

REV. COMB. FOR 3RA27, AC3, 4KW/400V, DC24V 3-POLE, SZ  
S00 SPRING-LOADED TERMINAL ELECTR. AND MECH.  
INTERLOCK



|                               |                                                                                                                                                                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product brand name            | SIRIUS                                                                                                                                                                                                                               |
| Product designation           | Reversing contactor assembly                                                                                                                                                                                                         |
| Product type designation      | 3RA23                                                                                                                                                                                                                                |
| Manufacturer's article number | <div><ul style="list-style-type: none"><li>• 1 of the supplied contactor</li><li>• 2 of the supplied contactor</li><li>• of the supplied RH assembly kit</li><li>• of the supplied function module for communication</li></ul></div> |

- [3RT2016-2BB42-0CC0](#)
- [3RT2016-2BB42](#)
- [3RA2913-2AA2](#)
- [3RA2711-2BA00](#)

| General technical data                                                                              |       |
|-----------------------------------------------------------------------------------------------------|-------|
| Size of contactor                                                                                   | S00   |
| Product extension                                                                                   |       |
| <div><ul style="list-style-type: none"><li>• Auxiliary switch</li></ul></div>                       | Yes   |
| Insulation voltage                                                                                  |       |
| <div><ul style="list-style-type: none"><li>• with degree of pollution 3 rated value</li></ul></div> | 690 V |
| Degree of pollution                                                                                 | 3     |
| Surge voltage resistance rated value                                                                | 6 kV  |
| Protection class IP                                                                                 |       |
| <div><ul style="list-style-type: none"><li>• on the front</li></ul></div>                           | IP20  |

|                                                              |                            |
|--------------------------------------------------------------|----------------------------|
| <b>Shock resistance at rectangular impulse</b>               |                            |
| • at AC                                                      | 6,7g / 5 ms, 4,2g / 10 ms  |
| • at DC                                                      | 6,7g / 5 ms, 4,2g / 10 ms  |
| <b>Shock resistance with sine pulse</b>                      |                            |
| • at AC                                                      | 10,5g / 5 ms, 6,6g / 10 ms |
| • at DC                                                      | 10,5g / 5 ms, 6,6g / 10 ms |
| <b>Mechanical service life (switching cycles)</b>            |                            |
| • of contactor typical                                       | 10 000 000                 |
| • of the contactor with added auxiliary switch block typical | 10 000 000                 |
| <b>Equipment marking</b>                                     |                            |
| • acc. to DIN EN 81346-2                                     | Q                          |

#### Ambient conditions

|                            |                |
|----------------------------|----------------|
| <b>Ambient temperature</b> |                |
| • during operation         | -25 ... +60 °C |
| • during storage           | -55 ... +80 °C |

#### Main circuit

|                                                 |       |
|-------------------------------------------------|-------|
| <b>Number of poles for main current circuit</b> | 3     |
| <b>Number of NO contacts for main contacts</b>  | 3     |
| <b>Number of NC contacts for main contacts</b>  | 0     |
| <b>Operating voltage</b>                        |       |
| • at AC-3 rated value maximum                   | 690 V |
| <b>Operating current</b>                        |       |
| • at AC-1 at 400 V                              |       |
| — at ambient temperature 40 °C rated value      | 18 A  |
| — at ambient temperature 60 °C rated value      | 16 A  |
| • at AC-2 at 400 V rated value                  | 7 A   |
| • at AC-3                                       |       |
| — at 400 V rated value                          | 9 A   |
| <b>Operating current</b>                        |       |
| • at 1 current path at DC-1                     |       |
| — at 24 V rated value                           | 20 A  |
| — at 110 V rated value                          | 2.1 A |
| • with 2 current paths in series at DC-1        |       |
| — at 24 V rated value                           | 20 A  |
| — at 110 V rated value                          | 12 A  |
| • with 3 current paths in series at DC-1        |       |
| — at 24 V rated value                           | 20 A  |
| — at 110 V rated value                          | 20 A  |
| <b>Operating current</b>                        |       |
| • at 1 current path at DC-3 at DC-5             |       |

