## **SIEMENS**

Data sheet 3RU2136-4HD1



OVERLOAD RELAY 40... 50 A FOR MOTOR PROTECTION SIZE S2, CLASS 10 STAND-ALONE INSTALLATION MAIN CIRCUIT: SCREW TERMINAL AUX. CIRCUIT: SPRING-T. TERM. MANUAL-AUTOMATIC-RESET.

Figure similar

product brand name	SIRIUS
Product designation	3RU2 thermal overload relay

General technical data:		
Active power loss total typical	W	11
Insulation voltage		
<ul> <li>with degree of pollution 3 Rated value</li> </ul>	V	690
Shock resistance		
• acc. to IEC 60068-2-27		8g / 11 ms
Surge voltage resistance Rated value	kV	6
Temperature compensation	°C	-40 +60
Recovery time		
<ul> <li>after overload trip with automatic reset typical</li> </ul>	min	10
<ul> <li>after overload trip with remote-reset</li> </ul>	min	10
<ul> <li>after overload trip with manual reset</li> </ul>	min	10
Size of contactor can be combined company-specific		S2
Type of assignment		2
Protection class IP		
• on the front		IP20
• of the terminal		IP00
Type of protection		on request
Equipment marking		
• acc. to DIN EN 81346-2		F

Main circuit:	
Number of poles for main current circuit	3

Departing voltage	Adjustable response value current of the current-	Α	40 50
• Rated value • at AC-3 Rated value maximum  ○ Poerating frequency Rated value  ○ Operating current • at AC-3 — at 400 V Rated value  ○ Auxiliary circuit  Number of NC contacts — Note  Number of NC contacts — Note  Number of NC contacts — Note  Number of CO contacts — Note  Number of CO contacts — Note  Number of NC contacts — Note  Number of NC contacts — Note  Number of CO contacts — Note  Number of NC contacts — Note	dependent overload release		
• at AC-3 Rated value maximum  V 690 Operating frequency Rated value Operating frequency Rated value A 50  Operating current • at AC-3 — at 400 V Rated value A 50  Auxiliary circuit.  Number of NC contacts • for auxiliary contacts • for auxiliary contacts — Note  Number of NO contacts • for auxiliary contacts — Note  Number of NO contacts • for auxiliary contacts — Note  Number of CO contacts  • for auxiliary contacts — Note  Number of CO contacts  • for auxiliary contacts — Note  Number of CO contacts  • for auxiliary contacts — Note  Number of CO contacts • for auxiliary contacts — Note  Number of CO contacts • of auxiliary contacts — Note  Number of CO contacts • of auxiliary contacts — Note  Number of CO contacts • of auxiliary contacts — Note  Number of CO contacts • of auxiliary contacts — Note  Number of CO contacts • of auxiliary contacts — Note  Number of CO contacts • of auxiliary contacts — Note  Number of CO contacts • of auxiliary contacts  • of auxiliary contacts  • of auxiliary contacts • of auxiliary contac	Operating voltage		
Departing frequency Rated value	Rated value	V	690
Operating current Rated value         A         50           Operating current         at AC-3         — at 400 V Rated value         A         50           Auxiliary circuit:         Number of NC contacts         Incomptor of NC contacts         Inco	<ul> <li>at AC-3 Rated value maximum</li> </ul>	V	690
Operating current  • at AC-3  — at 400 V Rated value  Auxiliary circuit:  Number of NC contacts  • for auxiliary contacts  0  Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15  • at 24 V  • at 110 V  • at 120 V  • at 125 V  • at 230 V  • at 400 V  • at 1400 V  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  • at 125 V  • at 20 V  • at 125 V  • at 126 V  • at 127 V  • at 128 V  • at 129 V  • at 125 V  • at 120 V  • at 125 V  • at 126 V  • at 127 V  • at 128 V  • at 129 V  • at 125 V  • at 126 V  • at 127 V  • at 128 V  • at 129 V  • at 129 V  • at 129 V  • at 125 V  • at 120 V  • at 125 V  • at 126 V  • at 127 V  • at 128 V  • at 129 V  • at 129 V  • at 125 V	Operating frequency Rated value	Hz	50 60
• at AC-3 — at 400 V Rated value  Auxiliary circuit:  Number of NC contacts • for auxiliary contacts — Note  Number of NO contacts • for auxiliary contacts — Note  Number of NO contacts • for auxiliary contacts — Note  Number of Co contacts • for auxiliary contacts — Note  Number of Co contacts • for auxiliary contacts — Note  Number of Co contacts • for auxiliary contacts  • for auxiliary contacts  0  Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15 • at 24 V • at 110 V A 3 4 4 125 V • at 230 V • at 400 V A 1  Operating current of the auxiliary contacts at DC-13 • at 24 V • at 110 V A A 1  Operating current of the auxiliary contacts at DC-13 • at 24 V • at 110 V A A C2 • at 110 V A C3 • at 125 V A C4 • at 110 V A C5 • at 220 V A C7 • at 125 V • at 220 V A C8 • at 126 V • at 220 V A C9 • at 126 V • at 220 V A C9 • at 126 V • at 220 V A C9 • at 126 V • at 220 V A C9 • at 220 V	Operating current Rated value	Α	50
A   50	Operating current		
Auxiliary circuit:  Number of NC contacts  • for auxiliary contacts  0  Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15  • at 24 V  • at 110 V  • at 120 V  • at 230 V  • at 230 V  • at 400 V  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  • at 25 V  • at 20 V  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  • at 125 V  • at 125 V  • at 110 V  • at 125 V  • at 110 V  • at 125 V  • at 220 V  Operating current of the auxiliary contacts at DC-13  • at 26 C  • at 27 C  • at 28 C  • at 28 C  • at 28 C  • at 28 C  • for short-circuit protection of the auxiliary switch  • for short-circuit protection of t	• at AC-3		
