

## SIRIUS 3RR2 Monitoring Relays for Mounting onto 3RT2 Contactors

## Current monitoring

## Overview

The SIRIUS 3RR2 current monitoring relays are suitable for the load monitoring of motors or other loads. In two or three phases they monitor the rms value of AC currents for overshooting or undershooting of set threshold values.

Whereas apparent current monitoring is used above all in connection with the rated torque or in case of overload, the active current monitoring option can be used to observe and evaluate the load factor over a motor's entire torque range.

The 3RR2 current monitoring relays can be integrated directly in the feeder by mounting onto the 3RT2 contactor; separate wiring of the main circuit is therefore superfluous. No separate transformers are required.

For a line-oriented configuration or simultaneous use of an overload relay, terminal brackets for stand-alone installation are available for separate standard rail mounting.

## Benefits

- Directly mountable onto 3RT2 contactors, i.e. no additional wiring outlay in the main circuit
- Optimally coordinated with the technical characteristics of the 3RT2 contactors
- No separate current transformer required
- Versions with wide voltage supply range
- Variably adjustable to overvoltage, undervoltage or range monitoring

- Freely configurable delay times and RESET response
- Display of ACTUAL value and status messages
- All versions with removable control current terminals
- All versions with screw terminals or alternatively with innovative spring-type terminals
- Simple determination of the threshold values through direct reference to actually measured values for setpoint loading
- Range monitoring and selectable active current measurement mean that only one device for monitoring a motor is required along the entire torque curve
- In addition to current monitoring it is also possible to monitor for broken cables, phase failure, phase sequence, residual current and motor blocking.

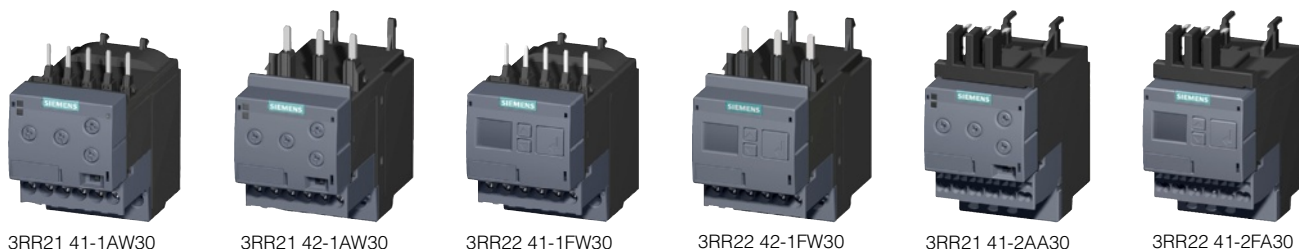
## Application



- Monitoring of current overshoot and undershoot
- Monitoring of broken conductors
- Monitoring of no-load operation and load shedding, e.g. in the event of a torn V-belt or no-load operation of a pump
- Monitoring of overload, e.g. on pumps due to a dirty filter system
- Monitoring the functionality of electrical loads such as heaters
- Monitoring of wrong phase sequence on mobile equipment such as compressors or cranes
- Monitoring of high-resistance short-circuits, e.g. due to damaged insulation or dampness

## Selection and ordering data

## SIRIUS 3RR2 current monitoring relays

- For load monitoring of motors or other loads
- Multi-phase monitoring of undercurrent and overcurrent
- Starting and tripping delay can be adjusted separately
- Tripping delay 0 to 30 s
- Auto or manual RESET



Size	Measuring range	Hysteresis	Power supply $U_s$	DT	Screw terminals 	PS* DT	Spring-type terminals 	PS*
	A	A	V		Order No.		Order No.	

