



MONITORING RELAY ATTACHABLE TO CONTACTOR 3RT2. SIZE S2 STANDARD, DIGITAL ADJUSTABLE APPARENT/ACTIVE CURRENT MONIT. 8 - 80A, 20-400 HZ, 3-PHASE SUPPLY 24-240 V AC/DC 1 CO CONTACT, 1 SEMICOND. FOR ALARM AND WARNING MONITORING FOR CURRENT OVERSHOOT/UNDERSHOOT PHASE FAILURE, WIRE BREAK PHASE SEQUENCE FAULT CURRENT BLOCKING CURRENT WARNING AND ALARM THRESHOLDS WITH OR W/O ERROR LOG ON-DELAY 0-99 S SPURIOUS PEAK SUPPR.0-30 S BREAK AFTER FAULT 0-300 MIN SCREW CONNECTION

Figure similar

| General technical data:                                                                                       |    |                                                  |
|---------------------------------------------------------------------------------------------------------------|----|--------------------------------------------------|
| product brandname                                                                                             |    | SIRIUS                                           |
| Product designation                                                                                           |    | Monitoring relays                                |
| Design of the product                                                                                         |    | digitally adjustable, 3-phase current monitoring |
| Size of contactor can be combined company-specific                                                            |    | S2                                               |
| Protection class IP                                                                                           |    |                                                  |
| • on the front                                                                                                |    | IP20                                             |
| • of the terminal                                                                                             |    | IP00                                             |
| Insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value | V  | 690                                              |
| Installation altitude at height above sea level maximum                                                       | m  | 2 000                                            |
| Ambient temperature                                                                                           |    |                                                  |
| • during storage                                                                                              | °C | -40 ... +80                                      |
| • during operation                                                                                            | °C | -25 ... +60                                      |
| Electromagnetic compatibility                                                                                 |    | IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4      |
| EMI immunity acc. to IEC 60947-1                                                                              |    | ambience A (industrial sector)                   |

|                                                                                            |     |                                |
|--------------------------------------------------------------------------------------------|-----|--------------------------------|
| EMC emitted interference acc. to IEC 60947-1                                               |     | ambience A (industrial sector) |
| <b>Shock resistance</b>                                                                    |     | 10g / 11 ms                    |
| <b>Vibration resistance</b>                                                                |     | 10 ... 55 Hz / 0.35 mm         |
| <b>Surge voltage resistance rated value</b>                                                | kV  | 6                              |
| <b>Operating apparent output rated value</b>                                               | V·A | 4                              |
| <b>Operating power rated value</b>                                                         | W   | 2.5                            |
| <b>Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b> |     | K                              |
| <b>Equipment marking acc. to DIN EN 61346-2</b>                                            |     | K                              |
| Mechanical service life (switching cycles) typical                                         |     | 10 000 000                     |
| Electrical endurance (switching cycles) at AC-15 at 230 V typical                          |     | 100 000                        |
| <b>Accuracy of digital display</b>                                                         |     | +/-1 digit                     |
| <b>Adjustable response delay time</b>                                                      |     |                                |
| • when starting                                                                            | s   | 0 ... 99                       |
| • with lower or upper limit violation                                                      | s   | 0 ... 30                       |
| <b>Stand-by time for restart after fault</b>                                               | s   | 0.2                            |
| <b>Phase number</b>                                                                        |     | 3                              |
| <b>Number of monitored phases</b>                                                          |     | 3                              |
| <b>Product function</b>                                                                    |     |                                |
| • Overcurrent monitoring                                                                   |     | Yes                            |
| • Undercurrent monitoring                                                                  |     | Yes                            |
| • Overcurrent and undercurrent monitoring                                                  |     | Yes                            |
| • Apparent current monitoring                                                              |     | Yes                            |
| • active current monitoring                                                                |     | Yes                            |
| • undercurrent detection DC                                                                |     | No                             |
| • undercurrent detection 1 phase                                                           |     | No                             |
| • Overcurrent detection DC                                                                 |     | No                             |
| • Current window recognition DC                                                            |     | No                             |
| • undercurrent detection 3 phases                                                          |     | Yes                            |
| • Overcurrent detection 1 phase                                                            |     | No                             |
| • Voltage window recognition 3 phase                                                       |     | No                             |
| • Voltage window recognition 1 phase                                                       |     | No                             |
| • phase sequence recognition                                                               |     | Yes                            |
| • can be activated or deactivated phase sequence recognition                               |     | Yes                            |
| • Auto-reset                                                                               |     | Yes                            |
| • External reset                                                                           |     | No                             |
| • Manual RESET                                                                             |     | Yes                            |
| <b>Adjustable pick-up value current</b>                                                    |     |                                |
| • 1                                                                                        | A   | 8 ... 80                       |
| • 2                                                                                        | A   | 8 ... 80                       |

