



Monitoring relay, can be mounted to Contactor 3RT2, Size S0 standard, digitally adjustable Apparant/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 output rated value                                                                                                                                        | 4 V·A                  |
| Insulation voltage <ul style="list-style-type: none"> <li>• for overvoltage category III according to IEC 60664</li> <li>— with degree of pollution 3 rated value</li> </ul> | 690 V                  |
| Surge voltage resistance rated value                                                                                                                                         | 6 kV                   |
| Protection class IP <ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>                                                              | IP20<br>IP20           |
| Shock resistance                                                                                                                                                             | 15g / 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             |

|                                                                                         |         |
|-----------------------------------------------------------------------------------------|---------|
| <b>Electrical endurance (switching cycles)</b>                                          |         |
| <ul style="list-style-type: none"> <li>• at AC-15 at 230 V typical</li> </ul>           | 100 000 |
| <b>Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b> | K       |
| <b>Reference code acc. to DIN EN 81346-2</b>                                            | K       |
| <b>Reference code acc. to DIN EN 61346-2</b>                                            | K       |
| <b>Relative repeat accuracy</b>                                                         | 2 %     |

### Supply voltage

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

### Measuring circuit

|                                                                                         |             |
|-----------------------------------------------------------------------------------------|-------------|
| <b>Type of current for monitoring</b>                                                   | AC          |
| <b>Adjustable pick-up value current</b>                                                 |             |
| <ul style="list-style-type: none"> <li>• 1</li> </ul>                                   | 4 ... 40 A  |
| <ul style="list-style-type: none"> <li>• 2</li> </ul>                                   | 4 ... 40 A  |
| <b>Adjustable response delay time</b>                                                   |             |
| <ul style="list-style-type: none"> <li>• when starting</li> </ul>                       | 0 ... 99 s  |
| <ul style="list-style-type: none"> <li>• with lower or upper limit violation</li> </ul> | 0 ... 30 s  |
| <b>Adjustable switching hysteresis for measured current value</b>                       | 0.1 ... 8 A |
| <b>Accuracy of digital display</b>                                                      | +/-1 digit  |

### Precision

|                                 |          |
|---------------------------------|----------|
| <b>Temperature drift per °C</b> | 0.1 %/°C |
|---------------------------------|----------|

### Communication/ Protocol

|                                                                      |    |
|----------------------------------------------------------------------|----|
| <b>Protocol is supported</b>                                         |    |
| <ul style="list-style-type: none"> <li>• IO-Link protocol</li> </ul> | No |
| <b>Type of voltage supply via input/output link master</b>           | No |

### Auxiliary circuit

|                                                                            |     |
|----------------------------------------------------------------------------|-----|
| <b>Number of CO contacts</b>                                               |     |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul> | 1   |
| <b>Operating current of auxiliary contacts at AC-15</b>                    |     |
| <ul style="list-style-type: none"> <li>• at 24 V</li> </ul>                | 3 A |
| <ul style="list-style-type: none"> <li>• at 230 V</li> </ul>               | 3 A |
| <ul style="list-style-type: none"> <li>• at 400 V</li> </ul>               | 3 A |
| <b>Operating current of auxiliary contacts at DC-13</b>                    |     |
| <ul style="list-style-type: none"> <li>• at 24 V</li> </ul>                | 1 A |

|                                                                                                                                                                                                                                               |                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 125 V</li> <li>• at 250 V</li> </ul>                                                                                                                                                              | 0.2 A<br>0.1 A                                                                                                                                                                                 |
| <b>Contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                   | B300 / R300                                                                                                                                                                                    |
| <b>Main circuit</b>                                                                                                                                                                                                                           |                                                                                                                                                                                                |
| <b>Operating power</b>                                                                                                                                                                                                                        |                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• rated value</li> </ul>                                                                                                                                                                               | 2.5 W                                                                                                                                                                                          |
| <b>Outputs</b>                                                                                                                                                                                                                                |                                                                                                                                                                                                |
| <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                                                                                                                                                                                    |
| <b>Connections/Terminals</b>                                                                                                                                                                                                                  |                                                                                                                                                                                                |
| <b>Product function</b>                                                                                                                                                                                                                       |                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• removable terminal for main circuit</li> <li>• removable terminal for auxiliary and control circuit</li> </ul>                                                                                       | No<br>Yes                                                                                                                                                                                      |
| <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>                                                                                                             | screw-type terminals<br>screw-type 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> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG conductors for main contacts</li> </ul>           | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )<br>2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup><br>2 x (16 ... 14), 2x (14 ... 8) |
| <b>Connectable conductor cross-section for main contacts</b>                                                                                                                                                                                  |                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• single or multi-stranded</li> <li>• finely stranded with core end processing</li> </ul>                                                                                                              | 1 ... 10 mm <sup>2</sup><br>2.5 ... 10 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> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG conductors for auxiliary contacts</li> </ul> | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (20 ... 14)                                   |
| <b>AWG number as coded connectable conductor cross section</b>                                                                                                                                                                                |                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• for main contacts</li> </ul>                                                                                                                                                                         | 16 ... 8                                                                                                                                                                                       |
| <b>Tightening torque</b>                                                                                                                                                                                                                      |                                                                                                                                                                                                |

