



intelligent load feeder reversing starter high feature 0.4-4 A up to 690 V AC type of coordination 2 frame size S00 for ET 200SP system consisting of 3RC7141-1EE10, 3RV2311-1EC20, 2x 3RT2017-2BB42

|                                                                                              |                                                                                             |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| product brand name                                                                           | SIRIUS                                                                                      |
| product designation                                                                          | Intelligent load feeder                                                                     |
| design of the product                                                                        | reversing starter high feature                                                              |
| product type designation                                                                     | 3RA8                                                                                        |
| manufacturer's article number                                                                |                                                                                             |
| • of the supplied contactor                                                                  | <a href="#">3RT2017-2BB42</a>                                                               |
| • of the supplied circuit-breakers                                                           | <a href="#">3RV2311-1EC20</a>                                                               |
| • of the supplied RH assembly kit                                                            | <a href="#">3RA2913-2LA2</a>                                                                |
| • of the supplied link module                                                                | <a href="#">3RC7141-1EE10</a>                                                               |
| <b>General technical data</b>                                                                |                                                                                             |
| number of monitored phases                                                                   | 3                                                                                           |
| suitability for use                                                                          |                                                                                             |
| • direct starter                                                                             | No                                                                                          |
| • reversing starter                                                                          | Yes                                                                                         |
| • star-delta starter                                                                         | No                                                                                          |
| product function external reset                                                              | Yes                                                                                         |
| product component RESET button                                                               | Yes                                                                                         |
| design of the overcurrent release                                                            | electronic                                                                                  |
| size of the circuit-breaker                                                                  | S00                                                                                         |
| size of load feeder                                                                          | S00                                                                                         |
| size of contactor can be combined company-specific                                           | S00                                                                                         |
| product function                                                                             |                                                                                             |
| • remote firmware update                                                                     | Yes                                                                                         |
| • disconnect functionality                                                                   | Yes                                                                                         |
| • for power supply reverse polarity protection                                               | Yes                                                                                         |
| power loss [W] for rated value of the current at AC in hot operating state per pole          | 2.6 W                                                                                       |
| insulation voltage                                                                           |                                                                                             |
| • rated value                                                                                | 690 V                                                                                       |
| • for overvoltage category III according to IEC 60664 with degree of pollution 2 rated value | 690 V                                                                                       |
| degree of pollution                                                                          | 3                                                                                           |
| overvoltage category                                                                         | 3                                                                                           |
| surge voltage resistance rated value                                                         | 6 kV                                                                                        |
| protection class IP                                                                          |                                                                                             |
| • on the front                                                                               | IP20                                                                                        |
| • of the terminal                                                                            | IP20                                                                                        |
| shock resistance according to IEC 60068-2-27                                                 | 6g / 11,0 ms (3 shocks); 10g / 6,0 ms (1000 shocks)                                         |
| vibration resistance                                                                         | 5-8,4 Hz, 3,5 mm; 8,4-150 Hz, 1 g; 10 cycles / 10-60 Hz, 0,35 mm; 60-500 Hz, 5 g; 10 cycles |
| type of coordination                                                                         | 2                                                                                           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| reference code according to IEC 81346-2                                                                                                                                                                                                                                                                                                                                                                                             | Q                                                                                                                                                                |
| reference code according to IEC 81346-2:2019                                                                                                                                                                                                                                                                                                                                                                                        | Q                                                                                                                                                                |
| continuous current rated value                                                                                                                                                                                                                                                                                                                                                                                                      | 4 A                                                                                                                                                              |