|                                                                                                                            |            |                 |
|----------------------------------------------------------------------------------------------------------------------------|------------|-----------------|
| Factor as multiple of the current monitoring upper limit for the adjustable value of a blocking current                    |            | 2 ... 5         |
| Response value residual current detection at 50/60 Hz typical                                                              | A          | 8               |
| <b>Relative metering precision</b><br>• relating to measured value                                                         | %          | 5               |
| <b>Type of current for monitoring</b>                                                                                      |            | AC              |
| <b>Measurable current at AC</b>                                                                                            | A          | 8 ... 80        |
| <b>Adjustable switching hysteresis for measured current value</b>                                                          | A          | 0.2 ... 16      |
| <b>Response time maximum</b>                                                                                               | ms         | 200             |
| <b>Relative repeat accuracy</b>                                                                                            | %          | 2               |
| <b>Temperature drift per °C</b>                                                                                            | %/°C       | 0.1             |
| <b>Ampacity</b><br>• for permanent overcurrent maximum permissible<br>• for overcurrent duration < 1 s maximum permissible | A<br><br>A | 80<br><br>1 600 |

#### Supply voltage:

|                                                                           |                 |                                            |
|---------------------------------------------------------------------------|-----------------|--------------------------------------------|
| <b>Type of voltage of the supply voltage</b>                              |                 | AC/DC                                      |
| <b>Supply voltage frequency 1</b>                                         | Hz              | 50 ... 60                                  |
| <b>Supply voltage 1</b><br>• at DC<br>• at AC<br>— at 50 Hz<br>— at 60 Hz | V<br><br>V<br>V | 24 ... 240<br><br>24 ... 240<br>24 ... 240 |
| <b>Buffering time in the event of power failure minimum</b>               | ms              | 10                                         |

#### Auxiliary circuit:

|                                                                                                                |          |                                               |
|----------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------|
| <b>Circuit principle of the output relay</b>                                                                   |          | closed-circuit current / open-circuit current |
| <b>Operating current at 17 V minimum</b>                                                                       | mA       | 5                                             |
| Number of outputs as contact-less semiconductor switching element for signaling function instantaneous contact |          | 1                                             |
| <b>Ampacity of the semiconductor output</b><br>• at DC-13 at 240 V<br>• at AC-14 at 240 V at 50/60 Hz          | mA<br>mA | 20<br>20                                      |
| <b>Residual current of the semiconductor output maximum</b>                                                    | mA       | 0.035                                         |
| <b>Number of CO contacts</b><br>• for auxiliary contacts                                                       |          | 1                                             |
| <b>Operating current of auxiliary contacts</b><br>• at AC-15<br>— at 24 V                                      | A        | 3                                             |

- at 230 V
- at 400 V
- at DC-13
  - at 24 V
  - at 125 V
  - at 250 V

|   |     |
|---|-----|
| A | 3   |
| A | 3   |
| A | 1   |
| A | 0.2 |
| A | 0.1 |

#### Inputs/ Outputs:

#### Short-circuit:

#### Installation/ mounting/ dimensions:

|                                                    |    |                 |
|----------------------------------------------------|----|-----------------|
| <b>Mounting position</b>                           |    | any             |
| <b>Mounting type</b>                               |    | direct mounting |
| <b>Width</b>                                       | mm | 55              |
| <b>Height</b>                                      | mm | 99              |
| <b>Depth</b>                                       | mm | 112             |
| <b>Required spacing with side-by-side mounting</b> |    |                 |
| • forwards                                         | mm | 0               |
| • Backwards                                        | mm | 0               |
| • upwards                                          | mm | 0               |
| • downwards                                        | mm | 10              |
| • at the side                                      | mm | 0               |
| <b>Required spacing for grounded parts</b>         |    |                 |
| • forwards                                         | mm | 10              |
| • Backwards                                        | mm | 0               |
| • upwards                                          | mm | 10              |
| • downwards                                        | mm | 10              |
| • at the side                                      | mm | 10              |
| <b>Required spacing for live parts</b>             |    |                 |
| • forwards                                         | mm | 10              |
| • Backwards                                        | mm | 0               |
| • upwards                                          | mm | 10              |
| • downwards                                        | mm | 10              |
| • at the side                                      | mm | 10              |

