



Overload relay 50...200 A for motor protection Size S6, 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	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 in networks with grounded star point	
• between auxiliary and auxiliary circuit	300 V
• between auxiliary and auxiliary circuit	300 V
• between main and auxiliary circuit	600 V
• between main and auxiliary circuit	690 V
shock resistance	15g / 11 ms
• 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 after overload trip	
• with automatic reset typical	3 min
• with remote-reset	0 min
• 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 IEC 81346-2	F
Substance Prohibitance (Date)	01.07.2006 00:00:00
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	50 ... 200 A
operating voltage • 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
operational current rated value	200 A
operating power • for 3-phase motors at 400 V at 50 Hz • for AC motors at 500 V at 50 Hz • for AC motors at 690 V at 50 Hz	30 ... 90 kW 30 ... 132 kW 55 ... 160 kW
Auxiliary circuit	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts • note	1 for contactor disconnection
number of NO contacts for auxiliary contacts • note	1 for message "tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15 • 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
operational current of auxiliary contacts at DC-13 • 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 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 • maximum	IMotor > lower current setting value 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 • 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 • 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: 355 A, Class L: 601 A gG: 315 A fuse gG: 6 A
Installation/ mounting/ dimensions	
mounting position	any
fastening method	Contactor mounting/stand-alone installation
height	119 mm

width	120 mm		
depth	155 mm		
Connections/ Terminals			
product component removable terminal for auxiliary and control circuit	Yes		
type of electrical connection - for main current circuit - for auxiliary and control circuit	busbar connection screw-type terminals		
arrangement of electrical connectors for main current circuit	Top and bottom		
type of connectable conductor cross-sections - for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing - at AWG cables for auxiliary contacts	1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²) 1x (0,5 ... 4 mm²), 2x (0,5 ... 2,5 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²) 2x (20 ... 14)		
tightening torque - for main contacts with screw-type terminals - for auxiliary contacts with screw-type terminals	10 ... 12 N·m 0.8 ... 1.2 N·m		
design of the thread of the connection screw - for main contacts - of the auxiliary and control contacts	M10 M3		
Safety related data			
protection class IP on the front acc. to IEC 60529	IP00; IP20 with box terminal/cover		
touch protection on the front acc. 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 acc. to IEC 61000-4-4 - due to conductor-earth surge acc. to IEC 61000-4-5 - due to conductor-conductor surge acc. to IEC 61000-4-5 - due to high-frequency radiation acc. to IEC 61000-4-6	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 2 kV (line to earth) corresponds to degree of severity 3 1 kV (line to line) corresponds to degree of severity 3 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz		
field-based interference 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



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

[Type Test Certificates/Test Report](#)



[Confirmation](#)[Miscellaneous](#)

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=3RB2153-4FC2>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2153-4FC2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2153-4FC2>

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

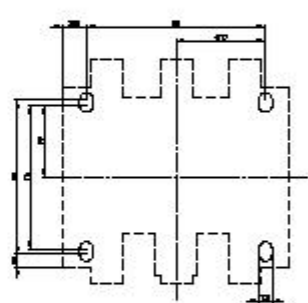
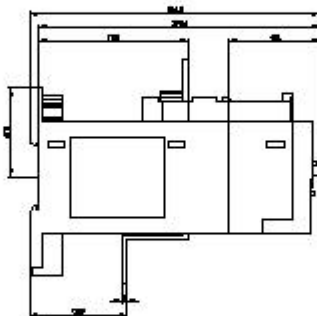
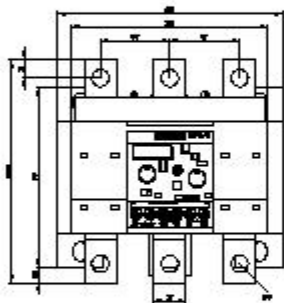
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2153-4FC2&lang=en

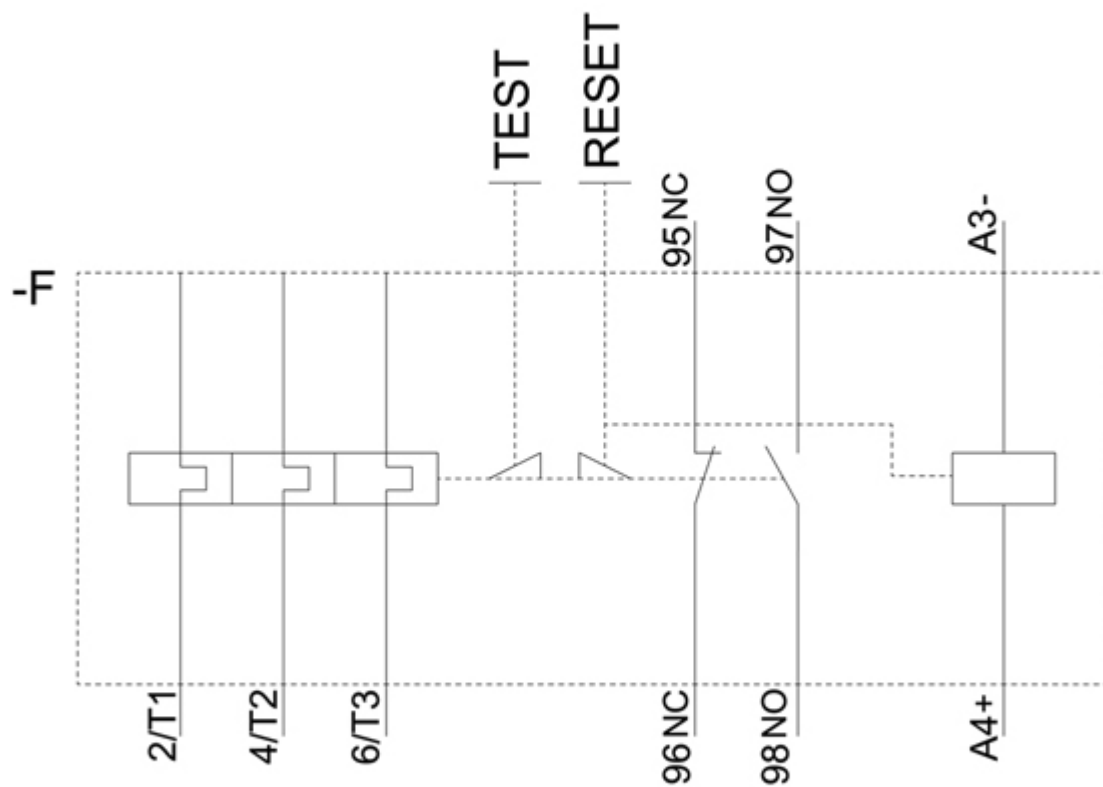
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2153-4FC2/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB2153-4FC2&objecttype=14&gridview=view1>





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