|                                                  |           |
|--------------------------------------------------|-----------|
| — at 24 V rated value                            | 20 A      |
| — at 110 V rated value                           | 0.15 A    |
| • with 2 current paths in series at DC-3 at DC-5 |           |
| — at 24 V rated value                            | 20 A      |
| — at 110 V rated value                           | 0.35 A    |
| • with 3 current paths in series at DC-3 at DC-5 |           |
| — at 24 V rated value                            | 20 A      |
| — at 110 V rated value                           | 20 A      |
| <b>No-load switching frequency</b>               | 1 500 1/h |
| <b>Operating frequency</b>                       |           |
| • at AC-1 maximum                                | 1 000 1/h |
| • at AC-2 maximum                                | 750 1/h   |
| • at AC-3 maximum                                | 750 1/h   |
| • at AC-4 maximum                                | 250 1/h   |

#### Control circuit/ Control

|                                                      |               |
|------------------------------------------------------|---------------|
| <b>Type of voltage of the control supply voltage</b> | DC            |
| <b>Control supply voltage 1</b>                      |               |
| • at DC rated value                                  | 24 V          |
| <b>Design of the surge suppressor</b>                | with varistor |
| <b>Closing power of magnet coil at DC</b>            | 4 W           |
| <b>Holding power of magnet coil at DC</b>            | 4 W           |

#### Auxiliary circuit

|                                                                 |                                            |
|-----------------------------------------------------------------|--------------------------------------------|
| <b>Number of NC contacts</b>                                    |                                            |
| • for auxiliary contacts                                        |                                            |
| — per direction of rotation                                     | 1                                          |
| — instantaneous contact                                         | 2                                          |
| <b>Number of NO contacts</b>                                    |                                            |
| • for auxiliary contacts                                        |                                            |
| — per direction of rotation                                     | 0                                          |
| — instantaneous contact                                         | 0                                          |
| <b>Operating current of auxiliary contacts at AC-12 maximum</b> | 10 A                                       |
| <b>Operating current of auxiliary contacts at AC-15</b>         |                                            |
| • at 230 V                                                      | 6 A                                        |
| • at 400 V                                                      | 3 A                                        |
| <b>Operating current of auxiliary contacts at DC-13</b>         |                                            |
| • at 24 V                                                       | 10 A                                       |
| • at 60 V                                                       | 2 A                                        |
| • at 110 V                                                      | 1 A                                        |
| • at 220 V                                                      | 0.3 A                                      |
| <b>Contact reliability of auxiliary contacts</b>                | < 1 error per 100 million operating cycles |

## UL/CSA ratings

|                                                             |             |
|-------------------------------------------------------------|-------------|
| <b>Full-load current (FLA) for three-phase AC motor</b>     |             |
| • at 480 V rated value                                      | 7.6 A       |
| • at 600 V rated value                                      | 9 A         |
| <b>Yielded mechanical performance [hp]</b>                  |             |
| • for single-phase AC motor                                 |             |
| — at 110/120 V rated value                                  | 0.33 hp     |
| — at 230 V rated value                                      | 1 hp        |
| • for three-phase AC motor                                  |             |
| — at 200/208 V rated value                                  | 2 hp        |
| — at 220/230 V rated value                                  | 3 hp        |
| — at 460/480 V rated value                                  | 5 hp        |
| — at 575/600 V rated value                                  | 7.5 hp      |
| <b>Contact rating of auxiliary contacts according to UL</b> | A600 / Q600 |

## Short-circuit protection

|                                                                 |                                                |
|-----------------------------------------------------------------|------------------------------------------------|
| <b>Design of the fuse link</b>                                  |                                                |
| • for short-circuit protection of the main circuit              |                                                |
| — with type of coordination 1 required                          | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A |
| — with type of assignment 2 required                            | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A |
| • for short-circuit protection of the auxiliary switch required | fuse gL/gG: 10 A                               |