## Basic versions

Analogically adjustable, closed-circuit principle, 1 CO, 2-phase current monitoring, apparent current monitoring, start-up delay 0 ... 60 s

<b>S00</b>	1.6 ... 16	6.25 % of threshold value	24 AC/DC 24 ... 240 AC/DC	<b>3RR21 41-1AA30</b> <b>3RR21 41-1AW30</b>	1 unit 1 unit	<b>3RR21 41-2AA30</b> <b>3RR21 41-2AW30</b>	1 unit 1 unit
<b>S0</b>	4 ... 40	6.25 % of threshold value	24 AC/DC 24 ... 240 AC/DC	<b>3RR21 42-1AA30</b> <b>3RR21 42-1AW30</b>	1 unit 1 unit	<b>3RR21 42-2AA30</b> <b>3RR21 42-2AW30</b>	1 unit 1 unit

## Standard versions

Digitally adjustable, LCD, open-circuit or closed-circuit principle, 1 CO, 1 semiconductor output, 3-phase current monitoring, active current or apparent current monitoring, phase sequence monitoring, residual current monitoring, blocking current monitoring, reclose delay time 0 ... 300 min, start-up delay 0 ... 99 s, separate settings for warning and alarm thresholds





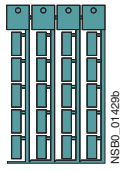



<b>S00</b>	1.6 ... 16	0.1 ... 3	24 AC/DC 24 ... 240 AC/DC	<b>3RR22 41-1FA30</b> <b>3RR22 41-1FW30</b>	1 unit 1 unit	<b>3RR22 41-2FA30</b> <b>3RR22 41-2FW30</b>	1 unit 1 unit
<b>S0</b>	4 ... 40	0.1 ... 8	24 AC/DC 24 ... 240 AC/DC	<b>3RR22 42-1FA30</b> <b>3RR22 42-1FW30</b>	1 unit 1 unit	<b>3RR22 42-2FA30</b> <b>3RR22 42-2FW30</b>	1 unit 1 unit

# Monitoring Relays

## SIRIUS 3RR2 Monitoring Relays for Mounting onto 3RT2 Contactors

### Current monitoring

#### Accessories

Use	Version	Size	DT	Order No.	PS*	
<b>Terminal brackets for stand-alone installation<sup>1)</sup></b>						
 3RU29 16-3AA01	For 3RR2	For separate mounting of the overload relays or monitoring relays; screw and snap-on mounting onto TH 35 standard mounting rail <ul style="list-style-type: none"> <li>Screw connection</li> </ul>	S00 S0	▶ ▶	<b>Screw terminals</b> 	1 unit 1 unit
					<b>Spring-type terminals</b> 	1 unit 1 unit
 3RU29 26-3AC01		<ul style="list-style-type: none"> <li>Spring-type connection</li> </ul>	S00 S0		<b>3RU29 16-3AA01</b> <b>3RU29 26-3AA01</b>	
<b>Blank labels</b>						
 3RT19 00-1SB20	For 3RR2	<b>Unit labeling plates<sup>2)</sup></b> For SIRIUS devices 20 mm x 7 mm, pastel turquoise			<b>3RT19 00-1SB20</b>	340 units
<b>Sealable covers</b>						
 3RR29 40	For 3RR2	<b>Sealable covers</b> For securing against unintentional or unauthorized adjustment of settings			<b>3RR29 40</b>	5 units
	For 3RR21	<b>Sealing foils</b> For securing against unauthorized adjustment of setting knobs		▶	<b>3TK28 20-0AA00</b>	1 unit
<b>Tools for opening spring-type terminals</b>						
 3RA29 08-1A	For auxiliary circuit connections	<b>Screwdrivers</b> For all SIRIUS devices with spring-type terminals 3.0 mm x 0.5 mm, length approx. 200 mm, titanium gray/black, partially insulated			<b>Spring-type terminals</b> 	1 unit

<sup>1)</sup> The accessories are identical to those of the 3RU21 thermal overload relays and the 3RB3 solid-state overload relays.

<sup>2)</sup> PC labeling system for individual inscription of unit labeling plates available from: murrplastik Systemtechnik GmbH [www.murrplastik.de](http://www.murrplastik.de)