## **SIEMENS**

Data sheet 3RB3123-4VB0



Overload relay 10...40 A Electronic For motor protection Size S0, Class 5...30 Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset Internal ground fault detection

product brand name	SIRIUS
product designation	solid-state overload relay
product type designation	3RB3
General technical data	
size of overload relay	S0
size of contactor can be combined company-specific	S0
power loss [W] for rated value of the current at AC in hot operating state	3 W
• per pole	1 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation in networks with grounded star point	
<ul> <li>between auxiliary and auxiliary circuit</li> </ul>	300 V
<ul> <li>between auxiliary and auxiliary circuit</li> </ul>	300 V
<ul> <li>between main and auxiliary circuit</li> </ul>	600 V
between main and auxiliary circuit	690 V
shock resistance	15g / 11 ms
• according to IEC 60068-2-27	15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 9g / 11 ms
vibration resistance	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles
thermal current	40 A
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 09 ATEX 3001
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	10/01/2009
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul> <li>during operation</li> </ul>	-25 +60 °C
<ul> <li>during storage</li> </ul>	-40 +80 °C
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 current response value current of the current- dependent overload release	10 40 A
operating voltage	
• rated value	690 V
<ul> <li>for remote-reset function at DC</li> </ul>	24 V
<ul> <li>at AC-3e rated value maximum</li> </ul>	690 V

operating frequency rated value	50 60 Hz
operational current rated value	40 A
operational current at AC-3e at 400 V rated value	40 A
operating power	
• for 3-phase motors at 400 V at 50 Hz	5.5 18.5 kW
• for AC motors at 500 V at 50 Hz	7.5 22 kW
• for AC motors at 690 V at 50 Hz	11 37 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
operational 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
operational 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 5E, 10E, 20E and 30E adjustable
design of the overload release	electronic
response value current of the grounding protection minimum	0.75 x IMotor
response time of the grounding protection in settled state	1 000 ms
operating range of the grounding protection relating to current set value	
• minimum	IMotor > lower current setting value
maximum	IMotor < upper current setting value x 3.5
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	40 A
<ul> <li>at 600 V rated value</li> </ul>	40. A
	40 A
contact rating of auxiliary contacts according to UL	B600 / R300
Short-circuit protection	
Short-circuit protection design of the fuse link	
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit	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: 125 A, J: 150 A
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required	gG: 125 A, J: 150 A gG: 80 A, J: 100 A
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required	gG: 125 A, J: 150 A
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A  any Contactor mounting
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A  any Contactor mounting 87 mm
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A  any Contactor mounting 87 mm 45 mm
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A  any Contactor mounting 87 mm
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method height width depth  Connections/ Terminals product component removable terminal for auxiliary and	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A  any Contactor mounting 87 mm 45 mm
design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A  any Contactor mounting 87 mm 45 mm 84 mm
design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A  any  Contactor mounting 87 mm 45 mm 84 mm  Yes
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A  any Contactor mounting 87 mm 45 mm 84 mm  Yes  screw-type terminals
design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method height width depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit  • for auxiliary and control circuit	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A  any Contactor mounting 87 mm 45 mm 84 mm  Yes  screw-type terminals screw-type terminals
Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A  any Contactor mounting 87 mm 45 mm 84 mm  Yes  screw-type terminals

• solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
• stranded	2x (1 2.3 mm²), 2x (2.3 10 mm²)
solid or stranded	
	1x (1 10 mm²), 2x (1 10 mm²)
finely stranded with core end processing	1x (1 6 mm²), 2 x (1 6 mm²), 1x 10 mm²
type of connectable conductor cross-sections	
for auxiliary contacts	4x (0 F
— solid	1x (0.5 4 mm²), 2x (0.5 2.5 mm²)
— solid or stranded	1x (0,5 4 mm²), 2x (0,5 2,5 mm²)
— finely stranded with core end processing	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
for AWG cables for auxiliary contacts	1x (20 14), 2x (20 14)
tightening torque	
for main contacts with screw-type terminals	2 2.5 N·m
for auxiliary contacts with screw-type terminals	0.8 1.2 N·m
design of screwdriver shaft	Diameter 5 to 6 mm
size of the screwdriver tip	Pozidriv PZ 2
design of the thread of the connection screw	
for main contacts	M4
of the auxiliary and control contacts	M3
Safety related data	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Communication/ Protocol	
type of voltage supply via input/output link master	No
Electromagnetic compatibility	
conducted interference	
<ul> <li>due to burst according to IEC 61000-4-4</li> </ul>	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
<ul> <li>due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	2 kV (line to earth) corresponds to degree of severity 3
<ul> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	1 kV (line to line) corresponds to degree of severity 3
<ul> <li>due to high-frequency radiation according to IEC 61000- 4-6</li> </ul>	10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according 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



Confirmation









For use in hazard-ous locations

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping







Type Test Certificates/Test Report

Special Test Certific-<u>ate</u>



Marine / Shipping









Confirmation

other

Siemens has decided to exit the Russian market (see here).

 $\underline{\text{https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business}}$ 

## Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

## Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RB3123-4VB0

## Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3123-4VB0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RB3123-4VB0

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

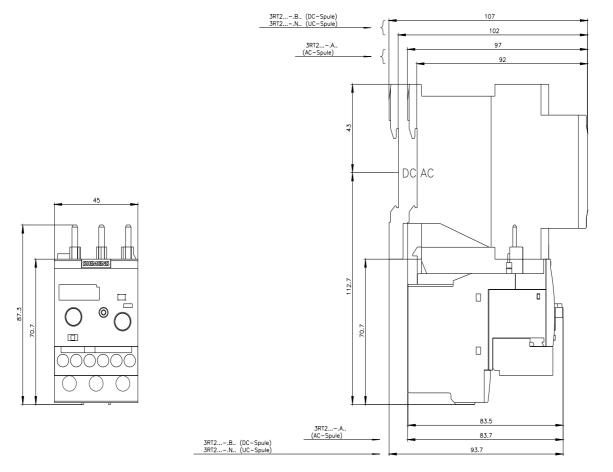
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RB3123-4VB0&lang=en

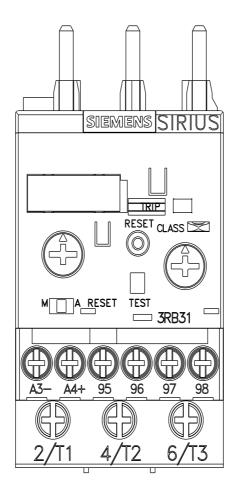
Characteristic: Tripping characteristics, I2t, Let-through current

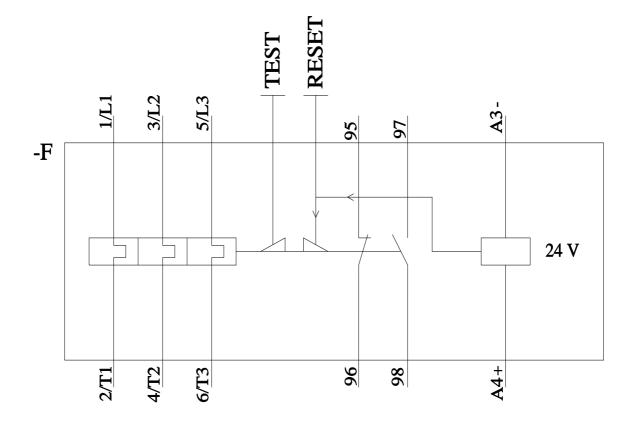
https://support.industry.siemens.com/cs/ww/en/ps/3RB3123-4VB0/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3123-4VB0&objecttype=14&gridview=view1







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