SIEMENS

## Data sheet 3RU2116-1KB0




OVERLOAD RELAY 9.0...12.5 A FOR MOTOR PROTECTION BGR S00, CLASS 10 FOR MOUNTING ONTO CONTACTORS MAIN CIRCUIT: SCREW TERMINAL AUXILARY CIRCUIT:SCREW TERMINAL MANUAL-AUTOMATIC-RESET

| | |
|---|---|
| **product brand name** | SIRIUS |
| **Product designation** | 3RU2 thermal overload relay |

| General technical data: | |
|---|---|
| **Size of contactor can be combined company-specific** | S00 |
| **Active power loss total typical** | 5.1 W |
| **Insulation voltage** | |
| • with degree of pollution 3 Rated value | 690 V |
| **Surge voltage resistance Rated value** | 6 kV |
| **Protection class IP** | |
| • on the front | IP20 |
| • of the terminal | IP20 |
| **Temperature compensation** | -40 ... +60 °C |
| **Type of assignment** | 2 |

| Ambient conditions: | |
|---|---|
| **Installation altitude at height above sea level maximum** | 2 000 m |
| **Ambient temperature** | |
| • during operation | -40 ... +70 °C |
| • during storage | -55 ... +80 °C |
| • during transport | -55 ... +80 °C |
| **Relative humidity during operation** | 0 ... 90 % |

| Main circuit: | |
|---|---|
| **Adjustable response value current of the current-dependent overload release** | 9 ... 12.5 A |


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| | |
|---|---|
| • Operating voltage Rated value | 690 V |
| • Operating voltage at AC-3 Rated value maximum | 690 V |
| **Operating frequency Rated value** | 50 ... 60 Hz |
| **Operating current Rated value** | 12.5 A |
| **Operating current** | |
| • at AC-3 | |
| — at 400 V Rated value | 12.5 A |

## Auxiliary circuit:

| | |
|---|---|
| **Number of NC contacts** | |
| • for auxiliary contacts | 1 |
| — Note | for contactor disconnection |
| **Number of NO contacts** | |
| • for auxiliary contacts | 1 |
| — Note | for message "Tripped" |
| **Number of CO contacts** | |
| • for auxiliary contacts | 0 |
| **Design of the auxiliary switch** | integrated |
| **Operating current of the auxiliary contacts at AC-15** | |
| • at 24 V | 3 A |
| • at 110 V | 3 A |
| • at 120 V | 3 A |
| • at 125 V | 3 A |
| • at 230 V | 2 A |
| • at 400 V | 1 A |
| **Operating current of the auxiliary contacts at DC-13** | |
| • at 24 V | 2 A |
| • at 110 V | 0.22 A |
| • at 125 V | 0.22 A |
| • at 220 V | 0.11 A |

## Protective and monitoring functions:

| | |
|---|---|
| **Trip class** | CLASS 10 |
| **Design of the overload circuit breaker** | thermal |

## UL/CSA ratings:

| | |
|---|---|
| **Full-load current (FLA) for three-phase AC motor** | |
| • at 480 V Rated value | 12.5 A |
| • at 600 V Rated value | 12.5 A |
| **Contact rating of the auxiliary contacts acc. to UL** | B600 / R300 |

## Installation/ mounting/ dimensions:

| | |
|---|---|
| **mounting position** | any |
| **Mounting type** | direct mounting |


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| | |
|---|---|
| **Height** | 76 mm |
| **Width** | 45 mm |
| **Depth** | 70 mm |
| **Required spacing** | |
| • with side-by-side mounting | |
| — forwards | 0 mm |
| — Backwards | 0 mm |
| — upwards | 6 mm |
| — downwards | 6 mm |
| — at the side | 6 mm |
| • for grounded parts | |
| — forwards | 0 mm |
| — Backwards | 0 mm |
| — upwards | 6 mm |
| — at the side | 6 mm |
| — downwards | 6 mm |
| • for live parts | |
| — forwards | 0 mm |
| — Backwards | 0 mm |
| — upwards | 6 mm |
| — downwards | 6 mm |
| — at the side | 6 mm |

| Connections/ Terminals: | |
|---|---|
| **Product function** | |
| • removable terminal for auxiliary and control circuit | No |
| **Type of electrical connection** | |
| • for main current circuit | screw-type terminals |
| • for auxiliary and control current circuit | screw-type terminals |
| **Arrangement of electrical connectors for main current circuit** | Top and bottom |
| **Type of connectable conductor cross-section** | |
| • for main contacts | |
| — single or multi-stranded | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm² |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) |
| • for AWG conductors for main contacts | 2x (20 ... 16), 2x (20 ... 18), 2x 12 |
| **Type of connectable conductor cross-section** | |
| • for auxiliary contacts | |
| — single or multi-stranded | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²) |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) |
| • for AWG conductors for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14) |
| **Design of screwdriver shaft** | 5 to 6 mm diameter |


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| | |
|---|---|
| **Design of the thread of the connection screw** | |
| • for main contacts | M3 |
| • of the auxiliary and control contacts | M3 |

## Safety related data:

| | |
|---|---|
| **Proportion of dangerous failures** | |
| • with low demand rate acc. to SN 31920 | 50 % |
| • with high demand rate acc. to SN 31920 | 50 % |
| **MTTF with high demand rate** | 2 280 y |
| **T1 value for proof test interval or service life acc. to IEC 61508** | 20 y |