## Installation/ mounting/ dimensions

|                              |                                                                                                                                      |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mounting position</b>     | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| <b>Mounting type</b>         | screw and snap-on mounting onto 35 mm standard mounting rail                                                                         |
| <b>Height</b>                | 84 mm                                                                                                                                |
| <b>Width</b>                 | 90 mm                                                                                                                                |
| <b>Depth</b>                 | 83 mm                                                                                                                                |
| <b>Required spacing</b>      |                                                                                                                                      |
| • with side-by-side mounting |                                                                                                                                      |
| — forwards                   | 6 mm                                                                                                                                 |
| — Backwards                  | 0 mm                                                                                                                                 |
| — upwards                    | 6 mm                                                                                                                                 |
| — downwards                  | 6 mm                                                                                                                                 |
| — at the side                | 6 mm                                                                                                                                 |
| • for grounded parts         |                                                                                                                                      |
| — forwards                   | 6 mm                                                                                                                                 |
| — Backwards                  | 0 mm                                                                                                                                 |
| — upwards                    | 6 mm                                                                                                                                 |
| — at the side                | 6 mm                                                                                                                                 |

|                  |      |
|------------------|------|
| — downwards      | 6 mm |
| • for live parts |      |
| — forwards       | 6 mm |
| — Backwards      | 0 mm |
| — upwards        | 6 mm |
| — downwards      | 6 mm |
| — at the side    | 6 mm |

## Connections/Terminals

|                                                     |                                   |
|-----------------------------------------------------|-----------------------------------|
| <b>Type of electrical connection</b>                |                                   |
| • for main current circuit                          | spring-loaded terminals           |
| • for auxiliary and control current circuit         | spring-loaded terminals           |
| <b>Type of connectable conductor cross-sections</b> |                                   |
| • for main contacts                                 |                                   |
| — solid                                             | 2x (0.5 ... 4 mm <sup>2</sup> )   |
| — single or multi-stranded                          | 2x (0,5 ... 4 mm <sup>2</sup> )   |
| — finely stranded with core end processing          | 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| — finely stranded without core end processing       | 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| • at AWG conductors for main contacts               | 1x (20 ... 12)                    |
| <b>Type of connectable conductor cross-sections</b> |                                   |
| • for auxiliary contacts                            |                                   |
| — single or multi-stranded                          | 2x (0,5 ... 2,5 mm <sup>2</sup> ) |
| — finely stranded with core end processing          | 2x (0.5 ... 1.5 mm <sup>2</sup> ) |
| — finely stranded without core end processing       | 2x (0.5 ... 1.5 mm <sup>2</sup> ) |
| • at AWG conductors for auxiliary contacts          | 2x (20 ... 14)                    |

## Safety related data

|                                                                           |           |
|---------------------------------------------------------------------------|-----------|
| <b>B10 value</b>                                                          |           |
| • with high demand rate acc. to SN 31920                                  | 1 000 000 |
| <b>Proportion of dangerous failures</b>                                   |           |
| • with low demand rate acc. to SN 31920                                   | 40 %      |
| • with high demand rate acc. to SN 31920                                  | 75 %      |
| <b>Failure rate [FIT]</b>                                                 |           |
| • with low demand rate acc. to SN 31920                                   | 100 FIT   |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | 20 y      |

## Communication/ Protocol

|                                           |     |
|-------------------------------------------|-----|
| <b>Product function Bus communication</b> | Yes |
| <b>Protocol is supported</b>              |     |
| • AS-interface protocol                   | No  |

## Certificates/approvals

| General Product Approval                                                          |                                                                                   |                                                                                   | Declaration of Conformity                                                         | Test Certificates                        |                                                    |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------|----------------------------------------------------|
|  |  |  |  | <a href="#">Special Test Certificate</a> | <a href="#">Type Test Certificates/Test Report</a> |
| CSA                                                                               | UL                                                                                |                                                                                   | EG-Konf.                                                                          |                                          |                                                    |

| Marine / Shipping                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| ABS                                                                               | BUREAU VERITAS                                                                    | GL                                                                                | LRS                                                                               | PRS                                                                                 | RMRS                                                                                |

| Marine / Shipping                                                                 | other                                       | Railway                      |                                     |
|-----------------------------------------------------------------------------------|---------------------------------------------|------------------------------|-------------------------------------|
|  | <a href="#">Environmental Confirmations</a> | <a href="#">Confirmation</a> | <a href="#">Vibration and Shock</a> |
| DNV GL                                                                            |                                             |                              |                                     |