#### Connections/ Terminals:

|                                                        |  |                      |
|--------------------------------------------------------|--|----------------------|
| <b>Type of electrical connection</b>                   |  |                      |
| • for main current circuit                             |  | screw-type terminals |
| • for auxiliary and control current circuit            |  | screw-type terminals |
| <b>Product function</b>                                |  |                      |
| • removable terminal for main circuit                  |  | No                   |
| • removable terminal for auxiliary and control circuit |  | Yes                  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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>— stranded</li> <li>— finely stranded <ul style="list-style-type: none"> <li>— with core end processing</li> </ul> </li> </ul> </li> <li>• at AWG conductors <ul style="list-style-type: none"> <li>— for main contacts</li> <li>— for auxiliary contacts</li> </ul> </li> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded <ul style="list-style-type: none"> <li>— with core end processing</li> </ul> </li> </ul> </li> </ul> |     | 2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )<br>2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )<br><br>2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )<br><br>2x (18 ... 2), 1x (18 ... 1)<br>2x (20 ... 14)<br><br>1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )<br><br>1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> ) |
| Tightening torque with screw-type terminals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | N·m | 0.8 ... 1.2                                                                                                                                                                                                                                                                                                                                                                                                        |

#### Certificates/ approvals:

##### Certificate of suitability

CE / UL / CSA

##### General Product Approval

##### Declaration of Conformity

##### Test Certificates



[Type Test  
Certificates/Test  
Report](#)

##### Shipping Approval

##### other



[Environmental  
Confirmations](#)

[Confirmation](#)

#### UL/CSA ratings:

##### Contact rating of auxiliary contacts according to UL

B300 / R300

#### Safety related data:

##### Protection against electrical shock

finger-safe when touched vertically from front acc. to IEC 60529

#### Further information

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

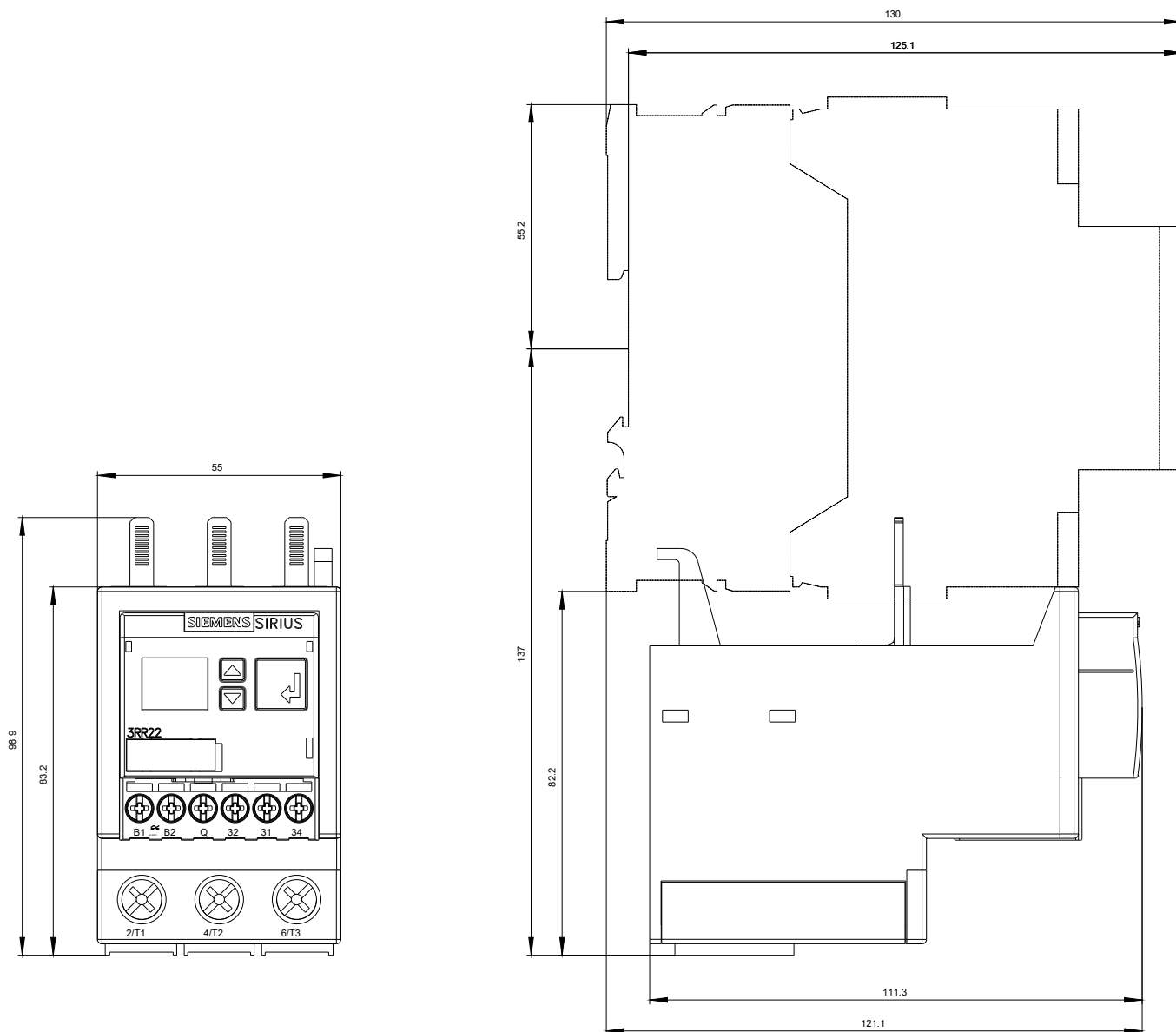
<http://www.siemens.com/industrial-controls/catalogs>