| Substance Prohibitance (Date)                                                                                                                                                                                                                                                                                                                                                                                                       | 06/21/2024                                                                                                                                                       |
| SVHC substance name                                                                                                                                                                                                                                                                                                                                                                                                                 | Lead - 7439-92-1<br>Lead monoxide (lead oxide) - 1317-36-8<br>Silicic acid, lead salt - 11120-22-2<br>2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7 |
| Weight                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.656 kg                                                                                                                                                         |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                  |
| installation altitude at height above sea level maximum                                                                                                                                                                                                                                                                                                                                                                             | 2 000 m                                                                                                                                                          |
| ambient temperature <ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> <li>during transport</li> <li>with upper limit without restrictions</li> </ul>                                                                                                                                                                                                                                             | -20 ... +60 °C<br>-40 ... +80 °C<br>-40 ... +80 °C<br>40 °C                                                                                                      |
| environmental category during operation according to IEC 60721                                                                                                                                                                                                                                                                                                                                                                      | 3C3 (without salt spray)                                                                                                                                         |
| relative humidity during operation                                                                                                                                                                                                                                                                                                                                                                                                  | 10 ... 95 %                                                                                                                                                      |
| <b>Main circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                  |
| number of poles for main current circuit                                                                                                                                                                                                                                                                                                                                                                                            | 3                                                                                                                                                                |
| design of the switching contact                                                                                                                                                                                                                                                                                                                                                                                                     | electromechanical                                                                                                                                                |
| adjustable current response value current of the current-dependent overload release                                                                                                                                                                                                                                                                                                                                                 | 0.4 ... 4 A                                                                                                                                                      |
| type of the motor protection                                                                                                                                                                                                                                                                                                                                                                                                        | solid-state                                                                                                                                                      |
| type of voltage for main current circuit                                                                                                                                                                                                                                                                                                                                                                                            | AC                                                                                                                                                               |
| utilization category according to IEC 60947-4-1                                                                                                                                                                                                                                                                                                                                                                                     | AC-3e                                                                                                                                                            |
| operating voltage <ul style="list-style-type: none"> <li>rated value</li> <li>at AC-3 rated value maximum</li> <li>at AC-3e rated value maximum</li> </ul>                                                                                                                                                                                                                                                                          | 690 V<br>690 V<br>690 V                                                                                                                                          |
| operating frequency rated value                                                                                                                                                                                                                                                                                                                                                                                                     | 50 ... 60 Hz                                                                                                                                                     |
| operational current rated value                                                                                                                                                                                                                                                                                                                                                                                                     | 4 A                                                                                                                                                              |
