SIEMENS

Data sheet 3RB2163-4GC2



Overload relay 55...250 A for motor protection Size S10/S12, CLASS 5...30E Contactor mounting/stand-alone installation Main circuit: busbar connection Auxiliary circuit: Screw terminal Manual-Automatic-Reset Internal ground fault detection

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 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
maximum permissible voltage for protective separation	
 in networks with ungrounded 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 ungrounded star point between main and auxiliary circuit 	600 V
 in networks with grounded star point 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": 8g / 11 ms
thermal current	250 A
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	07/01/2006
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	1.613 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
 during operation 	-25 +60 °C
during storage	-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	55 250 A
operating voltage	
rated value	1 000 V
 for remote-reset function at DC 	24 V
at AC-3e rated value maximum	1 000 V
operating frequency rated value	50 60 Hz

operational current rated value	250 A
operational current rated value operational current at AC-3e at 400 V rated value	250 A
·	200 A
operating powerfor 3-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	55 250 KW
	intograted
design of the auxiliary switch	integrated 1
number of NC contacts for auxiliary contacts • 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	250 A
at 600 V rated value at 600 V rated value	
	250 A
contact rating of auxiliary contacts according to UL Short-circuit protection	B600 / R300
Onort-circuit protection	
design of the fuse link	
design of the fuse link	
for short-circuit protection of the main circuit	nG: 500 A Class I : 700 A
 for short-circuit protection of the main circuit — with type of coordination 1 required 	gG: 500 A, Class L: 700 A
 for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required 	gG: 500 A
 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 	
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: 500 A fuse gG: 6 A
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: 500 A fuse gG: 6 A any
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: 500 A fuse gG: 6 A
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: 500 A fuse gG: 6 A any Contactor mounting/stand-alone installation
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: 500 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm
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: 500 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm
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: 500 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm
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: 500 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm
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: 500 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm
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: 500 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm
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: 500 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes
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 arrangement of electrical connectors for main current	gG: 500 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes busbar connection screw-type terminals
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 arrangement of electrical connectors for main current circuit	gG: 500 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes busbar connection screw-type terminals

— 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	2x (20 14)
tightening torque	
 for main contacts with screw-type terminals 	20 22 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
Electrical Safety	
protection class IP on the front according to IEC 60529	IP00; IP20 with box terminal/cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with box terminal/cover
Communication/ Protocol	
type of voltage supply via input/output link master	No
Electromagnetic compatibility	
conducted interference	
 due to burst according to IEC 61000-4-4 	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
 due to conductor-earth surge according to IEC 61000-4-5 	2 kV (line to earth) corresponds to degree of severity 3
 due to conductor-conductor surge according to IEC 61000-4-5 	1 kV (line to line) corresponds to degree of severity 3
 due to high-frequency radiation according to IEC 61000- 4-6 	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
Approvals Certificates	



General Product Approval





Confirmation





EMV For use in hazardous locations Test Certificates Marine / Shipping



<u>KC</u>



Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping other Environment







<u>Miscellaneous</u>

Confirmation

Environmental Confirmations

Further information

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=3RB2163-4GC2

Cax online generator

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

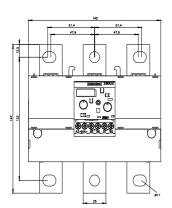
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

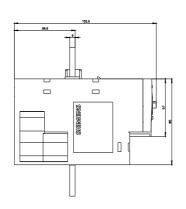
nttps://support.industry.siemens.com/cs/ww/en/ps/3RB2163-4GC2

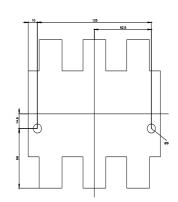
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

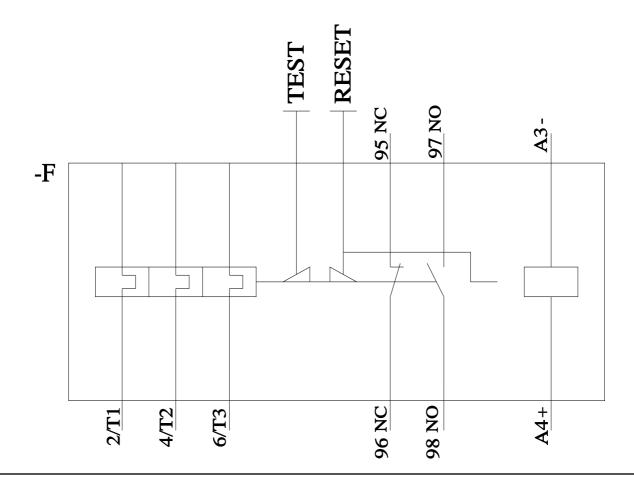
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2163-4GC2\&lang=endersen$

Characteristic: Tripping characteristics, I2t, Let-through current









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