

















Overload relay 4...16 A Electronic For motor protection Size S00, Class 10E  
 Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

product brand name	SIRIUS
product designation	solid-state overload relay
product type designation	3RB3
<b>General technical data</b>	
size of overload relay	S00
size of contactor can be combined company-specific	S00
power loss [W] for rated value of the current at AC in hot operating state	1.1 W
• per pole	0.37 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 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": 9g / 11 ms
vibration resistance	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles
thermal current	16 A
recovery time after overload trip	
• with automatic reset typical	3 min
• with remote-reset	0 min
• with manual reset	0 min
reference code according to IEC 81346-2	F
Substance Prohibition (Date)	10/01/2009
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
Weight	0.223 kg
<b>Ambient conditions</b>	
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 %

<b>Main circuit</b>	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	4 ... 16 A
operating voltage <ul style="list-style-type: none"> <li>rated value</li> <li>at AC-3e rated value maximum</li> </ul>	690 V 690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	16 A
operational current at AC-3e at 400 V rated value	16 A
operating power <ul style="list-style-type: none"> <li>for 3-phase motors at 400 V at 50 Hz</li> <li>for AC motors at 500 V at 50 Hz</li> <li>for AC motors at 690 V at 50 Hz</li> </ul>	2.2 ... 7.5 kW 2.2 ... 7.5 kW 3 ... 11 kW
<b>Auxiliary circuit</b>	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts <ul style="list-style-type: none"> <li>note</li> </ul>	1 for contactor disconnection
number of NO contacts for auxiliary contacts <ul style="list-style-type: none"> <li>note</li> </ul>	1 for message "tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15 <ul style="list-style-type: none"> <li>at 24 V</li> <li>at 110 V</li> <li>at 120 V</li> <li>at 125 V</li> <li>at 230 V</li> </ul>	4 A 4 A 4 A 4 A 3 A
operational current of auxiliary contacts at DC-13 <ul style="list-style-type: none"> <li>at 24 V</li> <li>at 60 V</li> <li>at 110 V</li> <li>at 125 V</li> <li>at 220 V</li> </ul>	2 A 0.55 A 0.3 A 0.3 A 0.11 A
<b>Protective and monitoring functions</b>	
trip class	CLASS 10E
design of the overload release	electronic
<b>UL/CSA ratings</b>	
full-load current (FLA) for 3-phase AC motor <ul style="list-style-type: none"> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul>	16 A 16 A
contact rating of auxiliary contacts according to UL	B600 / R300
<b>Short-circuit protection</b>	
design of the fuse link <ul style="list-style-type: none"> <li>for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>with type of coordination 1 required</li> <li>with type of coordination 2 required</li> </ul> </li> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 50 A, RK5: 60 A gG: 50 A, J: 60 A fuse gG: 6 A
<b>Installation/ mounting/ dimensions</b>	
mounting position	any
fastening method	Contactor mounting
height	79 mm
width	45 mm
depth	73 mm
<b>Connections/ Terminals</b>	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom

type of connectable conductor cross-sections for main contacts	<ul style="list-style-type: none"><li>• solid</li><li>• solid or stranded</li><li>• finely stranded with core end processing</li></ul>	1x (0.5 ... 4 mm²), 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 4 mm²) 1x (0,5 ... 4 mm²), 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 4 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 2.5 mm²)	
type of connectable conductor cross-sections	<ul style="list-style-type: none"><li>• for auxiliary contacts<ul style="list-style-type: none"><li>— solid</li><li>— solid or stranded</li><li>— finely stranded with core end processing</li></ul></li><li>• for AWG cables for auxiliary contacts</li></ul>	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) 1x (20 ... 14), 2x (20 ... 14)	
tightening torque	<ul style="list-style-type: none"><li>• for main contacts with screw-type terminals</li><li>• for auxiliary contacts with screw-type terminals</li></ul>	0.8 ... 1.2 N·m 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	<ul style="list-style-type: none"><li>• for main contacts</li><li>• of the auxiliary and control contacts</li></ul>	M3 M3	
Electrical Safety			
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 style="list-style-type: none"><li>• due to burst according to IEC 61000-4-4</li><li>• due to conductor-earth surge according to IEC 61000-4-5</li><li>• due to conductor-conductor surge according to IEC 61000-4-5</li><li>• due to high-frequency radiation according to IEC 61000-4-6</li></ul>	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 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		EMV	
<div><div> CCC</div><div></div><div> EG-Konf.</div><div> UL</div><div></div><div> RCM</div></div>			
EMV	For use in hazardous locations	Test Certificates	Maritime application
<a href="#">KC</a>	 ATEX	<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Special Test Certificate</a>
		 ABS	 BUREAU VERITAS
Maritime application		other	
 DNV	 LRS	 PRS	 RINA
		 产品合格 QC PASS	<a href="#">Confirmation</a>
Environment			

#### Further information

**Information on the packaging**

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

**Information for data generation and storage**

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

**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=3RB3016-1TB0>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3016-1TB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1TB0>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3016-1TB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-1TB0&lang=en)

**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1TB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3016-1TB0&objecttype=14&gridview=view1>