| operational current <ul style="list-style-type: none"> <li>at AC-3 <ul style="list-style-type: none"> <li>at 400 V rated value</li> <li>at 440 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul> </li> <li>at AC-3e <ul style="list-style-type: none"> <li>at 400 V rated value</li> <li>at 440 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul> </li> </ul> | 4 A<br>4 A<br>4 A<br>4 A<br><br>4 A<br>4 A<br>4 A<br>4 A                                                                                                         |
| operating power <ul style="list-style-type: none"> <li>at AC-3 <ul style="list-style-type: none"> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul> </li> <li>at AC-3e <ul style="list-style-type: none"> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul> </li> </ul>                                                                 | 1 500 W<br>2 200 W<br>3 000 W<br><br>1 500 W<br>2 200 W<br>3 000 W                                                                                               |
| <b>Control circuit/ Control</b>                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                  |
| type of voltage of the control supply voltage                                                                                                                                                                                                                                                                                                                                                                                       | DC                                                                                                                                                               |
| closing delay at DC                                                                                                                                                                                                                                                                                                                                                                                                                 | 40 ... 110 ms                                                                                                                                                    |
| opening delay at DC                                                                                                                                                                                                                                                                                                                                                                                                                 | 30 ... 50 ms                                                                                                                                                     |
| <b>Auxiliary circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                  |
| product component auxiliary switch                                                                                                                                                                                                                                                                                                                                                                                                  | No                                                                                                                                                               |
| product extension auxiliary switch                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                                                                                                              |
| type of voltage for auxiliary and control circuit                                                                                                                                                                                                                                                                                                                                                                                   | DC                                                                                                                                                               |
| auxiliary voltage at DC rated value                                                                                                                                                                                                                                                                                                                                                                                                 | 24 V                                                                                                                                                             |

|                                                                                 |                       |
|---------------------------------------------------------------------------------|-----------------------|
| auxiliary voltage at DC rated value                                             | 20.4 ... 28.8 V       |
| inrush current peak for auxiliary voltage at DC at 24 V                         | 2.5 A                 |
| duration of inrush current peak for auxiliary voltage at DC at 24 V             | 1 ms                  |
| power loss [W] at the auxiliary voltage in holding operation at DC at 24 V      | 0.9 W                 |
| <b>Protective and monitoring functions</b>                                      |                       |
| type of protection function of the overcurrent release                          | electronic            |
| product function                                                                |                       |
| • ground fault detection                                                        | No                    |
| • phase failure detection                                                       | Yes                   |
| • phase sequence recognition                                                    | Yes                   |
| • overcurrent detection 1 phase                                                 | Yes                   |
| • undercurrent detection 3 phases                                               | Yes                   |
| • undercurrent monitoring                                                       | Yes                   |
| • overcurrent and undercurrent monitoring                                       | Yes                   |
| • undercurrent detection 1 phase                                                | Yes                   |
| • overcurrent detection 3 phase                                                 | Yes                   |
| • overload protection                                                           | Yes                   |
| • overload warning                                                              | Yes                   |
| • temperature-compensated overload protection                                   | No                    |
| • motor protection                                                              | Yes                   |
| • active current monitoring                                                     | No                    |
| • main switches with supply disconnect function and EM-STOP switches            | No                    |
| • operating hours counter                                                       | Yes                   |
| trip class                                                                      | CLASS 10E / CLASS 20E |
| design of the overload release                                                  | electronic            |
| response value current of instantaneous short-circuit trip unit                 | 52 A                  |
| <b>UL/CSA ratings</b>                                                           |                       |
| full-load current (FLA) for 3-phase AC motor                                    |                       |
| • at 480 V rated value                                                          | 4 A                   |
| • at 600 V rated value                                                          | 4 A                   |
| yielded mechanical performance [hp]                                             |                       |
| • for single-phase AC motor                                                     |                       |
| — at 110/120 V rated value                                                      | 0.16 hp               |
| — at 230 V rated value                                                          | 0.5 hp                |
| • for 3-phase AC motor                                                          |                       |
| — at 200/208 V rated value                                                      | 1 hp                  |
| — at 220/230 V rated value                                                      | 1 hp                  |
| — at 460/480 V rated value                                                      | 3 hp                  |
| — at 575/600 V rated value                                                      | 3 hp                  |
| conditional short-circuit current (I <sub>q</sub> ) with type of coordination 1 |                       |
