SIEMENS

## Data sheet 3RU2116-1JB1




Overload relay 7.0...10 A Thermal For motor protection Size S00, Class 10 Stand-alone installation Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

| | |
|---|---|
| **product brand name** | SIRIUS |
| **product designation** | thermal overload relay |
| **product type designation** | 3RU2 |
| **General technical data** | |
| **size of overload relay** | S00 |
| **size of contactor can be combined company-specific** | S00 |
| power loss [W] for rated value of the current at AC in hot operating state | 6.6 W |
| ● per pole | 2.2 W |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V |
| **surge voltage resistance rated value** | 6 kV |
| **maximum permissible voltage for safe isolation in networks with grounded star point** | |
| ● between auxiliary and auxiliary circuit | 440 V |
| ● between auxiliary and auxiliary circuit | 440 V |
| ● between main and auxiliary circuit | 440 V |
| ● between main and auxiliary circuit | 440 V |
| shock resistance acc. to IEC 60068-2-27 | 8g / 11 ms |
| **type of protection according to ATEX directive 2014/34/EU** | Ex II (2) GD |
| certificate of suitability according to ATEX directive 2014/34/EU | DMT 98 ATEX G 001 |
| **reference code acc. to IEC 81346-2** | F |
| Substance Prohibitance (Date) | 01.10.2009 00:00:00 |
| **Ambient conditions** | |
| installation altitude at height above sea level maximum | 2 000 m |
| ● ambient temperature during operation | -40 ... +70 °C |
| ● ambient temperature during storage | -55 ... +80 °C |
| ● ambient temperature during transport | -55 ... +80 °C |
| **temperature compensation** | -40 ... +60 °C |
| relative humidity during operation | 10 ... 95 % |
| **Main circuit** | |
| **number of poles for main current circuit** | 3 |
| **adjustable current response value current of the current-dependent overload release** | 7 ... 10 A |
| ● operating voltage rated value | 690 V |
| ● operating voltage at AC-3 rated value maximum | 690 V |


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| | |
|---|---|
| **operating frequency rated value** | 50 ... 60 Hz |
| **operational current rated value** | 10 A |
| operating power at AC-3 | |
| ● at 400 V rated value | 4 kW |
| ● at 500 V rated value | 5.5 kW |
| ● at 690 V rated value | 7.5 kW |
| **Auxiliary circuit** | |
| **design of the auxiliary switch** | integrated |
| **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 |
| **operational current of 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 |
| **operational current of auxiliary contacts at DC-13** | |
| ● at 24 V | 2 A |
| ● at 60 V | 0.3 A |
| ● at 110 V | 0.22 A |
| ● at 125 V | 0.22 A |
| ● at 220 V | 0.11 A |
| **contact rating of auxiliary contacts according to UL** | B600 / R300 |
| **Protective and monitoring functions** | |
| **trip class** | CLASS 10 |
| **design of the overload release** | thermal |
| **UL/CSA ratings** | |
| **full-load current (FLA) for 3-phase AC motor** | |
| ● at 480 V rated value | 10 A |
| ● at 600 V rated value | 10 A |
| **Short-circuit protection** | |
| **design of the fuse link** | |
| ● for short-circuit protection of the auxiliary switch required | fuse gG: 6 A, quick: 10 A |
| **Installation/ mounting/ dimensions** | |
| **mounting position** | any |
| **fastening method** | stand-alone installation |
| **height** | 89 mm |
| **width** | 45 mm |
| **depth** | 80 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 circuit | screw-type terminals |
| **arrangement of electrical connectors for main current circuit** | Top and bottom |
| **type of connectable conductor cross-sections** | |
| ● for main contacts | |
| — solid or 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) |
| ● at AWG cables for main contacts | 2x (20 ... 16), 2x (18 ... 14), 2x 12 |
| **type of connectable conductor cross-sections** | |