Number of NC contacts  • for auxiliary contacts  — Note  Number of NO contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  — Note  Number of CO contacts  • for auxiliary contacts  — Note  Number of CO contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  0  Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15  • at 24 V  • at 110 V  • at 120 V  • at 125 V  • at 230 V  • at 400 V  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  A  2  • at 110 V  A  2  • at 110 V  A  0 0.22  • at 220 V  • at 20 V  • a	— at 400 V Rated value	Α	50
Note     Note     Number of NO contacts     • for auxiliary switch  Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15  • at 24 V     • at 110 V     • at 125 V     • at 230 V     • at 240 V     • at 400 V  Operating current of the auxiliary contacts at DC-13  • at 24 V     • at 110 V     • at 22 V     • at 110 V     • at 110 V     • at 22 V     • at 125 V     • at 110 V     • at 110 V     • at 25 V     • at 110 V     • at 125 V     • at 125 V     • at 125 V     • at 125 V     • at 120 V     • at 120 V     • at 125 V     • at 220 V     • at 125 V     • at 220 V  Design of the miniature circuit breaker  • for short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor			
Number of NO contacts  • for auxiliary contacts  — Note  Number of CO contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for of auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  0  Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15  • at 24 V  • at 110 V  • at 125 V  • at 230 V  • at 400 V  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  • at 110 V  • at 125 V  • at 125 V  • at 220 V  A  Operating current of the auxiliary contacts at DC-13  • at 22 V  • at 125 V  • at 220 V  • at 125 V  • at 220 V  • at 125 V  • at 220 V  Contactor disconnection  1  1  1  1  1  1  1  1  1  1  1  1  1			
Number of NO contacts  • for auxiliary contacts  — Note  Number of CO contacts  • for auxiliary contacts  • for auxiliary contacts  0  Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15  • at 24 V  • at 110 V  • at 125 V  • at 230 V  • at 400 V  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  A  3  • at 22 V  • at 110 V  A  2  • at 110 V  A  2  • at 110 V  A  1  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  A  0.22  • at 125 V  • at 220 V  • at 125 V  • at 220 V  • at 125 V  • at 26 V  • at 125 V  • at 26 V  • at 27 V  • at 28 V  • at 10 V  • at 28 V  • at 10 V  • at 29 V  • at 20	• for auxiliary contacts		1
Note     Note     Number of CO contacts     • for auxiliary contacts     • for auxiliary switch  Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15     • at 24 V     • at 110 V     • at 120 V     • at 230 V     • at 400 V  Operating current of the auxiliary contacts at DC-13     • at 24 V     • at 400 V  Operating current of the auxiliary contacts at DC-13     • at 22 V     • at 400 V  Operating current of the auxiliary contacts at DC-13     • at 24 V     • at 110 V     A     0.22     • at 110 V     A     0.22     • at 125 V     A     0.11  Design of the miniature circuit breaker     • for short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	— Note		for contactor disconnection
Number of CO contacts  • for auxiliary contacts  Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15  • at 24 V  • at 110 V  • at 120 V  • at 125 V  • at 4400 V  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  • at 230 V  • at 400 V  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  A  2  • at 20 V  • at 20 V  • at 20 V  • at 20 V  • at 110 V  A  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  A  Outline Company of the miniature circuit breaker  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	Number of NO contacts		
Number of CO contacts  • for auxiliary contacts  Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15  • at 24 V  • at 110 V  • at 120 V  • at 125 V  • at 230 V  • at 400 V  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 410 V  • at 25 V  • at 400 V  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  • at 25 V  • at 20 V  • at 110 V  • at 125 V  • at 125 V  • at 125 V  • at 20 V  •	for auxiliary contacts		1
for auxiliary contacts      Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15      • at 24 V     • at 110 V     • at 120 V     • at 125 V     • at 230 V     • at 400 V  Operating current of the auxiliary contacts at DC-13      • at 24 V     • at 230 V     • at 400 V  Operating current of the auxiliary contacts at DC-13      • at 24 V     • at 110 V     • at 125 V     • at 110 V     • at 125 V     • at 110 V     • at 125 V     • at 125 V     • at 10 V     • at 125 V     • at 125 V     • at 220 V  Design of the miniature circuit breaker      • for short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	— Note		for message "Tripped"
Design of the auxiliary switch  Operating current of the auxiliary contacts at AC-15  • at 24 V  • at 110 V  • at 125 V  • at 230 V  • at 400 V  Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 125 V  • at 220 V  • at 125 V  • at 22 V  • at 220 V  • at 110 V  • at 125 V  • at 220 V  • at 220 V  • at 110 V  • at 125 V  • at 125 V  • at 20 V  • at 10 V  • at 125 V  • at 20 V  • at 125 V  • at 20 V  • at 20 V  • at 20 V  • at 20 V  Design of the miniature circuit breaker  • for short-circuit protection of the auxiliary switch required  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	Number of CO contacts		
