

Overload relay 55...250 A for motor protection Size S10/S12, Class 20E Contactor mounting/stand-alone installation Main circuit: busbar connection Auxiliary circuit: Screw terminal Manual-Automatic-Reset



Product brand name	SIRIUS
Product designation	solid-state overload relay
Product type designation	3RB2
General technical data	
Size of overload relay	S10, S12
Size of contactor can be combined company-specific	S10, S12
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 auxiliary and auxiliary circuit	300 V
• in networks with grounded star point between auxiliary and auxiliary circuit	300 V
• in networks with grounded star point between main and auxiliary circuit	600 V
• in networks with grounded star point between main and auxiliary circuit	690 V
Protection class IP	
• on the front	IP20

• of the terminal	IP00
Shock resistance	15g / 11 ms • acc. to IEC 60068-2-27 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms
Thermal current	250 A
Recovery time	3 min 0 min 0 min • after overload trip with automatic reset typical • after overload trip with remote-reset • after overload trip with manual reset
Protection against electrical shock	Finger-safe with terminal covers for vertical contact from the front
Reference code acc. to DIN EN 81346-2	F
Ambient conditions	
Installation altitude at height above sea level	2 000 m • maximum
Temperature compensation	-25 ... +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	55 ... 250 A
Operating voltage	1 000 V • rated value 1 000 V • at AC-3 rated value maximum
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	250 A
Operating power	30 ... 132 kW • for three-phase motors at 400 V at 50 Hz 45 ... 160 kW • for AC motors at 500 V at 50 Hz 55 ... 250 kW • for AC motors at 690 V at 50 Hz
Auxiliary circuit	
Design of the auxiliary switch	integrated
Number of NC contacts for auxiliary contacts	1 • Note for contactor disconnection
Number of NO contacts for auxiliary contacts	1 • Note for message "tripped"
Number of CO contacts	0 • for auxiliary contacts
Operating current of auxiliary contacts at AC-15	4 A • at 24 V 4 A • at 110 V 4 A • at 120 V

• at 125 V	4 A
• at 230 V	3 A
Operating current of auxiliary contacts at DC-13	
• at 24 V	2 A
• at 60 V	0.55 A
• at 110 V	0.3 A
• at 125 V	0.3 A
• at 220 V	0.11 A
Protective and monitoring functions	
Trip class	CLASS 20E
Design of the overload release	electronic
UL/CSA ratings	
Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	250 A
• at 600 V rated value	250 A
Contact rating of auxiliary contacts according to UL	B600 / R300
Short-circuit protection	
Design of the fuse link	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	gG: 500 A, Class L: 700 A
— with type of assignment 2 required	gG: 500 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A
Installation/ mounting/ dimensions	
Mounting position	any
Mounting type	Contactor mounting/stand-alone installation
Height	119 mm
Width	120 mm
Depth	155 mm
Required spacing	
• with side-by-side mounting	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
• for grounded parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm

— at the side	6 mm
— downwards	0 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	6 mm

Connections/Terminals

Product function	
• removable terminal for auxiliary and control circuit	Yes
Type of electrical connection	
• for main current circuit	busbar connection
• 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 auxiliary contacts	
— solid	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
— single or multi-stranded	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
— finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• at AWG conductors for auxiliary contacts	2x (20 ... 14)
Tightening torque	
• for main contacts with screw-type terminals	10 ... 12 N·m
• for auxiliary contacts with screw-type terminals	0.8 ... 1.2 N·m
Design of the thread of the connection screw	
• for main contacts	M10
• of the auxiliary and control contacts	M3

Communication/ Protocol

Type of voltage supply via input/output link master	No
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Electromagnetic compatibility

Conducted interference	
• due to burst acc. to IEC 61000-4-4	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV (line to earth) corresponds to degree of severity 3
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV (line to line) corresponds to degree of severity 3
• due to high-frequency radiation acc. to IEC 61000-4-6	10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz
Field-bound parasitic coupling acc. to IEC 61000-4-3	10 V/m

Display

Display version

- for switching status

Slide switch

Certificates/approvals

General Product Approval	EMC	For use in hazardous locations
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CCC



CSA



UL



C-Tick



ATEX

Declaration of Conformity	Test Certificates	Marine / Shipping
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EG-Konf.

[Miscellaneous](#)[Special Test Certificate](#)[Declaration of the Compliance with the order](#)[Type Test Certificates/Test Report](#)

ABS

Marine / Shipping	other
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LRS



RINA

[Miscellaneous](#)[Confirmation](#)

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=3RB2066-2GC2>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2066-2GC2>

