



Overload relay 57...75 A Thermal For motor protection Size S3, Class 10  
 Contactor mounting Main circuit: Screw Auxiliary circuit: spring-type  
 terminal Manual-Automatic-Reset

|  |                        |
|--|------------------------|
| <b>product brand name</b>  | SIRIUS                 |
| <b>product designation</b>   | thermal overload relay |
| <b>product type designation</b>  | 3RU2                   |
| <b>General technical data</b>  |                        |
| <b>size of overload relay</b>  | S3                     |
| <b>size of contactor can be combined company-specific</b>                                  | S3                     |
| power loss [W] for rated value of the current at AC in hot operating state                 | 18.9 W                 |
| • per pole   | 6.3 W                  |
| insulation voltage with degree of pollution 3 at AC rated value                            | 1 000 V                |
| <b>surge voltage resistance rated value</b>  | 8 kV                   |
| <b>maximum permissible voltage for safe isolation in networks with grounded star point</b> |                        |
| • 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             |
| <b>type of protection according to ATEX directive 2014/34/EU</b>                           | Ex II (2) GD           |
| certificate of suitability according to ATEX directive 2014/34/EU                          | DMT 98 ATEX G 001      |
| <b>reference code acc. to IEC 81346-2</b>  | F                      |
| <b>Substance Prohibitance (Date)</b>   | 01.03.2017 00:00:00    |
| <b>Ambient conditions</b>  |                        |
| installation altitude at height above sea level maximum                                    | 2 000 m                |
| <b>ambient temperature</b>   |                        |
| • during operation   | -40 ... +70 °C         |
| • during storage   | -55 ... +80 °C         |
| • during transport   | -55 ... +80 °C         |
| <b>temperature compensation</b>  | -40 ... +60 °C         |
| relative humidity during operation   | 10 ... 95 %            |
| <b>Main circuit</b>  |                        |
| <b>number of poles for main current circuit</b>  | 3                      |
| <b>adjustable current response value current of the current-dependent overload release</b> | 57 ... 75 A            |
| <b>operating voltage</b>   |                        |
| • rated value  | 690 V                  |
| • at AC-3 rated value maximum  | 1 000 V                |
| <b>operating frequency rated value</b>   | 50 ... 60 Hz           |

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| <b>operational current rated value</b>  | 75 A   |
| <b>Auxiliary circuit</b>  |  |
| <b>design of the auxiliary switch</b>   | integrated   |
| <b>number of NC contacts for auxiliary contacts</b>   | 1  |
| • note  | for contactor disconnection  |
| <b>number of NO contacts for auxiliary contacts</b>   | 1  |
| • note  | for message "Tripped"  |
| number of CO contacts for auxiliary contacts  | 0  |
| <b>operational current of auxiliary contacts at AC-15</b>   |  |
| • 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  |
| <b>operational current of auxiliary contacts at DC-13</b>   |  |
| • 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   |
| design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required | 6A (SCC less than equal to 0.5 kA; U less than equal to 260V)                                    |
| <b>contact rating of auxiliary contacts according to UL</b>   | B600 / R300  |
| <b>Protective and monitoring functions</b>  |  |
| <b>trip class</b>   | CLASS 10   |
| <b>design of the overload release</b>   | thermal  |
| <b>UL/CSA ratings</b>   |  |
| <b>full-load current (FLA) for 3-phase AC motor</b>   |  |
| • at 480 V rated value  | 65 A   |
| • at 600 V rated value  | 62 A   |
| <b>Short-circuit protection</b>   |  |
| <b>design of the fuse link</b>  |  |
| • for short-circuit protection of the main circuit  |  |
| — with type of coordination 1 required  | gG: 250 A  |
| — with type of assignment 2 required  | gG: 160 A  |
| • for short-circuit protection of the auxiliary switch required                                       | fuse gG: 6 A, quick: 10 A  |
| <b>Installation/ mounting/ dimensions</b>   |  |
| <b>mounting position</b>  | any  |
| <b>fastening method</b>   | Contacting mounting  |
| <b>height</b>   | 105 mm   |
| <b>width</b>  | 70 mm  |
| <b>depth</b>  | 125 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  | screw-type terminals   |
| • for auxiliary and control circuit   | spring-loaded terminals  |
| <b>arrangement of electrical connectors for main current circuit</b>                                  | Top and bottom   |
| <b>type of connectable conductor cross-sections</b>   |  |
| • for main contacts   |  |
| — solid   | 2x (2.5 ... 16 mm <sup>2</sup> )   |
| — stranded  | 2x (6 ... 16 mm <sup>2</sup> ), 2x (10 ... 50 mm <sup>2</sup> ), 1x (10 ... 70 mm <sup>2</sup> ) |
| — solid or stranded   | 2x (2.5 ... 50 mm <sup>2</sup> ), 1x (10 ... 70 mm <sup>2</sup> )                                |
| — finely stranded with core end processing  | 2x (2.5 ... 35 mm <sup>2</sup> ), 1x (2.5 ... 50 mm <sup>2</sup> )                               |
| • at AWG cables for main contacts   | 2x (10 ... 1/0), 1x (10 ... 2/0)   |
| <b>type of connectable conductor cross-sections</b>   |  |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul> </li> <li>at AWG cables for auxiliary contacts</li> </ul> | 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 14) |
| <b>tightening torque</b>   |   |
| <ul style="list-style-type: none"> <li>for main contacts for ring cable lug</li> </ul>   | 4.5 ... 6 N·m   |
| <b>outer diameter of the usable ring cable lug maximum</b>   | 19 mm   |
| <b>tightening torque</b>   |   |
| <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> </ul>  | 4.5 ... 6 N·m   |
| <b>design of screwdriver shaft</b>   | Hexagonal socket  |
| <b>size of the screwdriver tip</b>   | 4 mm hexagon socket   |
| <b>design of the thread of the connection screw</b>  |   |
| <ul style="list-style-type: none"> <li>for main contacts</li> </ul>  | M8  |

