



Monitoring relay, can be mounted to Contactor 3RT2, Size S2 basic, analog adjustment Apparent current monitoring 8...80 A, 50...60 Hz, 2-phase Supply 24 V AC/DC 1 change-over contact Monitoring for Current overshoot and undershoot Phase failure, Cable break with or without fault buffer ON delay 0-60 s Noise pulse suppression 0-30 s Switching hysteresis 6% spring-type connection system

product brand name	SIRIUS
Product designation	Monitoring relays
Design of the product	analogically adjustable, 2-phase current monitoring
Product type designation	3RR2

General technical data	
Size of contactor can be combined company-specific	S2
Operating apparent output rated value	4 V·A
<ul style="list-style-type: none"> <li>— insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value</li> </ul>	690 V
Surge voltage resistance rated value	6 kV
<ul style="list-style-type: none"> <li>• protection class IP on the front</li> <li>• Protection class IP of the terminal</li> </ul>	IP20 IP00
Shock resistance	10g / 11 ms
Vibration resistance	10 ... 55 Hz / 0.35 mm
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	10 000 000
Electrical endurance (switching cycles)	

• at AC-15 at 230 V typical	100 000
Reference code acc. to DIN EN 81346-2	K
relative repeat accuracy	2 %

#### Supply voltage

Type of voltage of the supply voltage	AC/DC
Supply voltage 1 at AC	
• at 50 Hz rated value	24 V
• at 60 Hz rated value	24 V
• supply voltage 1 at DC rated value	24 V
• Supply voltage frequency 1	50 ... 60 Hz

#### Measuring circuit

Type of current for monitoring	AC
adjustable pick-up value current	
• 1	8 ... 80 A
• 2	8 ... 80 A
adjustable response delay time	
• when starting	0 ... 60 s
• with lower or upper limit violation	0 ... 30 s

#### Precision

Temperature drift per °C	0.1 %/°C
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#### Communication/ Protocol

Protocol is supported	
• IO-Link protocol	No
Type of voltage supply via input/output link master	No

#### Auxiliary circuit

Number of CO contacts	
• for auxiliary contacts	1
• operating current of auxiliary contacts at AC-15 at 24 V	3 A
• Operating current of auxiliary contacts at AC-15 at 230 V	3 A
• operating current of auxiliary contacts at AC-15 at 400 V	3 A
• operating current of auxiliary contacts at DC-13 at 24 V	1 A
• operating current of auxiliary contacts at DC-13 at 125 V	0.2 A
• operating current of auxiliary contacts at DC-13 at 250 V	0.1 A
Contact rating of auxiliary contacts according to UL	B300 / R300

#### Main circuit

<b>Operating power</b>	
<ul style="list-style-type: none"> <li>rated value</li> </ul>	2.5 W
<b>Outputs</b>	
<b>Ampacity of the semiconductor output in SIO mode</b>	200 mA
<b>Operating current at 17 V minimum</b>	5 mA
<b>Electromagnetic compatibility</b>	
<b>EMC emitted interference</b>	
<ul style="list-style-type: none"> <li>acc. to IEC 60947-1</li> </ul>	ambience A (industrial sector)
<b>EMI immunity</b>	
<ul style="list-style-type: none"> <li>acc. to IEC 60947-1</li> </ul>	ambience A (industrial sector)
<b>Safety related data</b>	
<b>Protection against electrical shock</b>	finger-safe when touched vertically from front acc. to IEC 60529
<b>Connections/ Terminals</b>	
<b>Product function</b>	
<ul style="list-style-type: none"> <li>removable terminal for main circuit</li> </ul>	No
<ul style="list-style-type: none"> <li>removable terminal for auxiliary and control circuit</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Type of electrical connection for main current circuit</li> </ul>	screw-type terminals
<ul style="list-style-type: none"> <li>Type of electrical connection for auxiliary and control current circuit</li> </ul>	spring-loaded terminals
<b>Type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>for main contacts <ul style="list-style-type: none"> <li>— solid</li> </ul> </li> </ul>	2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>— stranded</li> </ul>	2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul>	2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>at AWG conductors for main contacts</li> </ul>	2x (18 ... 2), 1x (18 ... 1)
<b>Connectable conductor cross-section for main contacts</b>	
<ul style="list-style-type: none"> <li>single or multi-stranded</li> </ul>	1 ... 50 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>	1 ... 35 mm <sup>2</sup>
<b>Type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>— solid</li> </ul> </li> </ul>	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul>	2x (0.25 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>— finely stranded without core end processing</li> </ul>	2x (0.25 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>at AWG conductors for auxiliary contacts</li> </ul>	2x (24 ... 16)
<b>AWG number as coded connectable conductor cross section</b>	
<ul style="list-style-type: none"> <li>for main contacts</li> </ul>	18 ... 1