Operating current of the auxiliary contacts at AC-15  • at 24 V • at 110 V • at 120 V • at 125 V • at 230 V • at 400 V  Operating current of the auxiliary contacts at DC-13 • at 24 V • at 110 V • at 110 V • at 125 V A  Operating current of the auxiliary contacts at DC-13 • at 24 V • at 110 V • at 125 V • at 220 V  Obesign of the miniature circuit breaker • for short-circuit protection of the auxiliary switch required  Operating current of the auxiliary switch required  Operating current of the auxiliary contacts at DC-13  A  C  C  C  C  C  C  C  C  C  C  C  C	<ul> <li>for auxiliary contacts</li> </ul>		0
at 24 V at 110 V at 120 V A at 125 V A at 230 V at 400 V A  Operating current of the auxiliary contacts at DC-13 at 24 V at 110 V A at 110 V A at 125 V A  A  2  A  1  Operating current of the auxiliary contacts at DC-13 at 24 V at 110 V A at 125 V A at 220 V A  O.22 at 220 V A O.11  Design of the miniature circuit breaker of or short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	Design of the auxiliary switch	_	integrated
at 110 V at 120 V at 125 V A at 230 V at 400 V  Operating current of the auxiliary contacts at DC-13  at 24 V at 110 V A at 125 V A at 20.22  at 125 V A at 110 V A at 20.22  at 125 V A at 220 V  at 220 V  at 220 V  A  O.11  Design of the miniature circuit breaker  after for short-circuit protection of the auxiliary switch required  For short-circuit protection of the auxiliary switch required  CLASS 10  Design of the overload circuit breaker  Trip class  CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	Operating current of the auxiliary contacts at AC-15		
at 120 V at 125 V A at 230 V at 400 V A Departing current of the auxiliary contacts at DC-13 at 24 V at 110 V at 125 V A at 22 at 110 V A at 125 V at 125 V A at 22 being of the miniature circuit breaker  after for short-circuit protection of the auxiliary switch required  A CLASS 10  Design of the overload circuit breaker  Design of the overload circuit breaker  Design of the overload circuit breaker  Trip class CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	● at 24 V	Α	3
at 125 V at 230 V at 400 V  Operating current of the auxiliary contacts at DC-13  at 24 V at 110 V at 125 V at 125 V at 125 V at 220 V  A  O.22  at 220 V  A  O.32  A  O.4  O.52  A  O.52  A  O.11  Design of the miniature circuit breaker  for short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class  CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	● at 110 V	Α	3
at 230 V at 400 V A 1  Operating current of the auxiliary contacts at DC-13  at 24 V at 110 V A at 125 V at 220 V A at 220 V A at 20 V A besign of the miniature circuit breaker after for short-circuit protection of the auxiliary switch required  Frotective and monitoring functions:  Trip class CLASS 10  Design of the overload circuit breaker  Design of the overload circuit breaker  Trip class CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	● at 120 V	Α	3
at 400 V     A 1 Operating current of the auxiliary contacts at DC-13     at 24 V     at 110 V     A 0.22     at 125 V     at 220 V     at 220 V     Design of the miniature circuit breaker     ofor short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class  CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	● at 125 V	Α	3
Operating current of the auxiliary contacts at DC-13  • at 24 V  • at 110 V  • at 125 V  • at 220 V  A  O.22  • at 220 V  Design of the miniature circuit breaker  • for short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class  CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	● at 230 V	Α	2
Operating current of the auxiliary contacts at DC-13  • at 24 V • at 110 V • at 125 V • at 220 V  • at 220 V  Design of the miniature circuit breaker • for short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class  CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	● at 400 V	Α	1
at 24 V at 110 V A 0.22 at 125 V at 220 V  Design of the miniature circuit breaker  for short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class  CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor			
at 125 V     at 220 V     A     Design of the miniature circuit breaker     for short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class     CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor		Α	2
at 125 V     at 220 V     A     O.11  Design of the miniature circuit breaker     for short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class     CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	● at 110 V	Α	0.22
at 220 V     Design of the miniature circuit breaker     for short-circuit protection of the auxiliary switch required  Protective and monitoring functions:  Trip class     CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor		Α	0.22
● for short-circuit protection of the auxiliary switch required  6A (SCC less than equal to 0.5 kA; U less than equal to 260V)  Protective and monitoring functions:  Trip class  CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor		Α	0.11
required to 260V)  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	Design of the miniature circuit breaker		
Protective and monitoring functions:  Trip class CLASS 10 Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor	for short-circuit protection of the auxiliary switch		6A (SCC less than equal to 0.5 kA; U less than equal
Trip class  CLASS 10  Design of the overload circuit breaker  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor			to 260V)
Design of the overload circuit breaker thermal  UL/CSA ratings:  Full-load current (FLA) for three-phase AC motor			
UL/CSA ratings: Full-load current (FLA) for three-phase AC motor	<u> </u>		
Full-load current (FLA) for three-phase AC motor	Design of the overload circuit breaker		thermal
• at 480 V Rated value A 50			_
	• at 480 V Rated value	Α	50