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

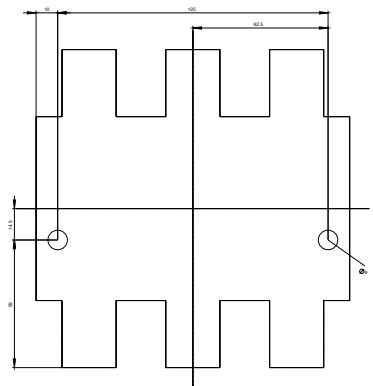
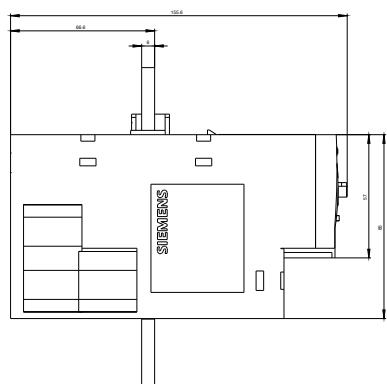
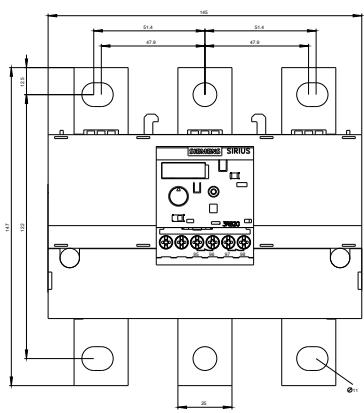
<https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-2GC2>

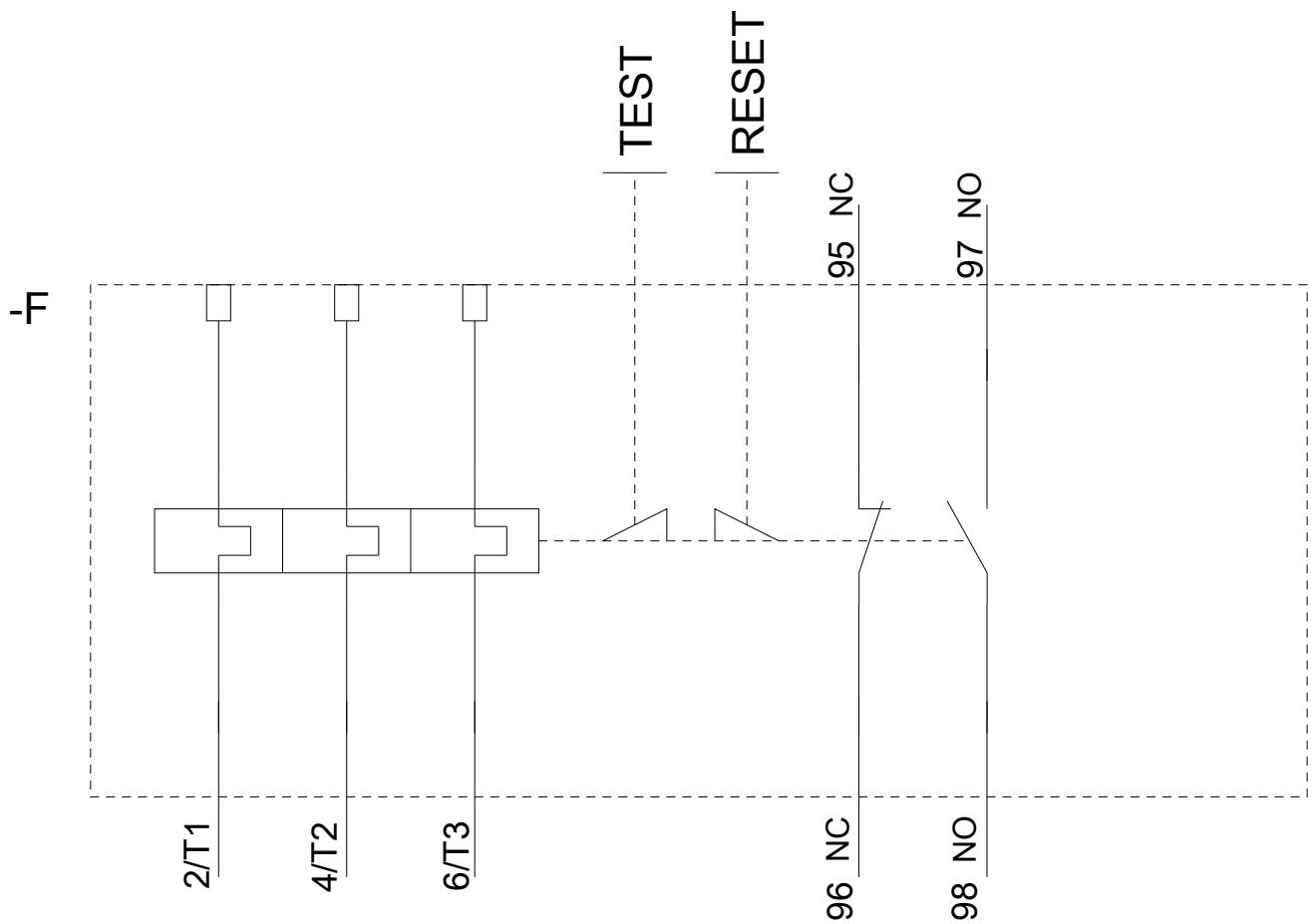
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2066-2GC2&lang=enCharacteristic: Tripping characteristics, I²t, Let-through current<https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-2GC2/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB2066-2GC2&objecttype=14&gridview=view1>





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