



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 24-240 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% Screw 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 power rated value	4 VA
insulation voltage for overvoltage category III according to IEC 60664	
<ul style="list-style-type: none"> <li>with degree of pollution 3 rated value</li> </ul>	690 V
surge voltage resistance rated value	6 kV
consumed current at 24 V	90 mA
protection class IP	
<ul style="list-style-type: none"> <li>on the front</li> <li>of the terminal</li> </ul>	IP20 IP00
shock resistance	10g / 11 ms
vibration resistance	10 ... 55 Hz / 0.35 mm
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) at AC-15 at 230 V typical	100 000
reference code according to IEC 81346-2	K
relative repeat accuracy	2 %
Substance Prohibitance (Date)	03/01/2017

### Supply voltage

type of voltage of the supply voltage	AC/DC
supply voltage 1 at AC	
<ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	24 ... 240 V 24 ... 240 V
supply voltage 1 at DC	24 ... 240 V
supply voltage frequency 1	50 ... 60 Hz

### Measuring circuit

type of current for monitoring	AC
adjustable current response value current	
<ul style="list-style-type: none"> <li>1</li> <li>2</li> </ul>	8 ... 80 A 8 ... 80 A
adjustable response delay time	
<ul style="list-style-type: none"> <li>when starting</li> <li>with lower or upper limit violation</li> </ul>	0 ... 60 s 0 ... 30 s

### Precision

temperature drift per °C	0.1 %/°C
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### Short-circuit protection

design of the fuse link for short-circuit protection of the auxiliary switch required	fuse gG: 4 A
<b>Communication/ Protocol</b>	
protocol is supported IO-Link protocol	No
<b>type of voltage supply via input/output link master</b>	No
<b>Auxiliary circuit</b>	
<b>number of CO contacts</b>	
• for auxiliary contacts	1
<b>operational current of auxiliary contacts at AC-15</b>	
• at 24 V	3 A
• at 230 V	3 A
• at 400 V	3 A
<b>operational current of auxiliary contacts at DC-13</b>	
• at 24 V	1 A
• at 125 V	0.2 A
• at 250 V	0.1 A
<b>contact rating of auxiliary contacts according to UL</b>	B300 / R300
<b>Main circuit</b>	
operating power rated value	2.5 W
<b>ampacity of the semiconductor output in SIO mode</b>	20 mA
<b>operational current at 17 V minimum</b>	5 mA
<b>Electromagnetic compatibility</b>	
EMC emitted interference according to IEC 60947-1	ambience A (industrial sector)
EMC immunity according to IEC 60947-1	ambience A (industrial sector)
<b>Connections/ Terminals</b>	
<b>product component removable terminal for main circuit</b>	No
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<b>type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
<b>type of connectable conductor cross-sections</b>	
• for main contacts	
— solid	2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )
— stranded	2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )
— finely stranded with core end processing	2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )
• at AWG cables for main contacts	2x (18 ... 2), 1x (18 ... 1)
<b>connectable conductor cross-section for main contacts</b>	
• solid or stranded	1 ... 50 mm <sup>2</sup>
• finely stranded with core end processing	1 ... 35 mm <sup>2</sup>
<b>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
— finely stranded with core end processing	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
• at AWG cables for auxiliary contacts	2x (20 ... 14)
AWG number as coded connectable conductor cross section for main contacts	18 ... 1
tightening torque with screw-type terminals	0.8 ... 1.2 N·m
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	direct mounting
<b>height</b>	99 mm
<b>width</b>	55 mm
<b>depth</b>	112 mm
<b>required spacing</b>	
• with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	10 mm
— at the side	0 mm

- for grounded parts
  - forwards 10 mm
  - backwards 0 mm
  - upwards 10 mm
  - at the side 10 mm
  - downwards 10 mm
- for live parts
  - forwards 10 mm
  - backwards 0 mm
  - upwards 10 mm
  - downwards 10 mm
  - at the side 10 mm

#### 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

#### Certificates/ approvals

##### General Product Approval

##### EMC



[Confirmation](#)



##### Declaration of Conformity

##### Test Certificates

##### Marine / Shipping



EG-Konf.

[Special Test Certificate](#)



ABS



LRS



PRS

##### Marine / Shipping

##### other



[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=3RR2143-1AW30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RR2143-1AW30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RR2143-1AW30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RR2143-1AW30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RR2143-1AW30&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RR2143-1AW30/manual>