| • at 480 AC Y/277 V rated value                                                 | 65 000 A              |
| operating voltage                                                               |                       |
| • according to UL 60947 rated value                                             | 600 V                 |
| • at AC at 60 Hz according to CSA and UL rated value                            | 600 V                 |
| <b>Short-circuit protection</b>                                                 |                       |
| product function short circuit protection                                       | Yes                   |
| design of the short-circuit trip                                                | magnetic              |
| conditional short-circuit current (I <sub>q</sub> )                             |                       |
| • at 690 V according to IEC 60947-4-1 rated value                               | 1 000 A               |
| • at 400 V according to IEC 60947-4-1 rated value                               | 150 000 A             |
| • at 440 V according to IEC 60947-4-1 rated value                               | 100 000 A             |
| • at 500 V according to IEC 60947-4-1 rated value                               | 10 000 A              |
| conditional short-circuit current (I <sub>q</sub> ) with type of coordination 2 |                       |
| • at 230 V rated value                                                          | 150 000 A             |
| • at 400 V rated value                                                          | 150 000 A             |
| certificate of suitability ATEX                                                 | No                    |
| <b>Installation/ mounting/ dimensions</b>                                       |                       |

|                                                                                      |                                                |
|--------------------------------------------------------------------------------------|------------------------------------------------|
| <b>mounting position</b>                                                             | horizontal                                     |
| <b>fastening method</b>                                                              | screw and snap-on mounting onto 35 mm DIN rail |
| • mounting rail                                                                      | Yes                                            |
| <b>height</b>                                                                        | 204 mm                                         |
| <b>width</b>                                                                         | 90 mm                                          |
| <b>depth</b>                                                                         | 131 mm                                         |
| <b>required spacing</b>                                                              |                                                |
| • for grounded parts at 400 V                                                        |                                                |
| — downwards                                                                          | 10 mm                                          |
| — upwards                                                                            | 20 mm                                          |
| — backwards                                                                          | 0 mm                                           |
| — at the side                                                                        | 9 mm                                           |
| — forwards                                                                           | 0 mm                                           |
| • for live parts at 400 V                                                            |                                                |
| — downwards                                                                          | 10 mm                                          |
| — upwards                                                                            | 20 mm                                          |
| — backwards                                                                          | 0 mm                                           |
| — at the side                                                                        | 9 mm                                           |
| — forwards                                                                           | 0 mm                                           |
| • for grounded parts at 500 V                                                        |                                                |
| — downwards                                                                          | 10 mm                                          |
| — upwards                                                                            | 20 mm                                          |
| — backwards                                                                          | 0 mm                                           |
| — at the side                                                                        | 9 mm                                           |
| — forwards                                                                           | 0 mm                                           |
| • for live parts at 500 V                                                            |                                                |
| — downwards                                                                          | 10 mm                                          |
| — upwards                                                                            | 20 mm                                          |
| — backwards                                                                          | 0 mm                                           |
| — at the side                                                                        | 9 mm                                           |
| — forwards                                                                           | 0 mm                                           |
| • for grounded parts at 690 V                                                        |                                                |
| — downwards                                                                          | 10 mm                                          |
| — upwards                                                                            | 50 mm                                          |
| — at the side                                                                        | 20 mm                                          |
| — forwards                                                                           | 0 mm                                           |
| • for live parts at 690 V                                                            |                                                |
| — downwards                                                                          | 10 mm                                          |
| — upwards                                                                            | 50 mm                                          |
| — at the side                                                                        | 20 mm                                          |
| — forwards                                                                           | 0 mm                                           |
| <b>Connections/ Terminals</b>                                                        |                                                |
| <b>product component removable terminal for auxiliary and control circuit</b>        | No                                             |
| <b>type of electrical connection</b>                                                 |                                                |
| • for main current circuit                                                           | spring-loaded terminals                        |
| • for auxiliary and control circuit                                                  | spring-loaded terminals (push-in)              |
| type of electrical connection for supply voltage line-side                           | spring-loaded terminals (push-in)              |
| <b>type of connectable conductor cross-sections</b>                                  |                                                |
| • for main contacts                                                                  |                                                |
| — solid                                                                              | 2x (0.5 ... 4 mm <sup>2</sup> )                |
| — stranded                                                                           | 2x (0.5 ... 4 mm <sup>2</sup> )                |
| — finely stranded with core end processing                                           | 2x (0.5 ... 2.5 mm <sup>2</sup> )              |
| • for AWG cables for main contacts                                                   | 2x 20 ... 12                                   |
