

Overload relay 3.5...5.0 A Thermal For motor protection Size S00,
Class 10 Contactor mounting 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] total typical	6.1 W
Insulation voltage with degree of pollution 3 rated value	690 V
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
<ul style="list-style-type: none"> • in networks with grounded star point between auxiliary and auxiliary circuit 	440 V
<ul style="list-style-type: none"> • in networks with grounded star point between auxiliary and auxiliary circuit 	440 V
<ul style="list-style-type: none"> • in networks with grounded star point between main and auxiliary circuit 	440 V
<ul style="list-style-type: none"> • in networks with grounded star point between main and auxiliary circuit 	440 V
Protection class IP	

<ul style="list-style-type: none"> • on the front • of the terminal 	IP20 IP20
Shock resistance	
<ul style="list-style-type: none"> • acc. to IEC 60068-2-27 	8g / 11 ms
Certificate of suitability according to ATEX directive 2014/34/EU	DMT 98 ATEX G 001
Protection against electrical shock	finger-safe
Reference code acc. to DIN EN 81346-2	F

Ambient conditions

Installation altitude at height above sea level	
<ul style="list-style-type: none"> • maximum 	2 000 m
Ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	-40 ... +70 °C -55 ... +80 °C -55 ... +80 °C
Temperature compensation	-40 ... +60 °C
Relative humidity during operation	0 ... 90 %

Main circuit

Number of poles for main current circuit	3
Adjustable pick-up value current of the current-dependent overload release	3.5 ... 5 A
Operating voltage	
<ul style="list-style-type: none"> • rated value • at AC-3 rated value maximum 	690 V 690 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	5 A
Operating power at AC-3	
<ul style="list-style-type: none"> • at 400 V rated value • at 500 V rated value • at 690 V rated value 	1.5 kW 2.2 kW 4 kW

Auxiliary circuit

Design of the auxiliary switch	integrated
Number of NC contacts for auxiliary contacts	1
<ul style="list-style-type: none"> • Note 	for contactor disconnection
Number of NO contacts for auxiliary contacts	1
<ul style="list-style-type: none"> • Note 	for message "Tripped"
Number of CO contacts	
<ul style="list-style-type: none"> • for auxiliary contacts 	0
Operating current of auxiliary contacts at AC-15	
<ul style="list-style-type: none"> • at 24 V • at 110 V 	3 A 3 A

<ul style="list-style-type: none"> • at 120 V • at 125 V • at 230 V • at 400 V 	3 A 3 A 2 A 1 A
Operating current of auxiliary contacts at DC-13 <ul style="list-style-type: none"> • at 24 V • at 60 V • at 110 V • at 125 V • at 220 V 	2 A 0.3 A 0.22 A 0.22 A 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 three-phase AC motor <ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	5 A 5 A
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Short-circuit protection

Design of the fuse link <ul style="list-style-type: none"> • for short-circuit protection of the auxiliary switch required 	fuse gG: 6 A, quick: 10 A
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Installation/ mounting/ dimensions

Mounting position	any
Mounting type	Contactor mounting
Height	76 mm
Width	45 mm
Depth	70 mm
Required spacing <ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side 	0 mm 0 mm 6 mm 6 mm 6 mm 0 mm 0 mm 6 mm 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-sections	
• for main contacts	
— single or multi-stranded	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ²
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• at AWG conductors for main contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— single or multi-stranded	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• at AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)
Tightening torque	
• for main contacts with screw-type terminals	0.8 ... 1.2 N·m
• 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

Display

Display version

- for switching status

Slide switch

Certificates/ approvals

General Product Approval



CCC



CSA



UL



ATEX



IECEX

Declaration of Conformity



EG-Konf.

[Miscellaneous](#)

Test Certificates

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

Marine / Shipping



ABS



BUREAU VERITAS

Marine / Shipping



LRS



PRS



RINA



RMRS



DNV-GL
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other

[Confirmation](#)

Railway

[Vibration and Shock](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RU2116-1FB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1FB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1FB0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1FB0&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

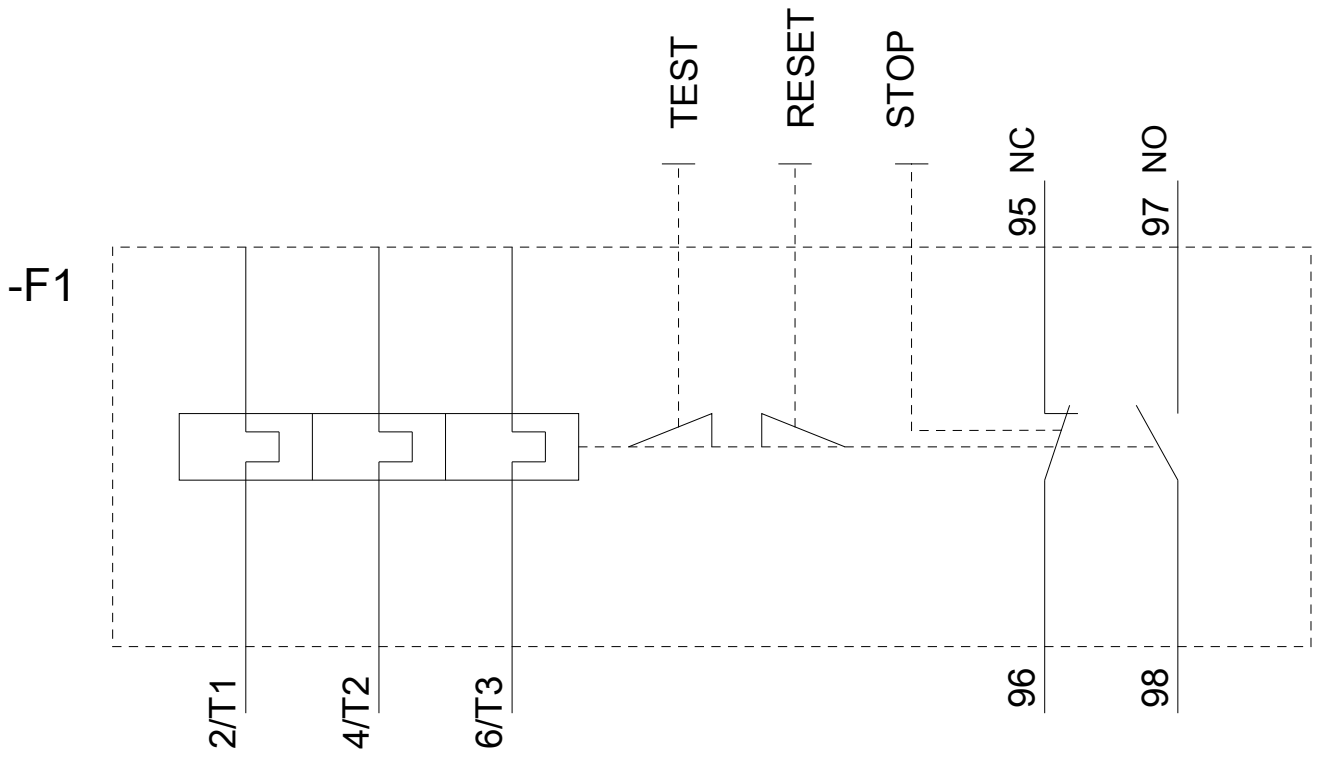
<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1FB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1FB0&objecttype=14&gridview=view1>







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