## SIEMENS

## Data sheet

## 3RB2056-1FW2



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 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				
<ul> <li>between main and auxiliary circuit</li> </ul>	690 V				
shock resistance	15g / 11 ms				
<ul> <li>according to IEC 60068-2-27</li> </ul>	15g / 11 ms				
vibration resistance	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s²; 10 cycles				
thermal current	200 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 06 ATEX 3001				
reference code according to IEC 81346-2	F				
Substance Prohibitance (Date)	07/01/2006				
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				
<ul> <li>during transport</li> </ul>	-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					
<ul> <li>rated value</li> </ul>	1 000 V				
<ul> <li>at AC-3e rated value maximum</li> </ul>	1 000 V				
operating frequency rated value	50 60 Hz				
operational current rated value	200 A				

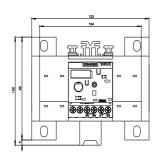
operational current at AC-3e at 400 V rated value	200 A			
operating power				
<ul> <li>for 3-phase motors at 400 V at 50 Hz</li> </ul>	30 90 kW			
<ul> <li>for AC motors at 500 V at 50 Hz</li> </ul>	30 132 kW			
<ul> <li>for AC motors at 690 V at 50 Hz</li> </ul>	55 160 kW			
Auxiliary circuit				
design 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 ● at 125 V	0.3 A 0.3 A			
• at 220 V	0.3 A 0.11 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 3-phase AC motor				
at 480 V rated value	200 A			
at 600 V rated value	200 A			
contact rating of auxiliary contacts according to UL	B600 / R300			
Short-circuit protection				
design of the fuse link				
<ul><li>design of the fuse link</li><li>for short-circuit protection of the main circuit</li></ul>				
<ul> <li>design of the fuse link</li> <li>for short-circuit protection of the main circuit</li> <li>— with type of coordination 1 required</li> </ul>	gG: 355 A, Class L: 601 A			
<ul> <li>design of the fuse link</li> <li>for short-circuit protection of the main circuit</li> <li>— with type of coordination 1 required</li> <li>— with type of assignment 2 required</li> </ul>	gG: 315 A			
<ul> <li>design of the fuse link</li> <li>for short-circuit protection of the main circuit         <ul> <li>with type of coordination 1 required</li> <li>with type of assignment 2 required</li> <li>for short-circuit protection of the auxiliary switch</li> </ul> </li> </ul>	<b>.</b>			
<ul> <li>design of the fuse link</li> <li>for short-circuit protection of the main circuit         <ul> <li>with type of coordination 1 required</li> <li>with type of assignment 2 required</li> </ul> </li> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 315 A			
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: 315 A fuse gG: 6 A			
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: 315 A fuse gG: 6 A any			
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: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation			
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: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 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	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 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	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 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	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 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	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 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: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 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	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 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: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 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         • for main current circuit	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes straight-through transformers			
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         arrangement of electrical connectors for main current circuit	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes straight-through transformers 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         arrangement of electrical connectors for main current circuit         type of connectable conductor cross-sections	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes straight-through transformers 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         arrangement of electrical connectors for main current circuit         type of connectable conductor cross-sections         • for auxiliary contacts	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes straight-through transformers screw-type terminals Top and bottom			
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         arrangement of electrical connectors for main current circuit         type of connectable conductor cross-sections         • for auxiliary contacts         - solid	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes straight-through transformers screw-type terminals Top and bottom 1x (0.5 4 mm <sup>2</sup> ), 2x (0.5 2.5 mm <sup>2</sup> )			
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         arrangement of electrical connectors for main current circuit         type of connectable conductor cross-sections         • for auxiliary contacts         - solid         - solid or stranded	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes straight-through transformers screw-type terminals Top and bottom 1x (0.5 4 mm <sup>2</sup> ), 2x (0.5 2.5 mm <sup>2</sup> ) 1x (0,5 4 mm <sup>2</sup> ), 2x (0,5 2,5 mm <sup>2</sup> )			
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         arrangement of electrical connectors for main current circuit         type of connectable conductor cross-sections         • for auxiliary contacts         — solid         — solid or stranded         — finely stranded with core end processing	gG: 315 Å fuse gG: 6 Å any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes straight-through transformers screw-type terminals Top and bottom $1x (0.5 4 mm^2), 2x (0.5 2.5 mm^2)$ $1x (0.5 4 mm^2), 2x (0.5 2.5 mm^2)$ $1x (0.5 2.5 mm^2), 2x (0.5 1.5 mm^2)$			
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         arrangement of electrical connectors for main current circuit         • for auxiliary contacts         — solid         — solid         — solid or stranded         — finely stranded with core end processing         • at AWG cables for auxiliary contacts	gG: 315 A fuse gG: 6 A any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes straight-through transformers screw-type terminals Top and bottom 1x (0.5 4 mm <sup>2</sup> ), 2x (0.5 2.5 mm <sup>2</sup> ) 1x (0,5 4 mm <sup>2</sup> ), 2x (0,5 2,5 mm <sup>2</sup> )			
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 auxiliary and control circuit         arrangement of electrical connectors for main current circuit         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         tightening torque	gG: 315 A fuse gG: 6 Aany Contactor mounting/stand-alone installation 119 mm 120 mm 155 mmYesYesStraight-through transformers screw-type terminals Top and bottom1x $(0.5 4 mm^2)$ , 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 $(20 14)$			
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         arrangement of electrical connectors for main current circuit         type of connectable conductor cross-sections         • for auxiliary contacts         - solid         - solid         - solid or stranded         - finely stranded with core end processing         • at AWG cables for auxiliary contacts         tightening torque         • for auxiliary contacts with screw-type terminals	gG: 315 Å fuse gG: 6 Å any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm Yes straight-through transformers screw-type terminals Top and bottom $1x (0.5 4 mm^2), 2x (0.5 2.5 mm^2)$ $1x (0.5 4 mm^2), 2x (0.5 2.5 mm^2)$ $1x (0.5 2.5 mm^2), 2x (0.5 1.5 mm^2)$			
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 auxiliary and control circuit         arrangement of electrical connectors for main current circuit         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         tightening torque	gG: 315 A fuse gG: 6 Aany Contactor mounting/stand-alone installation 119 mm 120 mm 155 mmYesYesStraight-through transformers screw-type terminals Top and bottom1x $(0.5 4 mm^2)$ , 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 $(20 14)$			