## Mechanical data:

| | |
|---|---|
| **Size of overload relay** | S00 |

## Display:

| | |
|---|---|
| **Display version** | |
| • for switching status | Slide switch |

## Certificates/ approvals:

| General Product Approval | | | | For use in hazardous locations | Declaration of Conformity |
|---|---|---|---|---|---|
| CCC | CSA | EAC | UL | ATEX | EG-Konf. |

| Test Certificates | | Shipping Approval | | | |
|---|---|---|---|---|---|
| Special Test Certificate | Type Test Certificates/Test Report | ABS | BUREAU VERITAS | DNV | GL |

| Shipping Approval | | | | other |
|---|---|---|---|---|
| LRS | PRS | RINA | RMRS | Environmental Confirmations |

## Further information

**Information- and Downloadcenter (Catalogs, Brochures,…)**
http://www.siemens.com/industrial-controls/catalogs

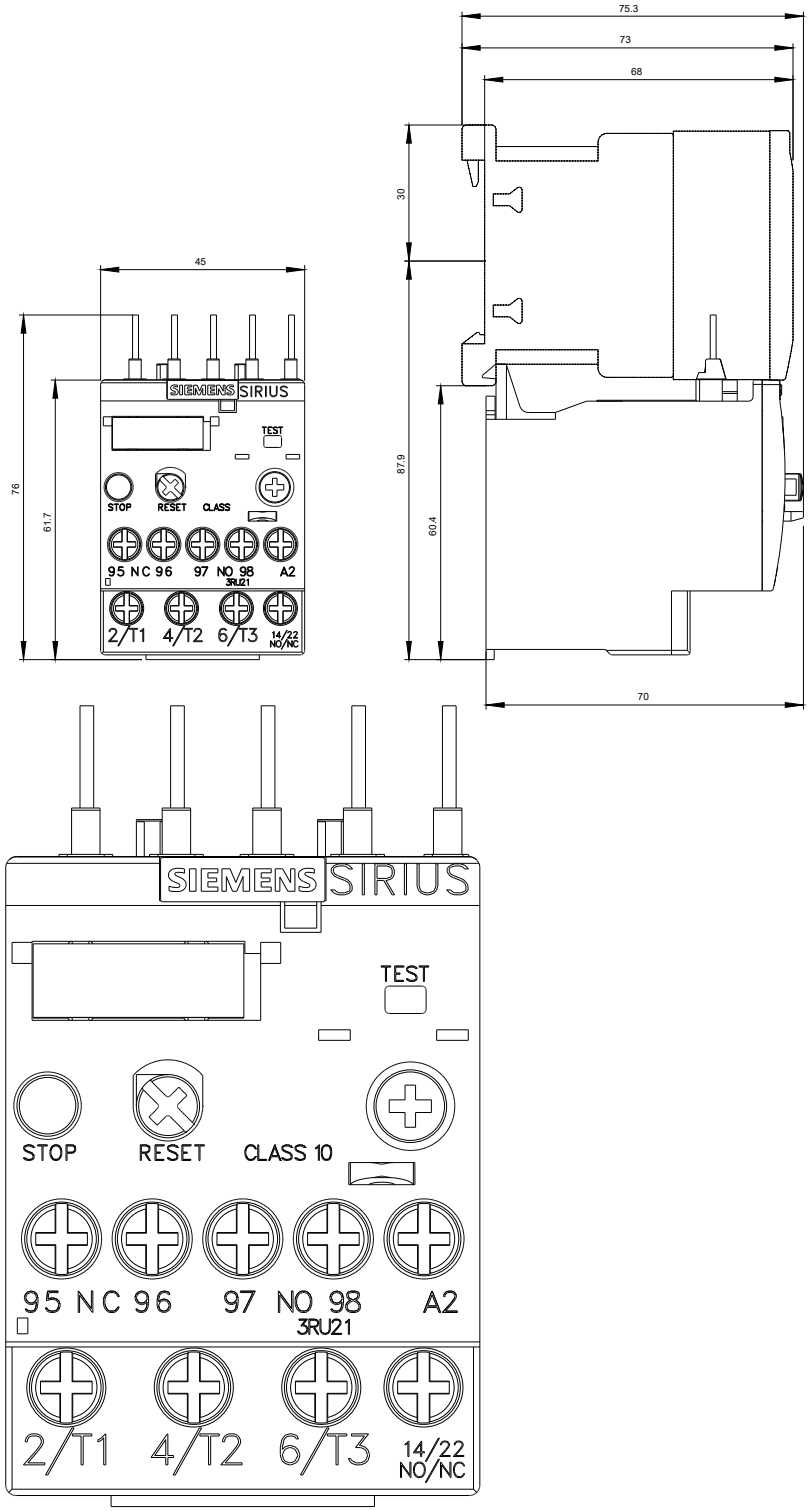
**Industry Mall (Online ordering system)**
http://www.siemens.com/industrymall


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**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU21161KB0

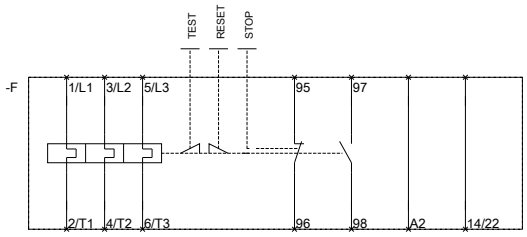
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https://support.industry.siemens.com/cs/ww/en/ps/3RU21161KB0

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU21161KB0&lang=en





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