- with screw-type terminals

0.8 ... 1.2 N·m

### Installation/ mounting/ dimensions

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | any                                                                                                                                                                                                                                          |
| <b>Mounting type</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | direct mounting                                                                                                                                                                                                                              |
| <b>Height</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 87 mm                                                                                                                                                                                                                                        |
| <b>Width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 45 mm                                                                                                                                                                                                                                        |
| <b>Depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 91 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> | <ul style="list-style-type: none"> <li>0 mm</li> <li>0 mm</li> <li>0 mm</li> <li>0 mm</li> <li>0 mm</li> <li>6 mm</li> <li>0 mm</li> <li>6 mm</li> <li>6 mm</li> <li>6 mm</li> <li>6 mm</li> <li>6 mm</li> <li>6 mm</li> <li>6 mm</li> </ul> |

### 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> | <ul style="list-style-type: none"> <li>-25 ... +60 °C</li> <li>-40 ... +80 °C</li> </ul> |

### Certificates/approvals

|                          |     |                           |
|--------------------------|-----|---------------------------|
| General Product Approval | EMC | Declaration of Conformity |
|--------------------------|-----|---------------------------|



CCC



CSA



UL



C-Tick



EG-Konf.

|                   |                   |
|-------------------|-------------------|
| Test Certificates | Marine / Shipping |
|-------------------|-------------------|

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



ABS



BUREAU VERITAS



LRS



PRS

|                   |       |
|-------------------|-------|
| Marine / Shipping | other |
|-------------------|-------|



RINA



RMRS



DNV-GL  
DNVGL.COM/AF

[Confirmation](#)

### Further information

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

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

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RR2242-1FW30>

**Cax online generator**

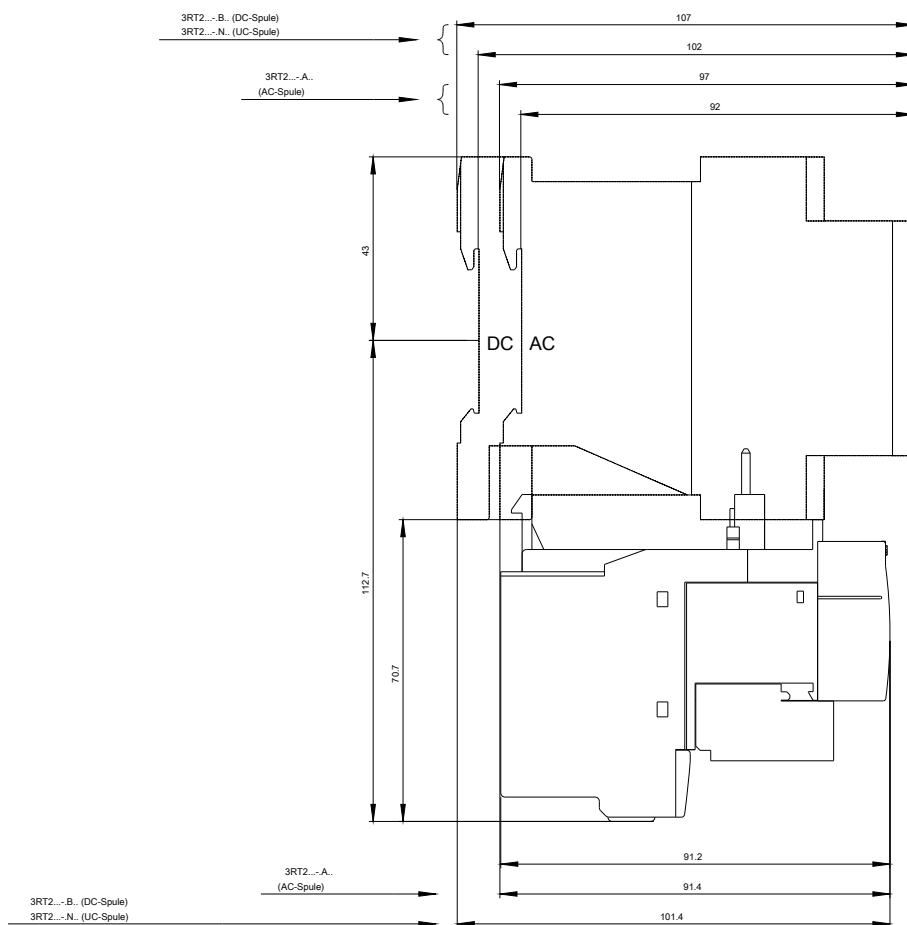
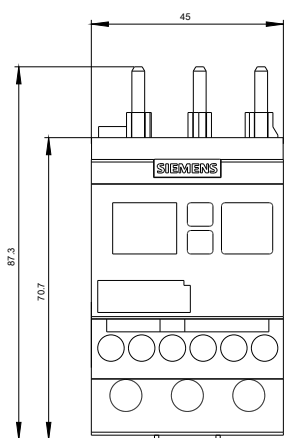
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RR2242-1FW30>