#### 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=3RA2316-8XE30-2BB4>

##### Cax online generator

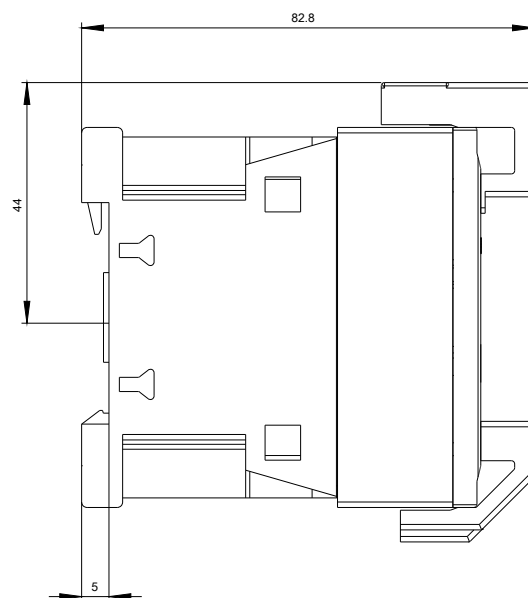
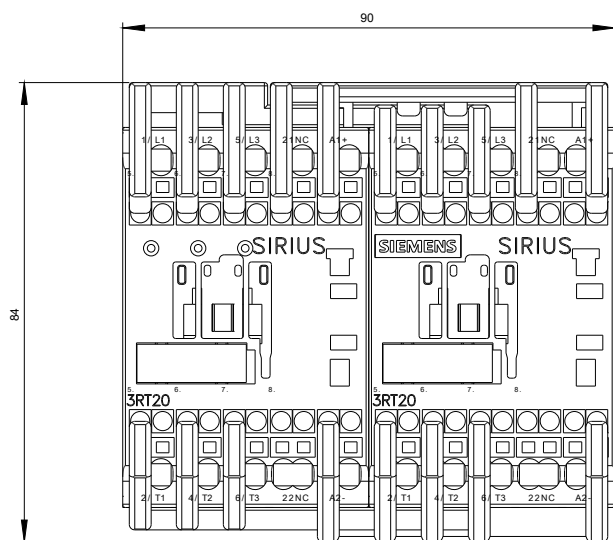
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2316-8XE30-2BB4>