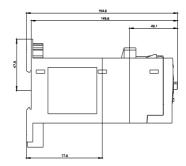
Safety related data							
protection class IP on the front according to IEC 60529		IP20	IP20				
touch protection on the front according to IEC 60529		finger-safe, for vertical contact from the front					
Communication/ Protocol							
	ply via input/output lin	k master	No				
Electromagnetic com							
conducted interference			2 k/(nower parts) = 1 k/(normal parts) corresponds to degree of coverity				
• due to burst according to IEC 61000-4-4		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	2 kV (line to earth) corresponds to degree of severity 3			
• due to conducto 61000-4-5	<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-free 61000-4-6</li> </ul>	quency radiation accord	ling to IEC	10 V kHz	10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1			
	ence according to IEC	61000-4-3	10 V/	10 V/m			
electrostatic discha	rge according to IEC	61000-4-2	6 kV	6 kV contact discharge / 8 kV air discharge			
Display							
display version for sw	-		Slide	switch			
Certificates/ approval	ls						
General Product Ap	oproval					EMC	
(SP) SA		<u>Confirmatio</u>	<u>on</u>	(UL)	EHC	RCM	
For use in hazard- ous locations	Declaration of Con	ormity		Test Certificates		Marine / Shipping	
K ATEX	UK CA	CE EG-Konf.	1	<u>Type Test Certific-</u> ates/Test Report	Special Test Certific- ate	ABS	
Marine / Shipping				other			
Lloyds Register us	RINA	DNV-GL DNV-GL		<u>Miscellaneous</u>	<u>Confirmation</u>		
Further information							
Information- and Do	ownloadcenter (Catalo	gs, 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⟨=en							

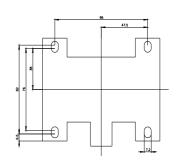
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RB2056-1FW2&lang=en

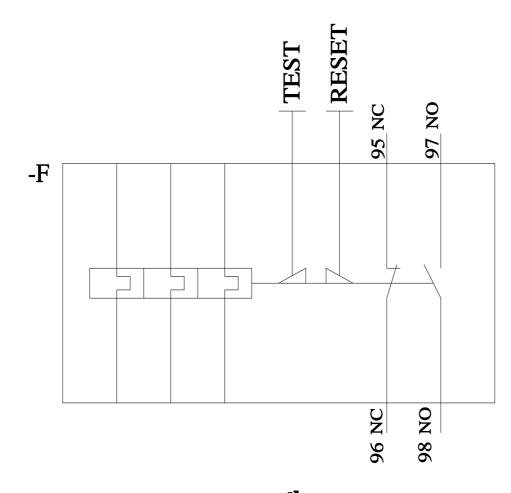
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RB2056-1FW2/char

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









last modified:

2/9/2022 🖸