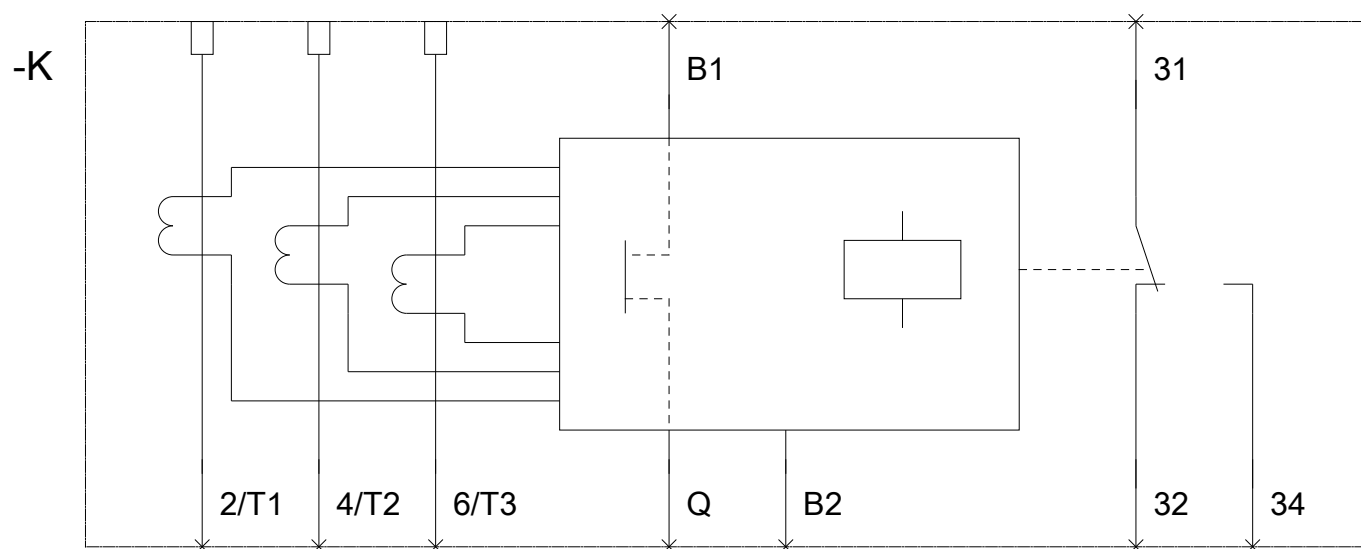
##### Industry Mall (Online ordering system)

<http://www.siemens.com/industrymall>

##### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RR2243-1FW30>





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