| <b>connectable conductor cross-section for main contacts</b>                         |                                                |
| • solid                                                                              | 0.5 ... 4 mm <sup>2</sup>                      |
| • stranded                                                                           | 0.5 ... 4 mm <sup>2</sup>                      |
| • finely stranded with core end processing                                           | 0.5 ... 2.5 mm <sup>2</sup>                    |
| <b>type of connectable conductor cross-sections at the inputs for supply voltage</b> |                                                |
| • solid                                                                              | 0.2 ... 1.5 mm <sup>2</sup>                    |

|                                                                                                                  |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |
|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------|
| <ul style="list-style-type: none"><li>finely stranded without core end processing</li></ul>                      | 0.2 ... 1.5 mm²                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| <ul style="list-style-type: none"><li>finely stranded with core end processing</li></ul>                         | 0.2 ... 1.0 mm²                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| type of connectable conductor cross-sections at the inputs for supply voltage for AWG cables solid               | 24 ... 16                                                                           |                                                                                           |                                                                                            |                                                    |                              |
| Electrical Safety                                                                                                |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| touch protection against electrical shock                                                                        | IP20                                                                                |                                                                                           |                                                                                            |                                                    |                              |
| touch protection on the front according to IEC 60529                                                             | finger-safe                                                                         |                                                                                           |                                                                                            |                                                    |                              |
| Communication/ Protocol                                                                                          |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| protocol is supported other protocols                                                                            | Yes                                                                                 |                                                                                           |                                                                                            |                                                    |                              |
| product function bus communication                                                                               | Yes                                                                                 |                                                                                           |                                                                                            |                                                    |                              |
| product function control circuit interface with IO link                                                          | No                                                                                  |                                                                                           |                                                                                            |                                                    |                              |
| product function control circuit interface with AS-interface                                                     | No                                                                                  |                                                                                           |                                                                                            |                                                    |                              |
| data volume                                                                                                      |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| <ul style="list-style-type: none"><li>of the address range of the inputs with cyclical transfer total</li></ul>  | 16 byte                                                                             |                                                                                           |                                                                                            |                                                    |                              |
| <ul style="list-style-type: none"><li>of the address range of the outputs with cyclical transfer total</li></ul> | 2 byte                                                                              |                                                                                           |                                                                                            |                                                    |                              |
| address space memory of address range                                                                            |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| <ul style="list-style-type: none"><li>of the inputs</li></ul>                                                    | 16 byte                                                                             |                                                                                           |                                                                                            |                                                    |                              |
| <ul style="list-style-type: none"><li>of the outputs</li></ul>                                                   | 2 byte                                                                              |                                                                                           |                                                                                            |                                                    |                              |
| type of electrical connection of the communication interface                                                     | RJ45                                                                                |                                                                                           |                                                                                            |                                                    |                              |
| Electromagnetic compatibility                                                                                    |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| conducted interference                                                                                           |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| <ul style="list-style-type: none"><li>due to burst according to IEC 61000-4-4</li></ul>                          | 2 kV                                                                                |                                                                                           |                                                                                            |                                                    |                              |
| <ul style="list-style-type: none"><li>due to conductor-earth surge according to IEC 61000-4-5</li></ul>          | 2 kV                                                                                |                                                                                           |                                                                                            |                                                    |                              |
| <ul style="list-style-type: none"><li>due to conductor-conductor surge according to IEC 61000-4-5</li></ul>      | 1 kV                                                                                |                                                                                           |                                                                                            |                                                    |                              |
