

Overload relay 50...200 A for motor protection Size S6, Class 10E
 Contactor mounting/stand-alone installation Main circuit: straight-through transformer 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	S6
size of contactor can be combined company-specific	S6
insulation voltage with degree of pollution 3 at AC 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 	IP20

<ul style="list-style-type: none"> • of the terminal 	IP20
shock resistance	15g / 11 ms
<ul style="list-style-type: none"> • acc. to IEC 60068-2-27 	15g / 11 ms
vibration resistance	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s ² ; 10 cycles
thermal current	200 A
recovery time	
<ul style="list-style-type: none"> • after overload trip with automatic reset typical 	3 min
<ul style="list-style-type: none"> • after overload trip with remote-reset 	0 min
<ul style="list-style-type: none"> • after overload trip with manual reset 	0 min
type of protection according to ATEX directive 2014/34/EU	Ex II (2) G [Ex e] [Ex d] [Ex px] ; Ex II (2) D [Ex t] [Ex p]
certificate of suitability according to ATEX directive 2014/34/EU	PTB 06 ATEX 3001
reference code acc. to DIN EN 81346-2	F

Ambient conditions	
<ul style="list-style-type: none"> • installation altitude at height above sea level maximum 	2 000 m
ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +80 °C
<ul style="list-style-type: none"> • during transport 	-40 ... +80 °C
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	50 ... 200 A
operating voltage	
<ul style="list-style-type: none"> • rated value 	1 000 V
<ul style="list-style-type: none"> • at AC-3 rated value maximum 	1 000 V
operating frequency rated value	50 ... 60 Hz
operating current rated value	200 A
operating power	
<ul style="list-style-type: none"> • for three-phase motors at 400 V at 50 Hz 	30 ... 90 kW
<ul style="list-style-type: none"> • for AC motors at 500 V at 50 Hz 	30 ... 132 kW
<ul style="list-style-type: none"> • for AC motors at 690 V at 50 Hz 	55 ... 160 kW

Auxiliary circuit	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts	1
<ul style="list-style-type: none"> • note 	for contactor disconnection
number of NO contacts for auxiliary contacts	1
<ul style="list-style-type: none"> • note 	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 	4 A 4 A 4 A 4 A 3 A
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 	2 A 0.55 A 0.3 A 0.3 A 0.11 A

Protective and monitoring functions

trip class	CLASS 10E
design of the overload release	electronic

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 	200 A 200 A
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 	gG: 355 A, Class L: 601 A gG: 315 A 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

Connections/ Terminals

product function	
<ul style="list-style-type: none"> • removable terminal for auxiliary and control circuit 	Yes
type of electrical connection	

<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit 	straight-through transformers screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
<ul style="list-style-type: none"> • type of connectable conductor cross-sections for auxiliary contacts <ul style="list-style-type: none"> — solid — single or multi-stranded — finely stranded with core end processing • type of connectable conductor cross-sections at AWG conductors for auxiliary contacts 	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0,5 ... 4 mm ²), 2x (0,5 ... 2,5 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) 2x (20 ... 14)
tightening torque	
<ul style="list-style-type: none"> • for auxiliary contacts with screw-type terminals 	0.8 ... 1.2 N·m
design of the thread of the connection screw	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • due to burst acc. to IEC 61000-4-4 	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
<ul style="list-style-type: none"> • due to conductor-earth surge acc. to IEC 61000-4-5 	2 kV (line to earth) corresponds to degree of severity 3
<ul style="list-style-type: none"> • due to conductor-conductor surge acc. to IEC 61000-4-5 	1 kV (line to line) corresponds to degree of severity 3
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • 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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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other
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[Miscellaneous](#)

[Confirmation](#)

Further information

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=3RB2056-1FW2>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2056-1FW2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2056-1FW2>

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

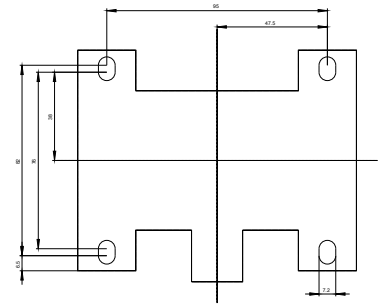
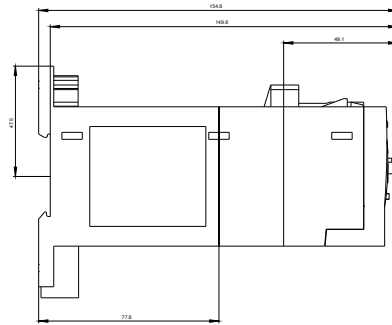
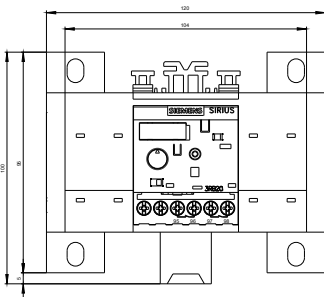
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2056-1FW2&lang=en

