



OVERLOAD RELAY 10...40 A FOR MOTOR  
 PROTECTION SIZE S0, CLASS 5...30 CONTACTOR  
 ASS. MAIN CIRCUIT: SPR.-LOAD.TERM.  
 AUX.CIRCUIT: SPR.-LOAD.TERM. MANUAL-AUTOM.-  
 RESET INT. GROUND FAULT DETECTION

product brand name		SIRIUS
Product designation		solid-state overload relay

**General technical data:**

<b>Active power loss total typical</b>	W	4.5
<b>Insulation voltage</b>	V	690
<ul style="list-style-type: none"> <li>with degree of pollution 3 Rated value</li> </ul>		
<b>Shock resistance</b>		15g / 11 ms
<ul style="list-style-type: none"> <li>acc. to IEC 60068-2-27</li> </ul>		
<b>Vibration resistance</b>		1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles
<b>Surge voltage resistance Rated value</b>	kV	6
<b>Size of contactor can be combined company-specific</b>		S0
<b>Type of assignment</b>		2
<b>Protection class IP</b>		IP20
<ul style="list-style-type: none"> <li>on the front</li> <li>of the terminal</li> </ul>		IP20
<b>Type of protection</b>		II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p]
<b>Equipment marking</b>		F
<ul style="list-style-type: none"> <li>acc. to DIN EN 61346-2</li> <li>acc. to DIN EN 81346-2</li> </ul>		F

**Main circuit:**

<b>Number of poles for main current circuit</b>		3
<b>Adjustable response value current of the current-dependent overload release</b>	A	10 ... 40
<b>Operating voltage</b>	V	24
<ul style="list-style-type: none"> <li>for remote-reset function for DC</li> </ul>		

• at AC-3 Rated value maximum	V	690
Operating frequency Rated value	Hz	50 ... 60
<b>Operating current</b>		
• at AC-3		
— at 400 V Rated value	A	40

#### Auxiliary circuit:

<b>Number of NC contacts</b>		
• for auxiliary contacts		1
— Note		for contactor disconnection
<b>Number of NO contacts</b>		
• for auxiliary contacts		1
— Note		for message "tripped"
<b>Number of CO contacts</b>		
• for auxiliary contacts		0
<b>Design of the auxiliary switch</b>		integrated
<b>Operating current of the auxiliary contacts at AC-15</b>		
• at 24 V	A	4
• at 110 V	A	4
• at 120 V	A	4
• at 125 V	A	4
• at 230 V	A	3
<b>Operating current of the auxiliary contacts at DC-13</b>		
• at 24 V	A	2
• at 60 V	A	0.55
• at 110 V	A	0.3
• at 125 V	A	0.3
• at 220 V	A	0.11

#### Protective and monitoring functions:

<b>Trip class</b>		CLASS 5, 10, 20 and 30 adjustable
<b>Design of the overload circuit breaker</b>		electronic

#### UL/CSA ratings:

<b>Contact rating of the auxiliary contacts acc. to UL</b>		B300 / R300
--	--	-------------

#### Short-circuit:

<b>Design of the fuse link</b>		
• for short-circuit protection of the main circuit		Fuse gG: 80 A
— required		
• for short-circuit protection of the auxiliary switch		fuse gG: 6 A
required		

#### Installation/ mounting/ dimensions:

<b>mounting position</b>		any
--------------------------	--	-----

<b>Mounting type</b>		direct mounting
<b>Height</b>	mm	109
<b>Width</b>	mm	45
<b>Depth</b>	mm	85
<b>Required spacing</b>		
<ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	mm	0 0 0 0 0  6 0 6 6 6  6 0 6 6 6

#### Connections/ Terminals:

<b>Type of electrical connection</b>		
<ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul>		spring-loaded terminals spring-loaded terminals
<b>Arrangement of electrical connectors for main current circuit</b>		Top and bottom
<b>Product function</b>		
<ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>		Yes
<b>Type of connectable conductor cross-section</b>		
<ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>• for AWG conductors for main contacts</li> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> </ul>		1x (1 ... 10 mm <sup>2</sup> ) 1x (1 ... 6 mm <sup>2</sup> ) 1x (1 ... 6 mm <sup>2</sup> )  1x (18 ... 8)  1x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,5 ... 1,5 mm <sup>2</sup> ) 1x (0.25 ... 1.5 mm <sup>2</sup> ), 2x (0.25 ... 1.5 mm <sup>2</sup> )

- finely stranded without core end processing
- for AWG conductors for auxiliary contacts

1x (0.25 ... 1.5 mm<sup>2</sup>), 2x (0.25 ... 1.5 mm<sup>2</sup>)

1x (24 ... 16), 2x (24 ... 16)