| <ul style="list-style-type: none"><li>due to high-frequency radiation according to IEC 61000-4-6</li></ul>       | 10 V                                                                                |                                                                                           |                                                                                            |                                                    |                              |
| field-based interference according to IEC 61000-4-3                                                              | 10 V/m                                                                              |                                                                                           |                                                                                            |                                                    |                              |
| electrostatic discharge according to IEC 61000-4-2                                                               | 8 kV air discharge                                                                  |                                                                                           |                                                                                            |                                                    |                              |
| conducted HF interference emissions according to CISPR11                                                         | Class A for industrial environment                                                  |                                                                                           |                                                                                            |                                                    |                              |
| field-bound HF interference emission according to CISPR11                                                        | Class A for industrial environment                                                  |                                                                                           |                                                                                            |                                                    |                              |
| Supply voltage                                                                                                   |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| type of voltage of the supply voltage                                                                            | DC                                                                                  |                                                                                           |                                                                                            |                                                    |                              |
| supply voltage 1 at DC rated value                                                                               |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| <ul style="list-style-type: none"><li>minimum permissible</li></ul>                                              | 19.2 V                                                                              |                                                                                           |                                                                                            |                                                    |                              |
| <ul style="list-style-type: none"><li>maximum permissible</li></ul>                                              | 28.8 V                                                                              |                                                                                           |                                                                                            |                                                    |                              |
| auxiliary voltage at DC rated value                                                                              | 20.4 ... 28.8 V                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| supply voltage at DC rated value                                                                                 | 24 V                                                                                |                                                                                           |                                                                                            |                                                    |                              |
| inrush current peak with supply voltage at DC at 24 V                                                            | 1.25 A                                                                              |                                                                                           |                                                                                            |                                                    |                              |
| duration of inrush current peak with supply voltage at DC at 24 V                                                | 5 ms                                                                                |                                                                                           |                                                                                            |                                                    |                              |
| power loss [W] at supply voltage at DC at 24 V                                                                   | 0.5 W                                                                               |                                                                                           |                                                                                            |                                                    |                              |
| Approvals Certificates                                                                                           |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| General Product Approval                                                                                         | EMV                                                                                 | Test Certificates                                                                         | other                                                                                      |                                                    |                              |
| <br>EG-Konf.                  |  | <br>UL | <br>RCM | <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Confirmation</a> |
| other                                                                                                            | Environment                                                                         |                                                                                           |                                                                                            |                                                    |                              |
|                               | <a href="#">Environmental Conformations</a>                                         |                                                                                           |                                                                                            |                                                    |                              |
| Further information                                                                                              |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |
| Information on the packaging                                                                                     |                                                                                     |                                                                                           |                                                                                            |                                                    |                              |

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=3RA8512-1EE10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA8512-1EE10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA8512-1EE10>

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

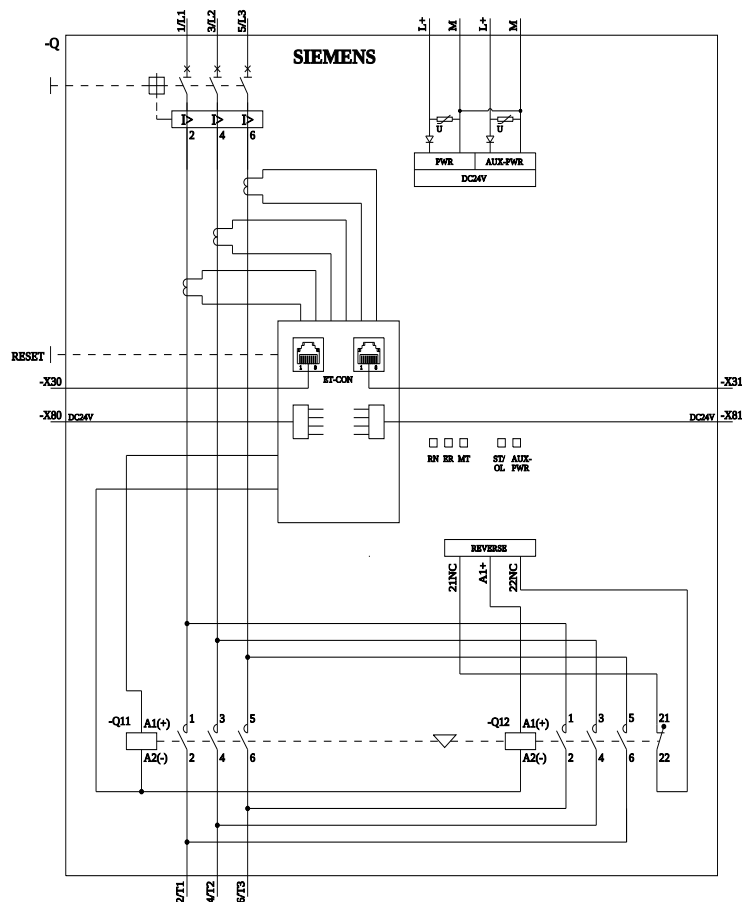
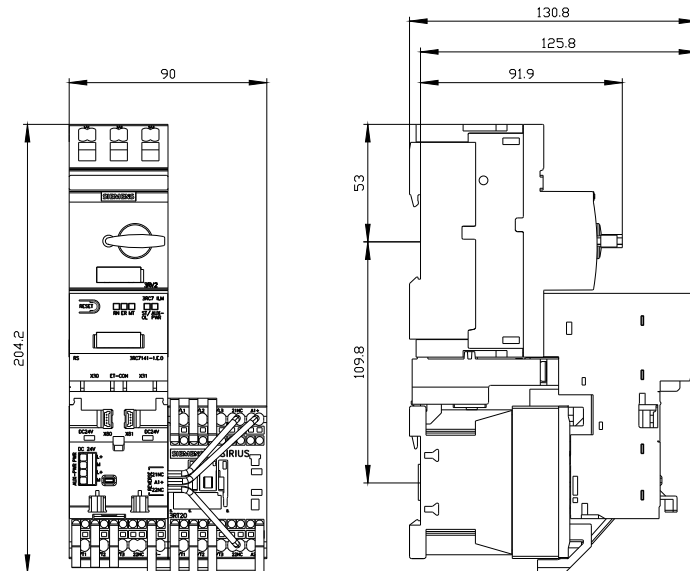
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA8512-1EE10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA8512-1EE10&lang=en)

Characteristic: Tripping characteristics,  $I^2t$ , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA8512-1EE10/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA8512-1EE10&objecttype=14&gridview=view1>



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