● at 600 V Rated value	Α	50
Contact rating of the auxiliary contacts acc. to UL		B600 / R300

Short-circuit:	
Design of the fuse link	
<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
— required	Fuse gG: 100 A
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	fuse gG: 6 A, quick: 10 A

nstallation/ mounting/ dimensions: mounting position		any	
Mounting type		stand-alone installation	
Height	mm	105	
Width	mm	55	
Depth	mm	117	
Required spacing			
<ul><li>with side-by-side mounting</li></ul>			
— forwards	mm	10	
— Backwards	mm	0	
— upwards	mm	10	
— downwards	mm	10	
— at the side	mm	10	
<ul> <li>for grounded parts</li> </ul>			
— forwards	mm	10	
— Backwards	mm	0	
— upwards	mm	10	
— at the side	mm	10	
— downwards	mm	10	
• for live parts			
— forwards	mm	10	
— Backwards	mm	0	
— upwards	mm	10	
— downwards	mm	10	
— at the side	mm	10	

Connections/ Terminals:	
Type of electrical connection	
• for main current circuit	screw-type terminals
<ul> <li>for auxiliary and control current circuit</li> </ul>	spring-loaded terminals
Arrangement of electrical connectors for main current circuit	Top and bottom
Product function	

<ul> <li>removable terminal for auxiliary and control circuit</li> </ul>		No
Type of connectable conductor cross-section		
• for main contacts		
<ul> <li>single or multi-stranded</li> </ul>		2x (1 35 mm²), 1x (1 50 mm²)
— finely stranded with core end processing		2x (1 25 mm²), 1x (1 35 mm²)
<ul> <li>for AWG conductors for main contacts</li> </ul>		2x (18 2), 1x (18 1)
• for auxiliary contacts		
— single or multi-stranded		2x (0,5 2,5 mm²)
— finely stranded with core end processing		2x (0.5 1.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>		2x (0.5 2.5 mm²)
<ul> <li>for AWG conductors for auxiliary contacts</li> </ul>		2x (20 14)
Tightening torque		
• for main contacts with screw-type terminals	N·m	3 4.5
Design of screwdriver shaft		5 to 6 mm diameter
Design of the thread of the connection screw		
• for main contacts		M6
Safety related data:		
Protection against electrical shock		finger-safe when touched vertically from front acc. to IEC 60529
Mechanical data:		
Size of overload relay		S2
Ambient conditions:		
Installation altitude at height above sea level maximum	m	2 000
Ambient temperature		
during operation	°C	-40 <b>+</b> 70
• during storage	°C	-55 <b>+</b> 80
during transport	°C	-55 <b>+</b> 80
Relative humidity during operation	%	0 90
Display:		
Display version		
• for switching status		Slide switch
Certificates/ approvals:		

ha	or use in azardous ocations	Declaration of Conformity	Test Certificates
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Type Test Certificates/Test Report

Test Certificates	other	
Special Test	Confirmation	Environmental
Certificate		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

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU21364HD1

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RU21364HD1/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RU21364HD1&lang=en