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| <b>Safety related data</b>  |  |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | 20 y   |
| <b>protection class IP on the front acc. to IEC 60529</b>                 | IP20   |
| <b>touch protection on the front acc. to IEC 60529</b>                    | finger-safe, for vertical contact from the front |

|                                      |              |
|--------------------------------------|--------------|
| <b>Display</b>                       |              |
| display version for switching status | Slide switch |

|                                 |                                       |
|---------------------------------|---------------------------------------|
| <b>Certificates/ approvals</b>  |                                       |
| <b>General Product Approval</b> | <b>For use in hazardous locations</b> |



|                                  |                          |                          |
|----------------------------------|--------------------------|--------------------------|
| <b>Declaration of Conformity</b> | <b>Test Certificates</b> | <b>Marine / Shipping</b> |
|----------------------------------|--------------------------|--------------------------|



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



|                          |              |                |
|--------------------------|--------------|----------------|
| <b>Marine / Shipping</b> | <b>other</b> | <b>Railway</b> |
|--------------------------|--------------|----------------|



[Confirmation](#)

[Special Test Certificate](#)

**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=3RU2146-4KD0>

Cax online generator

<http://support.automation.siemens.com/WWW/CAXorder/default.aspx?lang=en&mlfb=3RU2146-4KD0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2146-4KD0>

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

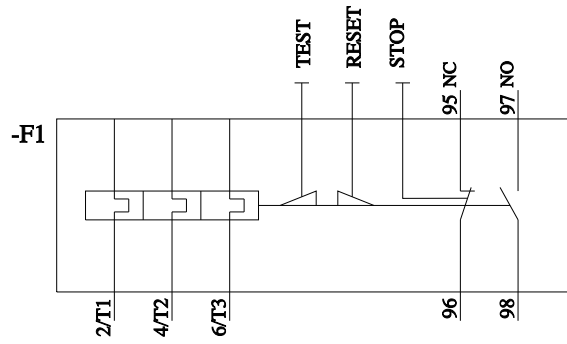
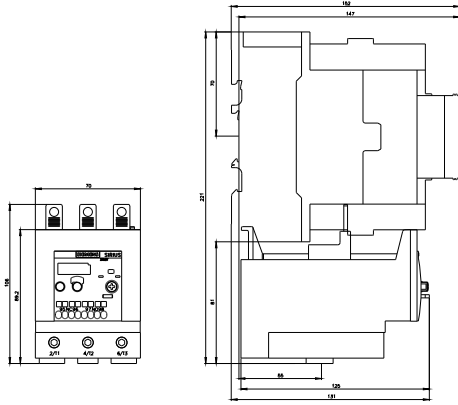
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2146-4KD0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2146-4KD0&lang=en)

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2146-4KD0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2146-4KD0&objecttype=14&gridview=view1>



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9/29/2021 