<b>Tightening torque</b>	
<ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>	0.8 ... 1.2 N·m

### Installation/ mounting/ dimensions

<ul style="list-style-type: none"> <li>• <b>mounting position</b></li> </ul>	any
<b>Mounting type</b>	direct mounting
<b>Height</b>	99 mm
<b>Width</b>	55 mm
<b>Depth</b>	112 mm
<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>	0 mm 0 mm 0 mm 10 mm 0 mm  10 mm 0 mm 10 mm 10 mm 10 mm  10 mm 0 mm 10 mm 10 mm 10 mm

### Ambient conditions

<b>Installation altitude at height above sea level</b>	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	2 000 m
<b>Ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul>	-25 ... +60 °C -40 ... +80 °C

### Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
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CCC



CSA



UL



RCM



EG-Konf.

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

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



ABS



LRS



PRS

Marine / Shipping	other
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RINA



RMRS



DNVGL.COM/AF

[Confirmation](#)

## 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=3RR2143-3AA30>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RR2143-3AA30>

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

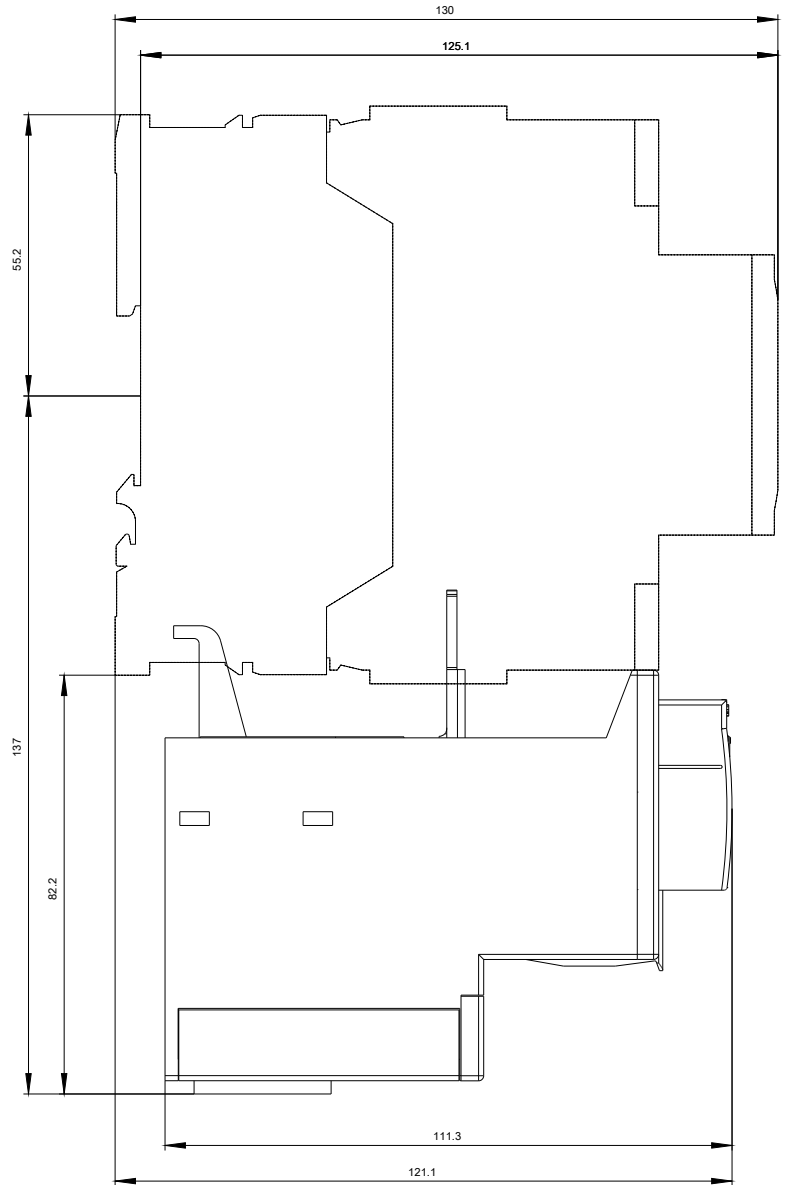
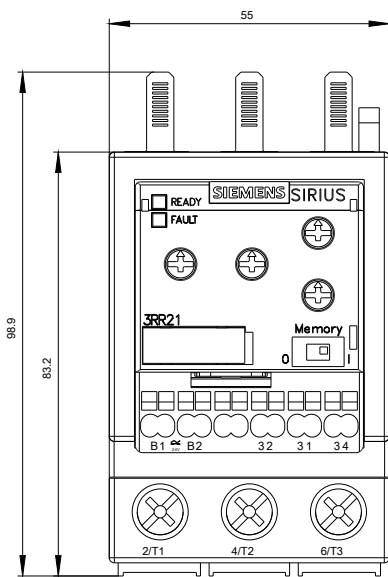
<https://support.industry.siemens.com/cs/ww/en/ps/3RR2143-3AA30>