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| | |
|---|---|
| ● for auxiliary contacts | |
| — solid or 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) |
| ● at AWG cables for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14) |
| ● tightening torque for main contacts with screw-type terminals | 0.8 ... 1.2 N·m |
| ● tightening torque for auxiliary contacts with screw-type terminals | 0.8 ... 1.2 N·m |
| **design of screwdriver shaft** | Diameter 5 ... 6 mm |
| **size of the screwdriver tip** | Pozidriv PZ 2 |
| **design of the thread of the connection screw** | |
| ● for main contacts | M3 |
| ● of the auxiliary and control contacts | M3 |
| **Safety related data** | |
| failure rate [FIT] with low demand rate acc. to SN 31920 | 50 FIT |
| **MTTF with high demand rate** | 2 280 y |
| **T1 value for proof test interval or service life acc. to IEC 61508** | 20 y |
| **protection class IP on the front acc. to IEC 60529** | IP20 |
| **touch protection on the front acc. to IEC 60529** | finger-safe, for vertical contact from the front |
| **Display** | |
| display version for switching status | Slide switch |

**Certificates/ approvals**

**General Product Approval** | **For use in hazardous locations**

CSA CCC UL EAC IECEx ATEX

| Declaration of Conformity | Test Certificates | | Marine / Shipping | |
|---|---|---|---|---|
| Miscellaneous | EG-Konf. | Special Test Certificate | Type Test Certificates/Test Report | ABS | BUREAU VERITAS |

| Marine / Shipping | | | | | other |
|---|---|---|---|---|---|
| LRS | PRS | RINA | RMRS | DNV·GL | Confirmation |

