

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 <ul style="list-style-type: none">in networks with grounded star point between auxiliary and auxiliary circuitin networks with grounded star point between auxiliary and auxiliary circuitin networks with grounded star point between main and auxiliary circuitin networks with grounded star point between main and auxiliary circuit	<div>300 V</div> <div>300 V</div> <div>600 V</div> <div>690 V</div>
Protection class IP <ul style="list-style-type: none">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	
• after overload trip with automatic reset typical	3 min
• after overload trip with remote-reset	0 min
• after overload trip with manual reset	0 min
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	
• maximum	2 000 m
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	
• rated value	1 000 V
• at AC-3 rated value maximum	1 000 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	250 A
Operating power	
• for three-phase motors at 400 V at 50 Hz	30 ... 132 kW
• for AC motors at 500 V at 50 Hz	45 ... 160 kW
• for AC motors at 690 V at 50 Hz	55 ... 250 kW

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	
• for auxiliary contacts	0
Operating current of auxiliary contacts at AC-15	
• at 24 V	4 A
• at 110 V	4 A
• at 120 V	4 A

• 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

Electrostatic discharge acc. to IEC 61000-4-2

6 kV contact discharge / 8 kV air discharge

Display

Display version

- for switching status

Slide switch

Certificates/approvals

General Product Approval

EMC

For use in hazardous locations



CCC



CSA



UL



C-Tick



ATEX

Declaration of Conformity

Test Certificates

Marine / Shipping



EG-Konf.

[Miscellaneous](#)

[Special Test Certificate](#)

[Declaration of the Compliance with the order](#)

[Type Test Certificates/Test Report](#)



ABS

Marine / Shipping

other



LRS



RINA



DNVGL.COM/AF

[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, ...)

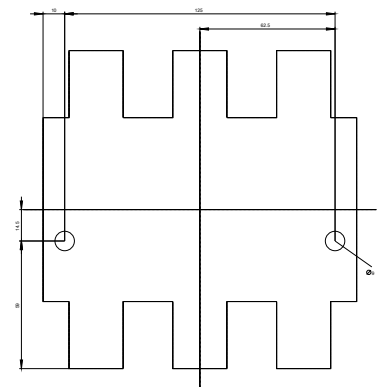
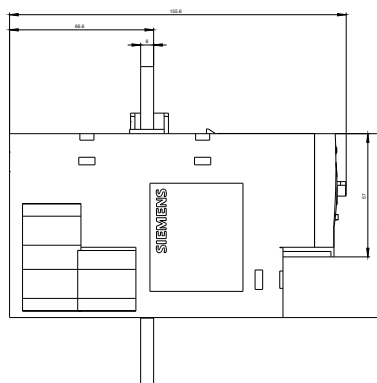
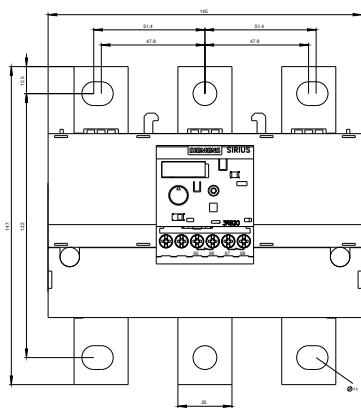
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2066-2GC2&lang=en

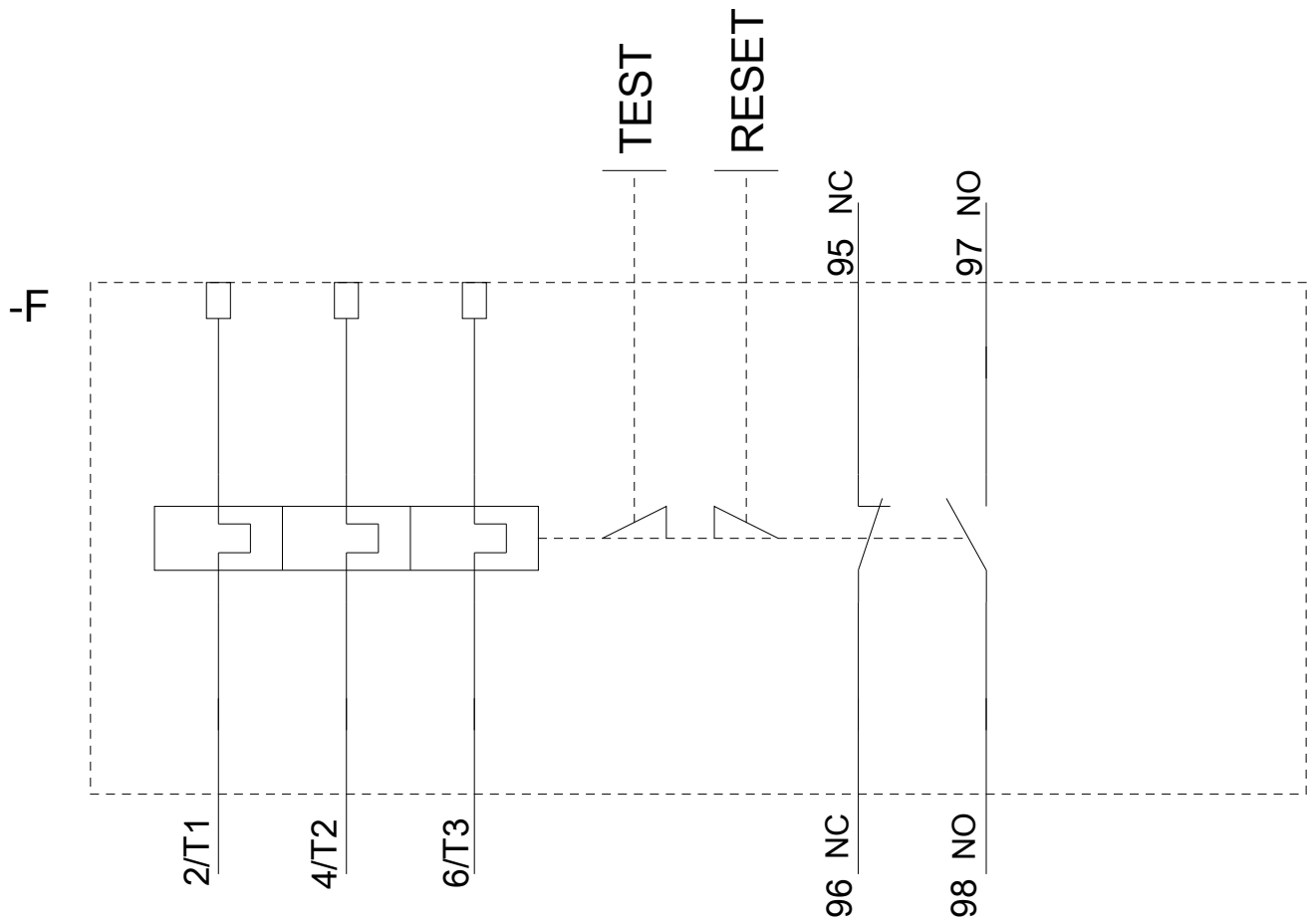
Characteristic: Tripping characteristics, I²t, Let-through current

<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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