SIEMENS

Data sheet 3RU2136-4FB0

Overload relay 28...40 A Thermal For motor protection Size S2, 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	S2
Size of contactor can be combined company-specific	S2
Power loss [W] total typical	11 W
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
 in networks with grounded star point between auxiliary and auxiliary circuit 	415 V
 in networks with grounded star point between auxiliary and auxiliary circuit 	415 V
 in networks with grounded star point between main and auxiliary circuit 	690 V
 in networks with grounded star point between main and auxiliary circuit 	690 V
Protection class IP	
• on the front	IP20

of the terminal	IP00
Shock resistance	
• acc. to IEC 60068-2-27	8g / 11 ms
Recovery time	
 after overload trip with automatic reset typical 	10 min
 after overload trip with remote-reset 	10 min
 after overload trip with manual reset 	10 min
Certificate of suitability according to ATEX directive 2014/34/EU	DMT 98 ATEX G 001
Protection against electrical shock	finger-safe when touched vertically from front acc. to IEC 60529
Reference code acc. to DIN EN 81346-2	F
Ambient conditions	
Installation altitude at height above sea level	
• maximum	2 000 m
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-	28 40 A
dependent overload release	
Operating voltage	
• rated value	690 V
 at AC-3 rated value maximum 	690 V
Operating frequency rated value	50 60 Hz
Operating current rated value	40 A
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
Operating 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
Operating 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
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)
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	
• at 480 V rated value	40 A
● at 600 V rated value	40 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

Mounting position	any
Mounting type	Contactor mounting
Height	90 mm
Width	55 mm
Depth	105 mm
Required spacing	
with side-by-side mounting	
— forwards	10 mm
— Backwards	0 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm
• for grounded parts	
— forwards	10 mm
— Backwards	0 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm

— Backwards	0 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm

T1 value for proof test interval or service life acc. to 20 y IEC 61508		
• removable terminal for auxiliary and control circuit Type of electrical connection • for main current circuit Arrangement of electrical connectors for main current circuit Arrangement of electrical connectors for main current circuit Type of connectable conductor cross-sections • for main contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts — single or multi-stranded — finely stranded with core end processing • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts 2x (1 35 mm²), 1x (1 35 mm²) 2x (18 2), 1x (18 1) Type of connectable conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts Tightening torque • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for main contacts • for main contacts • for main contacts • for main contacts • of the auxiliary and control contacts M6 M6 M6 M6 M6 M7 Value for proof test interval or service life acc. to IEC 61508 Display Display version • for switching status	Connections/Terminals	
Circuit Type of electrical connection • for main current circuit • for auxiliary and control current circuit Arrangement of electrical connectors for main current circuit Type of connectable conductor cross-sections • for main contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts — single or multi-stranded — finely stranded with core end processing • for auxiliary contacts — single or multi-stranded — single or multi-stranded — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts Type of connectable conductor cross-sections • for auxiliary contacts • for main contacts with screw-type terminals • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for main contacts with screw-type terminals • for main contacts with screw-type terminals • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for main contacts • of the auxiliary and control contacts M6 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display version • for switching status	Product function	
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For auxiliary and control current circuit Arrangement of electrical connectors for main current circuit Type of connectable conductor cross-sections • for main contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts Tightening torque • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for main contacts with screw-type terminals 2x (20 15, mm²), 2x (0.75 2,5 mm²) 2x (20 16), 2x (18 14) Tightening torque • for main contacts with screw-type terminals 0	Type of electrical connection	
Arrangement of electrical connectors for main current circuit Type of connectable conductor cross-sections • for main contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts — single or multi-stranded — finely connectable conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts 2x (0.5 1,5 mm²), 2x (0.75 2,5 mm²) 2x (20 16), 2x (18 14) Tightening torque • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals Diameter 5 6 mm Design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts M6 • of the auxiliary and control contacts T1 value for proof test interval or service life acc. to lEC 61508 Display Display version • for switching status Slide switch	• for main current circuit	screw-type terminals
circuit Type of connectable conductor cross-sections • for main contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts 2x (1 25 mm²), 1x (1 35 mm²) • at AWG conductors for main contacts 2x (18 25 mm²), 1x (1 35 mm²) • at AWG conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts 2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²) • at AWG conductors for auxiliary contacts 2x (20 16), 2x (18 14) Tightening torque • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals Diameter 5 6 mm Size of the screwdriver tip Pozidriv PZ 2 Design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts M6 • of the auxiliary and control contacts M7 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display version • for switching status Slide switch	 for auxiliary and control current circuit 	screw-type terminals
• for main contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts 2x (1 25 mm²), 1x (1 35 mm²) 2x (18 2), 1x (18 1) Type of connectable conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2,5 mm²) 2x (20 1.5 mm²), 2x (0.75 2,5 mm²) 2x (20 16), 2x (18 14) Tightening torque • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals 1x - 5 N·m Design of screwdriver shaft Diameter 5 6 mm Diameter 5 6 mm Size of the screwdriver tip Pozidriv PZ 2 Design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts M6 • of the auxiliary and control contacts M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display version • for switching status Slide switch	•	Top and bottom
- single or multi-stranded - finely stranded with core end processing • at AWG conductors for main contacts Type of connectable conductor cross-sections • for auxiliary contacts - single or multi-stranded - finely stranded with core end processing • at AWG conductors for auxiliary contacts - single or multi-stranded - finely stranded with core end processing • at AWG conductors for auxiliary contacts 2x (0.5 1,5 mm²), 2x (0.75 2,5 mm²) • at AWG conductors for auxiliary contacts 2x (20 16), 2x (18 14) Tightening torque • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals Design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts M6 T1 value for proof test interval or service life acc. to IEC 61508 Display Display Display Display version • for switching status Slide switch	Type of connectable conductor cross-sections	
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at AWG conductors for main contacts Type of connectable conductor cross-sections of or auxiliary contacts — single or multi-stranded — finely stranded with core end processing at AWG conductors for auxiliary contacts Tightening torque of or auxiliary contacts with screw-type terminals of the screwdriver shaft Diameter 5 6 mm Pozidriv PZ 2 Design of the thread of the connection screw of the auxiliary and control contacts M6 of the auxiliary and control contacts M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display Display version of or switching status Slide switch	 single or multi-stranded 	2x (1 35 mm²), 1x (1 50 mm²)
• for auxiliary contacts • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts — for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals 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 • of the auxiliary and control contacts M6 T1 value for proof test interval or service life acc. to IEC 61508 Display Display Display Display Slide switch	 finely stranded with core end processing 	2x (1 25 mm²), 1x (1 35 mm²)
• for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts — for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals 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 • of the auxiliary and control contacts M6 • of the auxiliary and control contacts T1 value for proof test interval or service life acc. to IEC 61508 Display Display Display Display version • for switching status S1 (0.5 1,5 mm²), 2x (0.75 2,5 mm²) 2x (20 16), 2x (18 14) T2 (18 14) T3 m² T4 (18 14) Diameter 5 6 mm Size of the screwdriver tip Pozidriv PZ 2 Diameter 5 6 mm S2 (20 y) S3 (18 c) S4 (18 14) Diameter 5 6 mm Size of the screwdriver tip Diameter 5 6 mm Size of the screwdriver tip Pozidriv PZ 2 Diameter 5 6 mm Size of the screwdriver tip Pozidriv PZ 2 Diameter 5 6 mm Size of the screwdriver tip Pozidriv PZ 2 S4 (20 16), 2x (18 14) Diameter 5 6 mm Size of the screwdriver tip Pozidriv PZ 2 Diameter 5 6 mm Size of the screwdriver tip Pozidriv PZ 2 S5 (20 16), 2x (18 14) S6 (20 16), 2x (18 14) S7 (20 16), 2x (18 14) S6 (20 16), 2x (18 14) S7 (20 16), 2x (18 14) S8 (20 16), 2x (18 14) S9 (20 16), 2x (18 14) S9 (20 16	 at AWG conductors for main contacts 	2x (18 2), 1x (18 1)
single or multi-stranded finely stranded with core end processing finely stranded with core end processing at AWG conductors for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14) Tightening torque for main contacts with screw-type terminals for auxiliary contacts with screw-type terminals for auxiliary contacts with screw-type terminals 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 for main contacts for the auxiliary and control contacts M6 of the auxiliary and control contacts M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display version for switching status Slide switch	Type of connectable conductor cross-sections	
- finely stranded with core end processing • at AWG conductors for auxiliary contacts 2x (20 16), 2x (18 14) Tightening torque • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals 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 • of the auxiliary and control contacts M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display version • for switching status Slide switch	• for auxiliary contacts	
at AWG conductors for auxiliary contacts 2x (20 16), 2x (18 14) Tightening torque • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals 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 • of the auxiliary and control contacts M6 of the auxiliary and control contacts T1 value for proof test interval or service life acc. to IEC 61508 Display Display Display version • for switching status Slide switch	 single or multi-stranded 	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)
Tightening torque • for main contacts with screw-type terminals • 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 • of the auxiliary and control contacts M6 • of the auxiliary and control contacts M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display Display version • for switching status Slide switch	 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
• for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals 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 • of the auxiliary and control contacts M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display Display version • for switching status Slide switch	 at AWG conductors for auxiliary contacts 	2x (20 16), 2x (18 14)
● for auxiliary contacts with screw-type terminals 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 ● of the auxiliary and control contacts M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display Display version ● for switching status Slide switch	Tightening torque	
Design of screwdriver shaft Size of the screwdriver tip Pozidriv PZ 2 Design of the thread of the connection screw of the auxiliary and control contacts M6 M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display Display version of the screwdriver tip Pozidriv PZ 2 M6 M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Slide switch	for main contacts with screw-type terminals	3 4.5 N·m
Size of the screwdriver tip Design of the thread of the connection screw of the main contacts of the auxiliary and control contacts M6 M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display version of for switching status Pozidriv PZ 2 M6 M2 M3 Slide switch	 for auxiliary contacts with screw-type terminals 	0.8 1.2 N·m
Design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display version • for switching status Slide switch	Design of screwdriver shaft	Diameter 5 6 mm
• for main contacts • of the auxiliary and control contacts Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display version • for switching status M6 M3 Safety related data Z0 y Slide switch	Size of the screwdriver tip	Pozidriv PZ 2
of the auxiliary and control contacts M3 Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display version • for switching status M3 M3 Slide switch	Design of the thread of the connection screw	
Safety related data T1 value for proof test interval or service life acc. to IEC 61508 Display Display version • for switching status Slide switch	• for main contacts	M6
T1 value for proof test interval or service life acc. to IEC 61508 Display Display version • for switching status Slide switch	 of the auxiliary and control contacts 	M3
Display Display version • for switching status Slide switch	Safety related data	
Display version ● for switching status Slide switch	•	20 y
• for switching status Slide switch	Display	
	Display version	
Certificates/approvals	• for switching status	Slide switch
	Certificates/approvals	