#### Safety related data:

**Protection against electrical shock** finger-safe

#### Mechanical data:

**Size of overload relay** S0

#### Communication/ Protocol:

**Protocol is supported**  
 • IO-Link protocol No

**Type of voltage supply via input/output link master** No

#### Ambient conditions:

**Installation altitude at height above sea level maximum** m 2 000

**Ambient temperature**

- during operation °C -25 ... +60
- during storage °C -40 ... +80
- during transport °C -40 ... +80

**Relative humidity during operation** % 95

#### Electromagnetic compatibility:

**EMC emitted interference**  
 • acc. to IEC 60947-1 CISPR 11, environment B (residential area)

**EMI immunity acc. to IEC 60947-1** corresponds to degree of severity 3

**Conducted interference due to burst acc. to IEC 61000-4-4** 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3

**Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5** 2 kV (line to earth) corresponds to degree of severity 3

**Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5** 1 kV (line to line) corresponds to degree of severity 3

**Field-bound parasitic coupling 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	Shipping Approval
---------------------------	-------------------	-------------------



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Shipping Approval	other
-------------------	-------



[Environmental Confirmations](#)

[Confirmation](#)

#### Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<http://www.siemens.com/industrymall>

**Cax online generator**

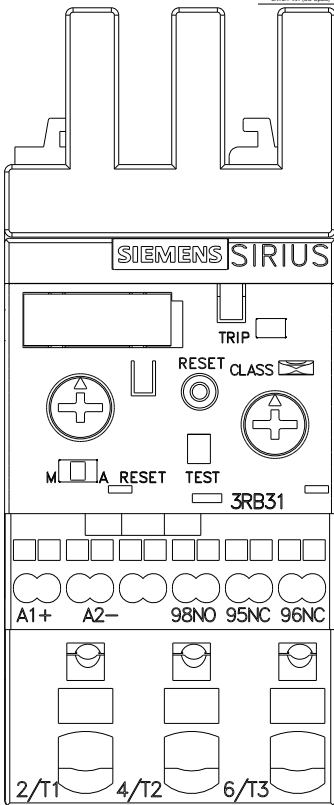
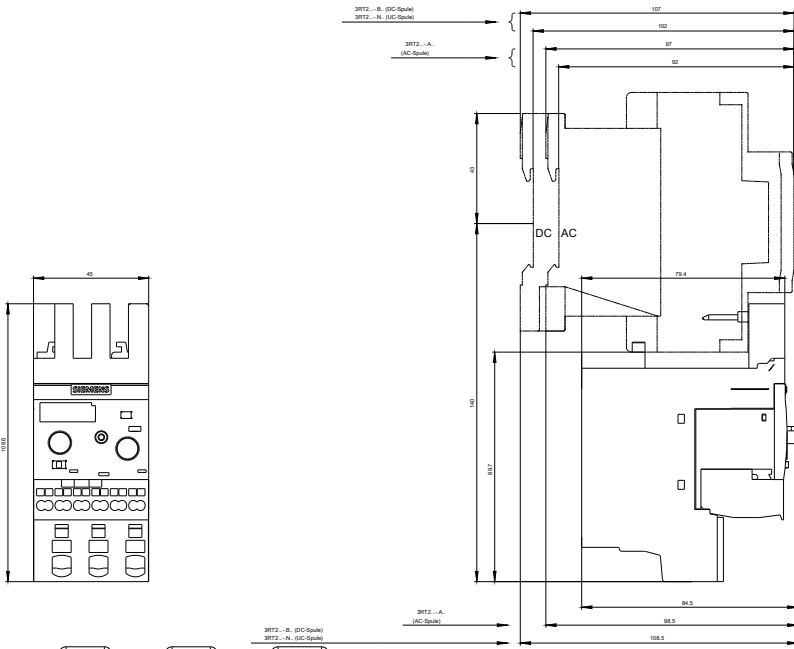
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB31234VE0>

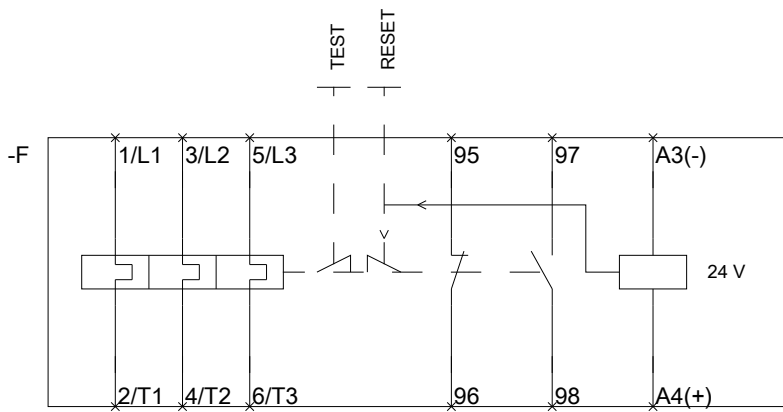
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<http://support.automation.siemens.com/WW/view/en/3RB31234VE0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB31234VE0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB31234VE0&lang=en)





last modified:

11.03.2015