**Railway**

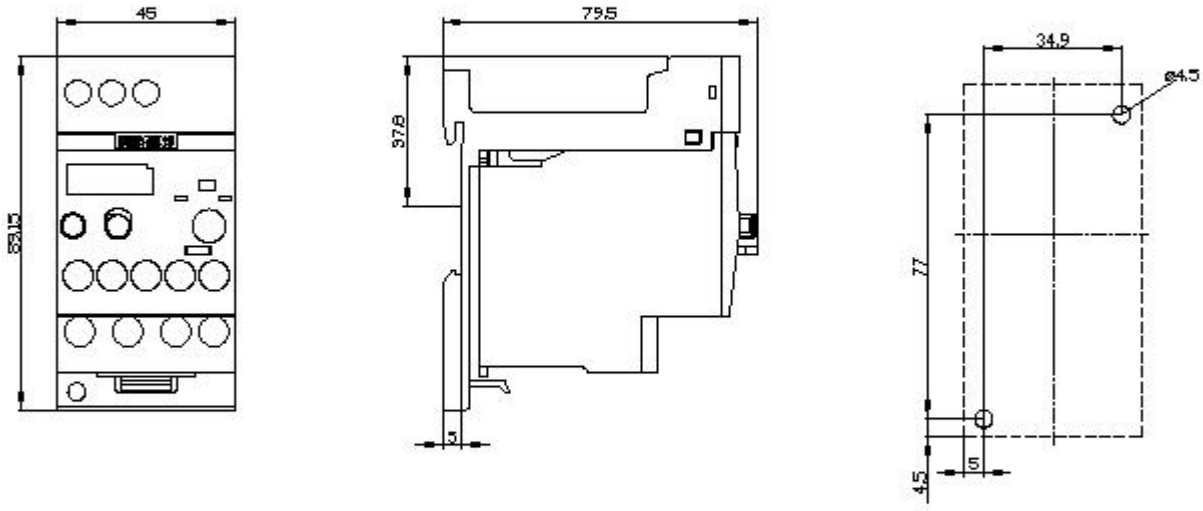
Vibration and Shock

**Further information**

**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=3RU2116-1JB1

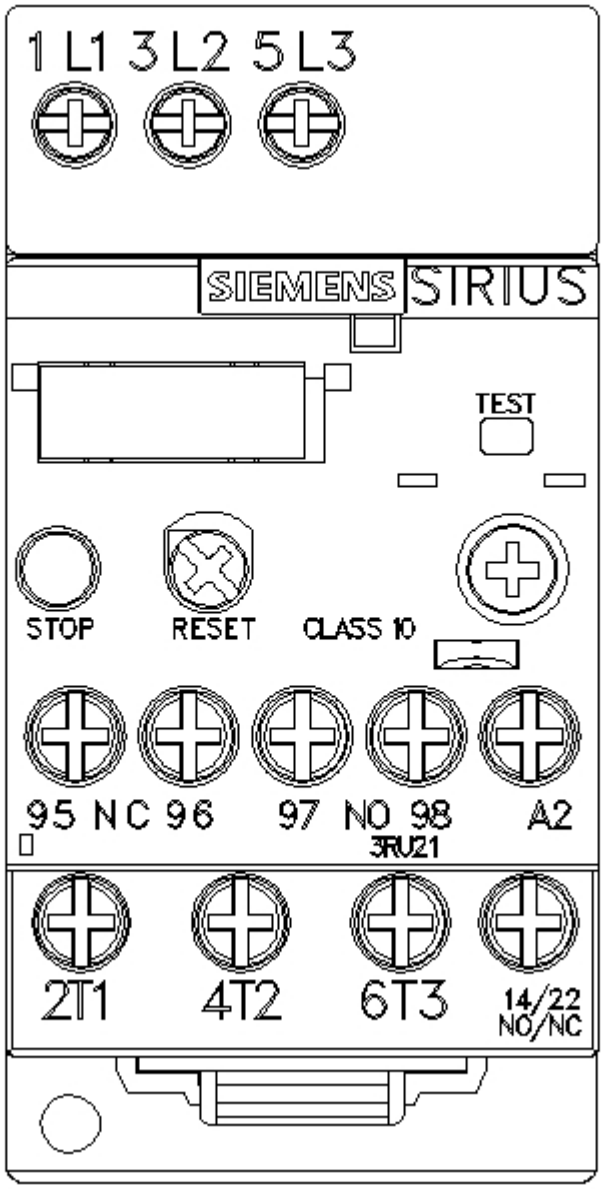

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**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1JB1
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1JB1
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1JB1&lang=en
**Characteristic: Tripping characteristics, I²t, Let-through current**
https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1JB1/char
**Further characteristics (e.g. electrical endurance, switching frequency)**
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1JB1&objecttype=14&gridview=view1



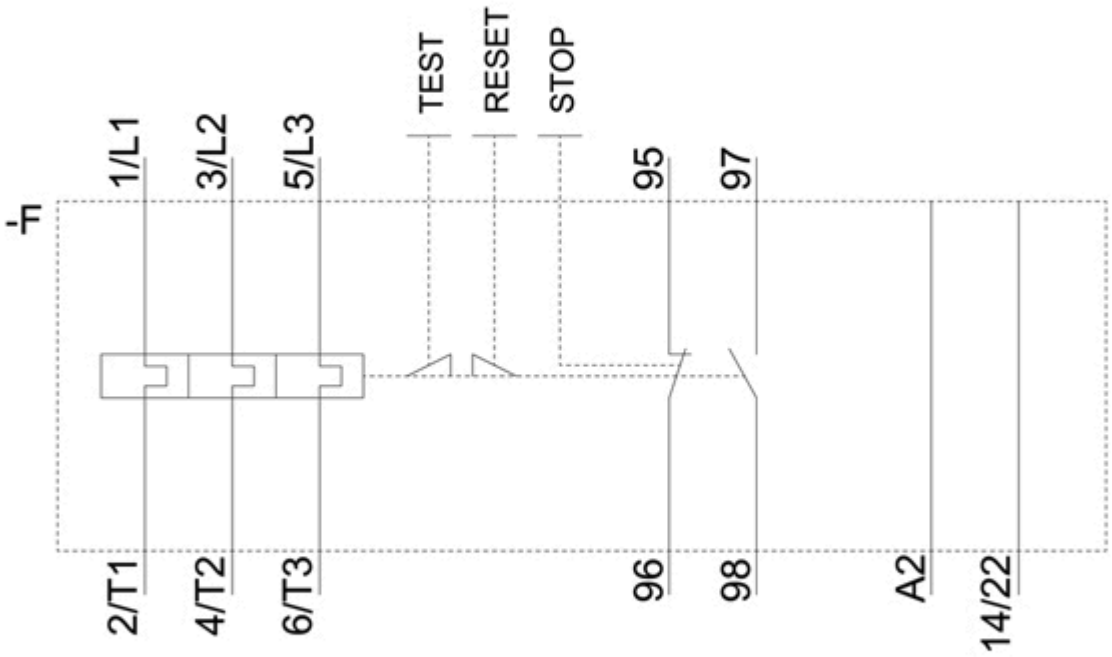


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