General Product Approval















IECEx

Declaration of Conformity

Test Certificates

Marine / Shipping



Miscellaneous

Type Test Certificates/Test Report

Special Test Certificate





Marine / Shipping

other











Confirmation

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=3RU2136-4FB0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2136-4FB0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4FB0

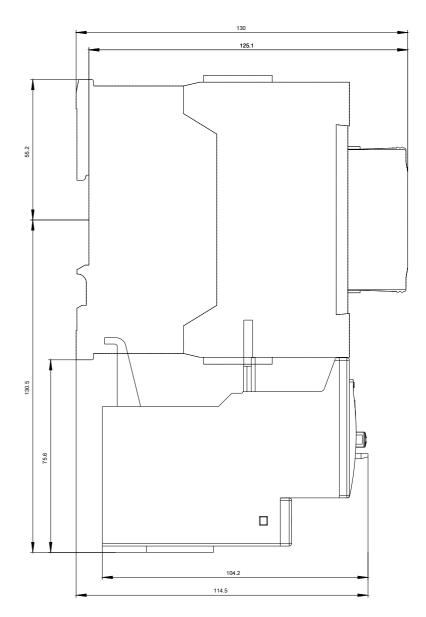
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2136-4FB0&lang=en

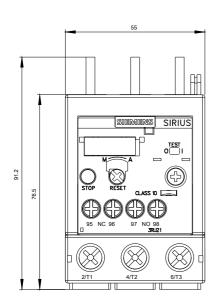
Characteristic: Tripping characteristics, I²t, Let-through current

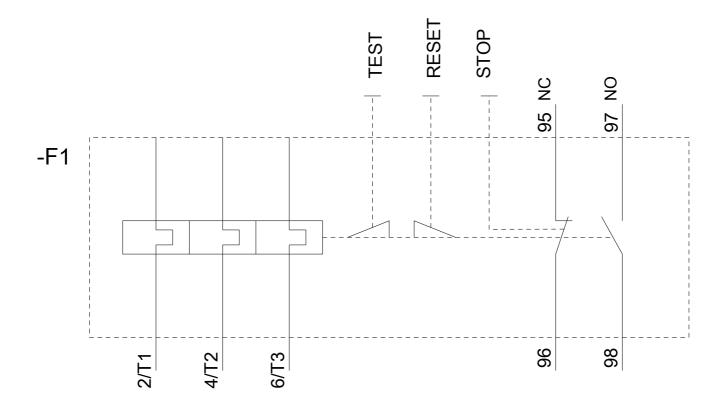
https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4FB0/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2136-4FB0&objecttype=14&gridview=view1







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