YA10

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2142-4YA10

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RV2142-4YA10

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2142-4YA10&lang=en





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