



Monitoring relay, can be mounted to Contactor 3RT2, Size S0 standard, digitally adjustable Apparent/active current monitoring 4...40 A, 20...400 Hz, 3-phase Supply 24-240 V AC/DC 1 change-over contact, 1 semiconductor output for alarm and warning Monitoring for Current overshoot and undershoot Phase failure, Cable break Phase sequence Residual current Blocking current Warning and alarm thresholds with or without fault buffer ON delay 0-99 s Noise pulse suppression 0-30 s Pause after fault 0-300 min Screw connection system

product brand name	SIRIUS
product designation	Monitoring relays
design of the product	digitally adjustable, 3-phase current monitoring
product type designation	3RR2

### General technical data

size of contactor can be combined company-specific	S0
operating apparent power rated value	4 VA
insulation voltage for overvoltage category III according to IEC 60664	
• with degree of pollution 3 rated value	690 V
surge voltage resistance rated value	6 kV
consumed current at 24 V	90 mA
protection class IP	
• on the front	IP20
• of the terminal	IP20
shock resistance	15g / 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)	10/01/2009

### Supply voltage

type of voltage of the supply voltage	AC/DC
supply voltage 1 at AC	
• at 50 Hz	24 ... 240 V
• at 60 Hz	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	
• 1	4 ... 40 A
• 2	4 ... 40 A
adjustable response delay time	
• when starting	0 ... 99 s
• with lower or upper limit violation	0 ... 30 s
adjustable switching hysteresis for measured current value	0.1 ... 8 A
accuracy of digital display	+/-1 digit

### Precision

<b>temperature drift per °C</b>	0.1 %/°C
<b>Short-circuit protection</b>	
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>	1
• for auxiliary contacts	
<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 at AC-14 at 240 V at 50/60 Hz</b>	20 mA
<b>ampacity of the semiconductor output at DC-13 at 240 V</b>	20 mA
<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 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )
— finely stranded with core end processing	2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>
• at AWG cables for main contacts	2 x (16 ... 14), 2x (14 ... 8)
<b>connectable conductor cross-section for main contacts</b>	
• solid or stranded	1 ... 10 mm <sup>2</sup>
• finely stranded with core end processing	2.5 ... 10 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	16 ... 8
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>	87 mm
<b>width</b>	45 mm
<b>depth</b>	91 mm
<b>required spacing</b>	
• with side-by-side mounting	

- forwards 0 mm
- backwards 0 mm
- upwards 0 mm
- downwards 0 mm
- at the side 0 mm
- for grounded parts
  - forwards 6 mm
  - backwards 0 mm
  - upwards 6 mm
  - at the side 6 mm
  - downwards 6 mm
- for live parts
  - forwards 6 mm
  - backwards 0 mm
  - upwards 6 mm
  - downwards 6 mm
  - at the side 6 mm

#### Ambient conditions

installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-40 ... +80 °C

#### Certificates/ approvals

##### General Product Approval

##### EMC



[Confirmation](#)



##### Declaration of Conformity

##### Test Certificates

##### Marine / Shipping



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



##### 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=3RR2242-1FW30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RR2242-1FW30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RR2242-1FW30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RR2242-1FW30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RR2242-1FW30&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RR2242-1FW30/manual>