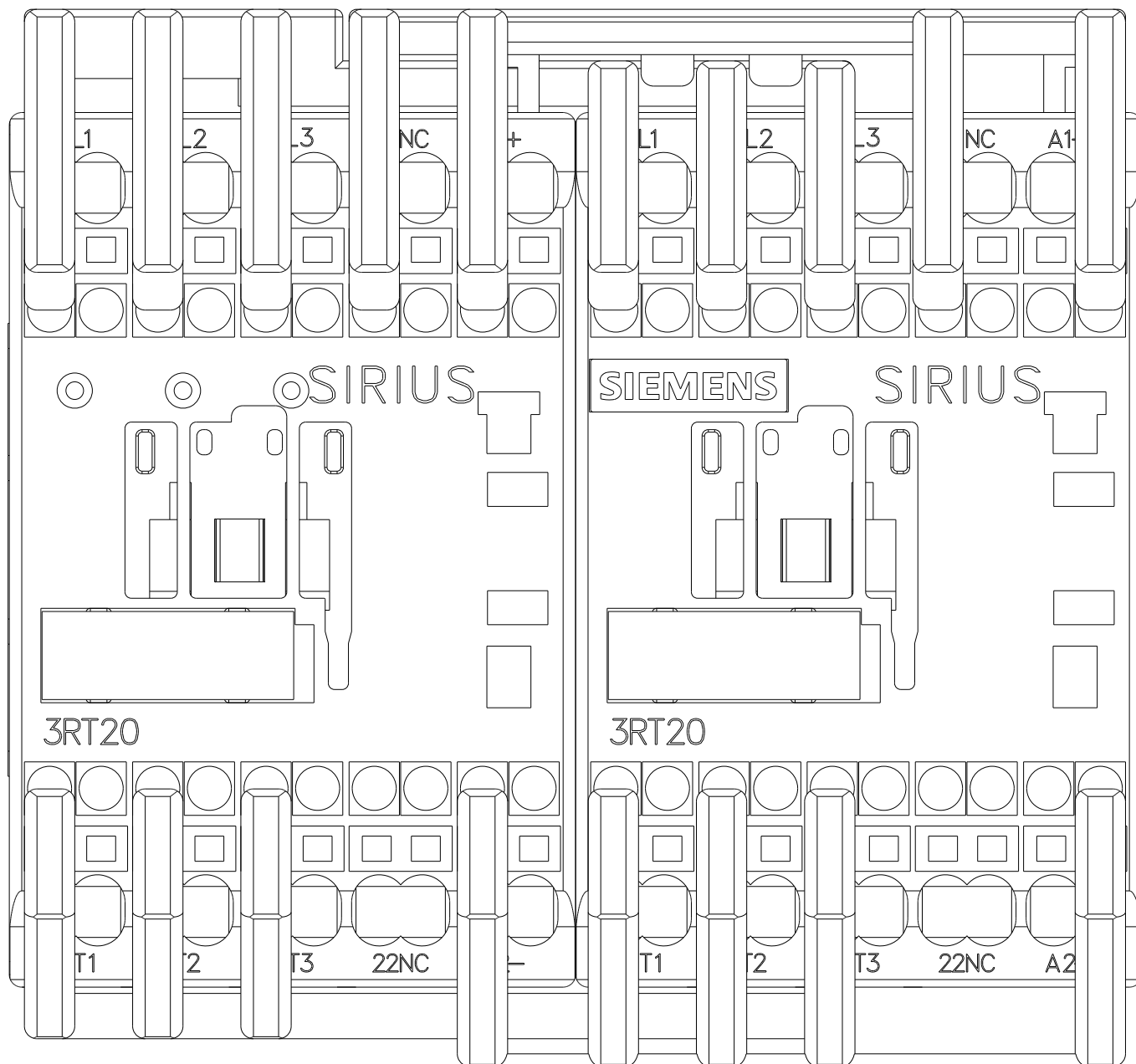
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2316-8XE30-2BB4>

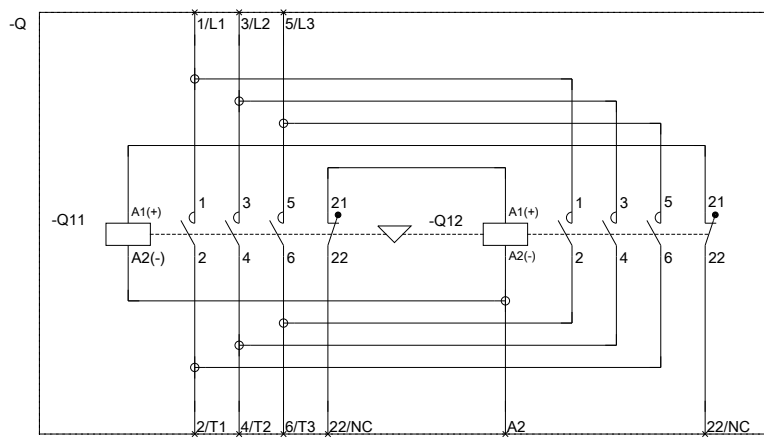
##### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2316-8XE30-2BB4&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2316-8XE30-2BB4&lang=en)





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REVERSING COMB. SZ S00

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