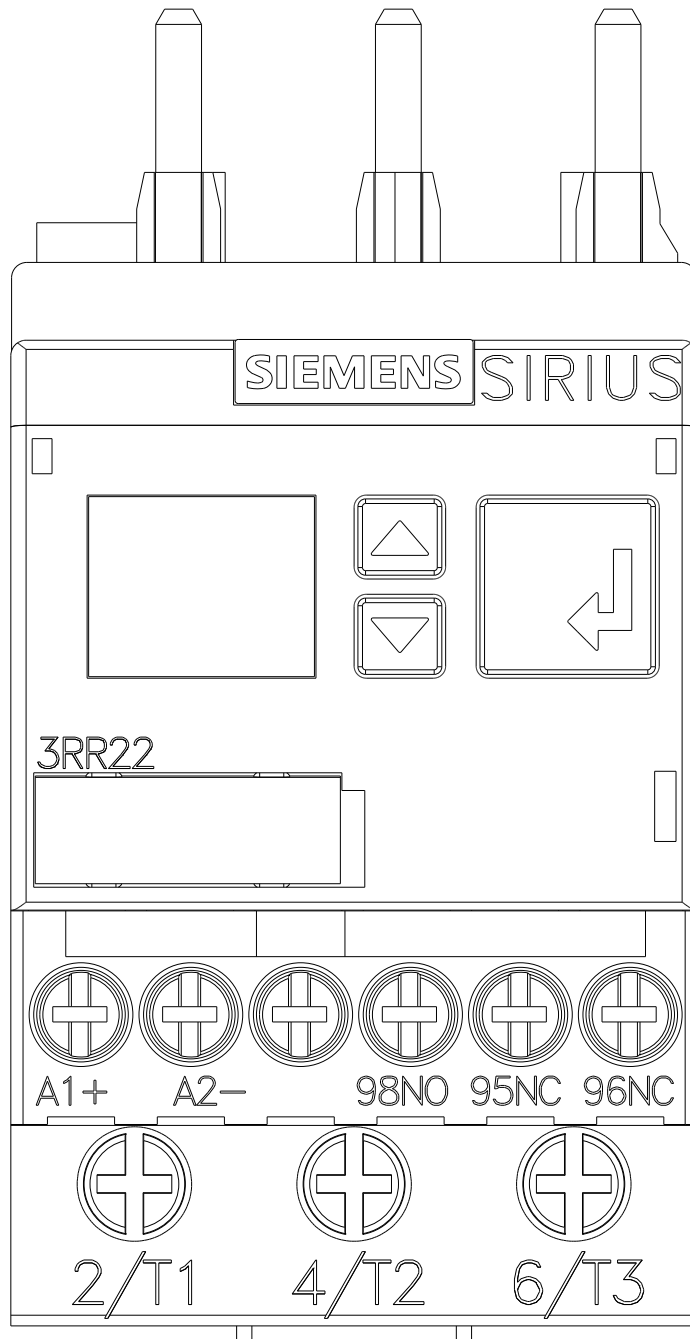
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

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

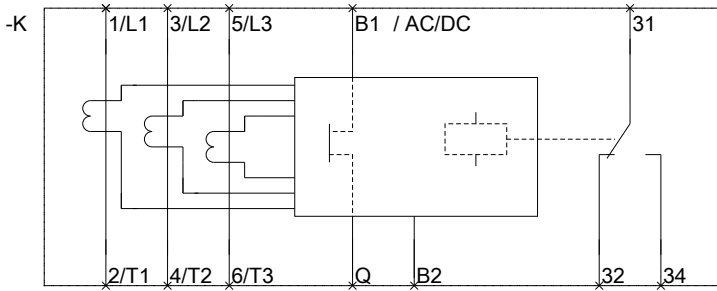
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

[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)





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