

Overload relay 55...250 A for motor protection size S10/S12, CLASS 5...30E Contactor/standalone mounting Main circuit: bus connection Aux. circuit: screw term. Manual/Auto RESET internal ground fault monit.



Figure similar

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 circuit 	300 V
<ul style="list-style-type: none"> in networks with grounded star point between auxiliary and auxiliary circuit 	300 V
<ul style="list-style-type: none"> in networks with grounded star point between main and auxiliary circuit 	600 V
<ul style="list-style-type: none"> in networks with grounded star point between main and auxiliary circuit 	690 V

Protection class IP	
<ul style="list-style-type: none"> • on the front • of the terminal 	IP20 IP00
Vibration resistance	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s ² ; 10 cycles
Thermal current	250 A
Recovery time	
<ul style="list-style-type: none"> • after overload trip with automatic reset typical • after overload trip with remote-reset • after overload trip with manual reset 	3 min 0 min 0 min
Type of protection	II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p]
Protection against electrical shock	Finger-safe with terminal covers for vertical contact from the front
Equipment marking acc. to DIN EN 81346-2	F

Ambient conditions

Ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	-25 ... +60 °C -40 ... +80 °C -40 ... +80 °C
Temperature compensation	60 ... -25 °C

Main circuit

Number of poles for main current circuit	3
Adjustable pick-up value current of the current-dependent overload release	50 ... 200 A
Operating voltage	
<ul style="list-style-type: none"> • rated value • for remote-reset function at DC • at AC-3 rated value maximum 	1 000 V 24 V 1 000 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	200 A
Operating power for three-phase motors at 400 V at 50 Hz	30 ... 132 kW

Auxiliary circuit

Design of the auxiliary switch	integrated
Number of NC contacts	
<ul style="list-style-type: none"> • for auxiliary contacts — Note 	1 for contactor disconnection
Number of NO contacts	
<ul style="list-style-type: none"> • for auxiliary contacts — Note 	1 for message "tripped"
Number of CO contacts	
<ul style="list-style-type: none"> • for auxiliary contacts 	0
Operating current of auxiliary contacts at AC-15	

<ul style="list-style-type: none"> • at 24 V • at 110 V • at 120 V • at 125 V • at 230 V 	<p>4 A</p> <p>4 A</p> <p>4 A</p> <p>4 A</p> <p>3 A</p>
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 	<p>2 A</p> <p>0.55 A</p> <p>0.3 A</p> <p>0.3 A</p> <p>0.11 A</p>

Protective and monitoring functions

Trip class	CLASS 5E, 10E, 20E and 30E adjustable
Design of the overload release	electronic
Response time of the ground fault protection in settled state	1 000 ms
Operating range of the ground fault protection relating to current setting value	
<ul style="list-style-type: none"> • minimum • maximum 	<p>$I_{Motor} > \text{lower current setting value}$</p> <p>$I_{Motor} < \text{upper current setting value} \times 3.5$</p>

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 	<p>200 A</p> <p>200 A</p>
Contact rating of auxiliary contacts according to UL	B600 / R300

Short-circuit protection

Design of the fuse link	
<ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required 	<p>gG: 500 A, Class L: 700 A</p> <p>gG: 500 A</p> <p>fuse gG: 6 A</p>

Installation/ mounting/ dimensions

Mounting position	any
Mounting type	direct mounting / stand-alone installation
Height	119 mm
Width	120 mm
Depth	155 mm
Required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — 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

Communication/ Protocol

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

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
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Declaration of Conformity	Test Certificates	Marine / Shipping
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[Special Test Certificate](#)

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[Type Test Certificates/Test Report](#)



Marine / Shipping	other
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[Environmental Confirmations](#)

[Miscellaneous](#)

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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=3RB2163-4GC2>

Cax online generator

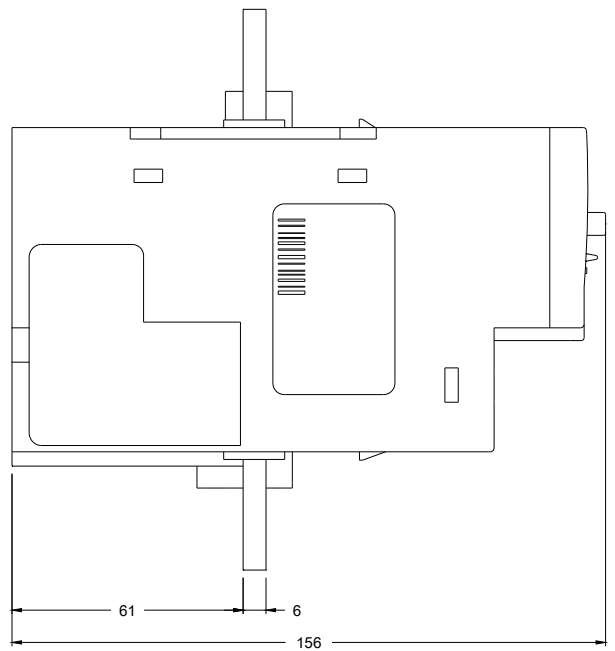
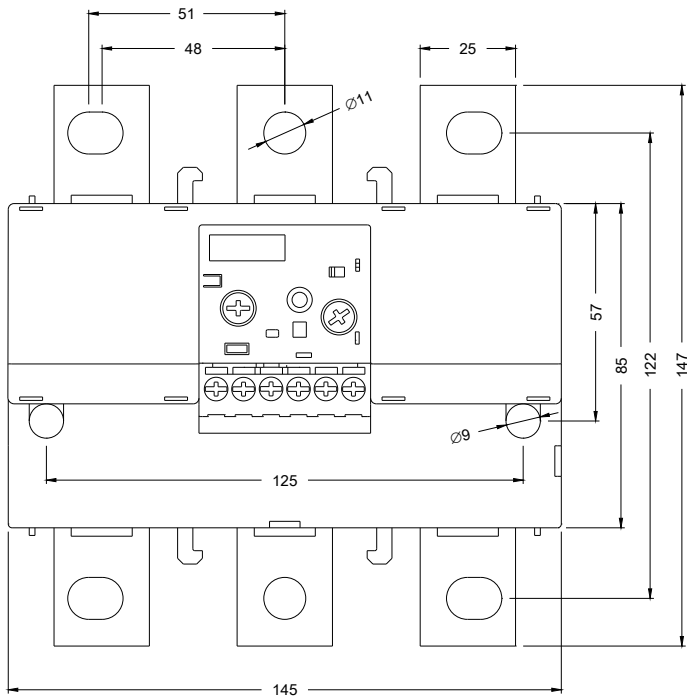
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2163-4GC2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2163-4GC2>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2163-4GC2&lang=en



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