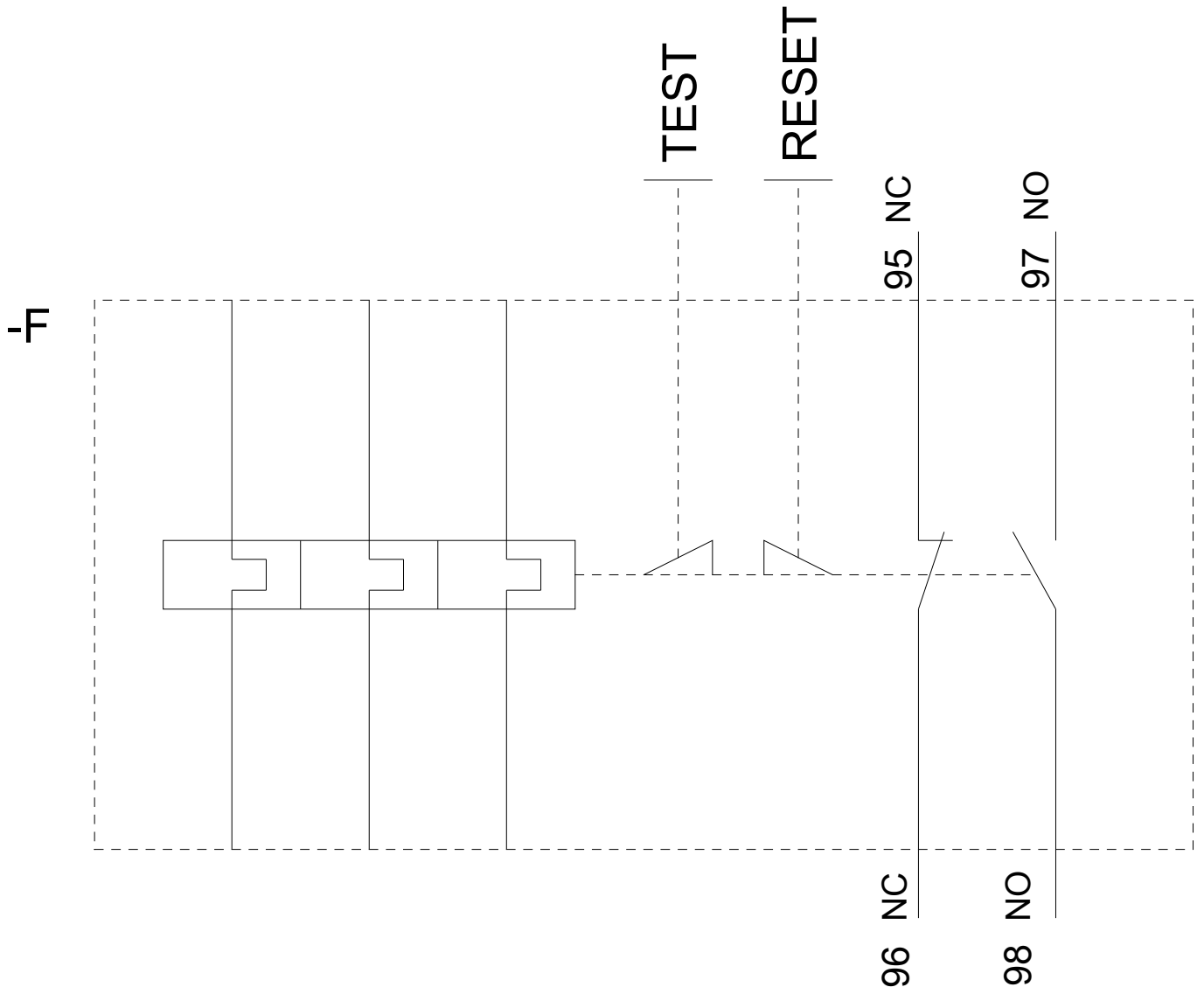
Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2056-1FW2/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB2056-1FW2&objecttype=14&gridview=view1>





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