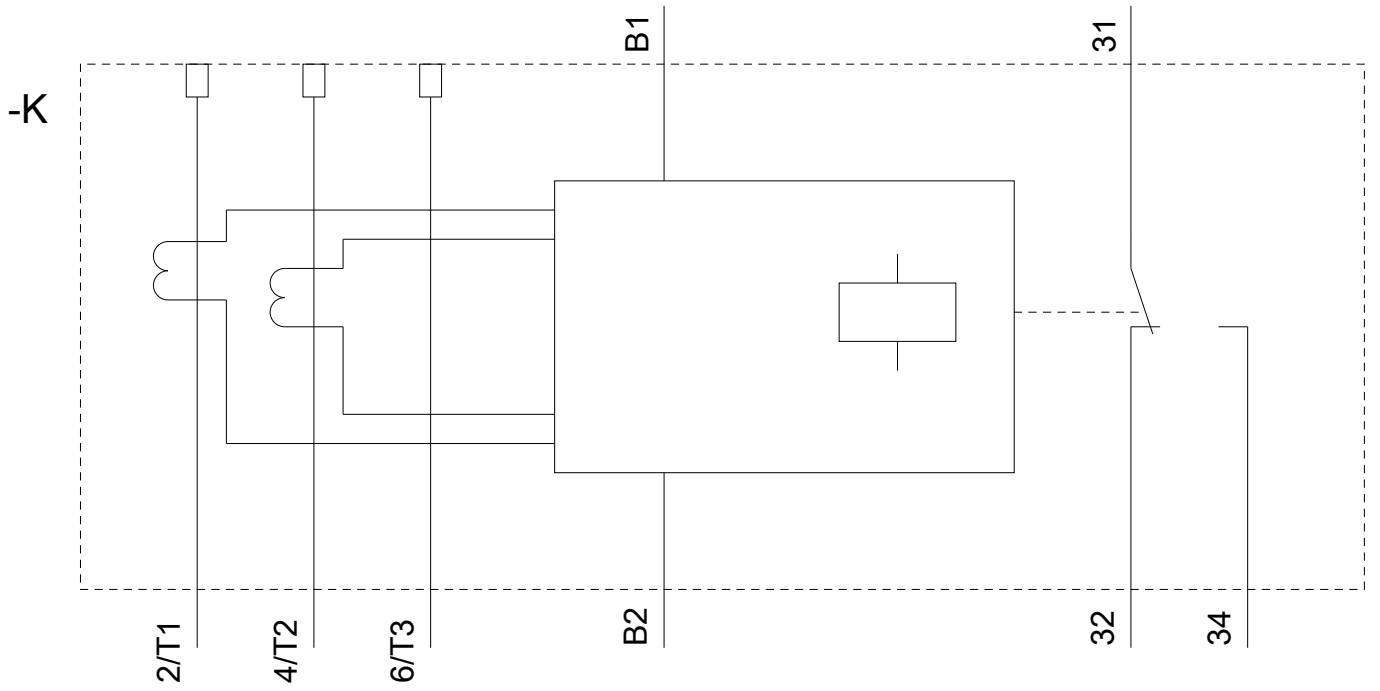
### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RR2143-3AA30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RR2143-3AA30&lang=en)

### Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RR2143-3AA30/manual>





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