## **SIEMENS**

Data sheet 3RU2136-4QB0



Overload relay 47...57 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] for rated value of the current at AC in hot operating state	15.6 W
• per pole	5.2 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	
<ul> <li>between auxiliary and auxiliary circuit</li> </ul>	415 V
<ul> <li>between auxiliary and auxiliary circuit</li> </ul>	415 V
<ul> <li>between main and auxiliary circuit</li> </ul>	690 V
<ul> <li>between main and auxiliary circuit</li> </ul>	690 V
shock resistance according 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 according to IEC 81346-2	F
Substance Prohibitance (Date)	10/15/2014
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul> <li>during operation</li> </ul>	-40 +70 °C
during storage	-55 +80 °C
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	47 57 A
operating voltage	
rated value	690 V
at AC-3e rated value maximum	690 V
operating frequency rated value	50 60 Hz

Operating power	anavational august	57 A
perating power  at ACO Y rated value — at 500 V rated value — at 120 V — at 125 V — at 120 V — at 125 V — at 100 V — at 125 V — at 100 V — at 110 V — at 125 V — at 100 V — at 110 V — at 125 V — at 100 V — at 110 V — at 125 V — at 100 V — at 110 V — at 125 V — at 100 V — at 125 V — at 100 V — at 1	operational current rated value	57 A
### at AC-3	_ ·	5/ A
— at 500 V rated value		20.111
at 400 V rated value		55 KW
Auxillary circuit  design of the auxillary switch number of NC contacts for auxillary contacts		
Auxiliary circuit  design of the auxiliary switch note number of NC contacts for auxiliary contacts note number of NC contacts for auxiliary contacts note number of NO contacts for auxiliary contacts note number of CO contacts for auxiliary contacts note of contacts of auxiliary contacts note number of CO contacts for auxiliary contacts at AC-15 number of CO contacts for auxiliary contacts at AC-15 number of CO contacts for auxiliary contacts at AC-15 number of CO contacts for auxiliary contacts at AC-15 number of CO contacts for auxiliary contacts at AC-15 number of CO contacts for auxiliary contacts at DC-13 number of CO contact for auxiliary contacts at DC-13 number of CO contact for auxiliary contacts at DC-13 number of CO contact for auxiliary contacts at DC-13 number of CO contact for auxiliary contacts at DC-13 number of CO contact for auxiliary contacts according to UL number of CO contact for auxiliary contacts according to UL number of CO contact for auxiliary contacts according to UL number of CO contact for auxiliary contacts according to UL number of CO contacts for auxiliary contacts according to UL number of CO contacts for auxiliary switch for auxiliary swit		
design of the auxiliary switch   number of NC contacts for auxiliary contacts   1		55 kW
number of NC contacts for auxiliary contacts  • note  number of NC contacts for auxiliary contacts  • note  number of CO contacts for auxiliary contacts  • note  number of CO contacts for auxiliary contacts  • all 24 V  • all 110 V  • all 126 V  • all 230 V  • all 240 V  • all 240 V  • all 240 V  • all 250 V  • all 250 V  • all 260 V  • all 270 V  • all 270 V  • all 270 V  • all 280 V  • all 280 V  • all 290 V  • all 290 V  • all 200 V  • all	Auxiliary circuit	
number of NC contacts for auxiliary contacts		integrated
number of NO contacts for auxillary contacts  • note  note  number of CO contacts for auxillary contacts  operational current of auxillary contacts at AC-15  • at 24 V  • at 110 V  3 A  • at 120 V  3 A  • at 230 V  • at 230 V  • at 100 V  Operational current of auxillary contacts at DC-13  • at 24 V  • at 60 V  • at 110 V  3 A  • at 22 A  • at 120 V  • at 110 V  0 Coperational current of auxillary contacts at DC-13  • at 24 V  • at 60 V  • at 110 V  0 Coperational current of auxillary contacts at DC-13  • at 22 V  • at 120 V  • at 125 V  • at 145 V  • at 150 V  •	number of NC contacts for auxiliary contacts	1
number of CO contacts for auxiliary contacts operational current of auxiliary contacts at AC-15  at 24 V at 110 V 3 A at 120 V 3 A at 125 V 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A	• note	for contactor disconnection
number of CO contacts for auxiliary contacts operational current of auxiliary contacts at AC-15	number of NO contacts for auxiliary contacts	1
operational current of auxillary contacts at AC-15	• note	for message "Tripped"
at 24 V at 110 V at 120 V at 125 V at 230 V at 230 V at 24 O operational current of auxillary contacts at DC-13 at 126 V at 24 V at 60 V at 100 V at 110 V at 110 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 auxillary switch required  contact rating of auxillary contacts according to UL Protective and monitoring functions trip class CLASS 10 design of the overload release  UL/CSA ratings  CUL/CSA ratings  CLASS 10 design of the fuse link at 200 V rated value 57 A at 300 V rated value 57 A st 300 V rated value 57 A st 300 V rated value 57 A st 300 V rated value 58 A st 50 Contactor mounting functions  trip class CLASS 10 design of the fuse link for short-circuit protection of the auxiliary switch required  contact rating of auxiliary switch required  Contactor mounting functions  Tubes of Contactor mounting functions  Tubes of Contactor mounting  fuse gC: 6 A, quick: 10 A required  Contactor mounting  position for main current circuit for auxiliary and control circuit for aux	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 230 V at 400 V porational current of auxiliary contacts at DC-13  at 24 V at 60 V 0.33 A at 110 V 0.22 A at 125 V at 125 V at 220 V design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required  contact rating of auxiliary contacts according to UL Protective and monitoring functions  trip class CLASS 10 design of the overload release  UL/CSA ratings  design of the overload release  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value 57 A 57 A  design of the fuse link of or short-circuit protection  design of the fuse link of or short-circuit protection of the auxiliary switch required  Installation/mounting/ dimensions  mounting position fastening method height width depth Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection of or auxiliary and control circuit arrangement of electrical connectors for main current circuit  arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current circuit arrangement of electrical connectors for main current	• at 120 V	3 A
operational current of auxiliary contacts at DC-13  ot 24 V ot 60 V ot 60 V ot 1110 V ot 122 V ot 1220 V Ot 112 A  design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required Contact rating of auxillary contacts according to UL Protective and monitoring functions trip class	• at 125 V	3 A
e at 24 V 2 e at 60 V 0.3 A 0.22 A e at 125 V 0.22 A e at 125 V 0.22 A e at 125 V 0.11 A  design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required  contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class  design of the overload release  tul/CSA ratings  full-load current (FLA) for 3-phase AC motor e at 480 V rated value 57 A side 50 V rated value 57 A side 60 V rated value 67 FOR 50 FOR The circuit protection  design of the fuse link for short-circuit protection  design of the fuse link for short-circuit protection of the auxiliary switch required  installation/ mounting/ dimensions  mounting position fastening method height width depth 00 mm  width depth 00 mm  forman current circuit for auxiliary and control circuit screw-type terminals for auxiliary and control circuit arrangement of electrical connectors for main current circuit  Top and bottom	• at 230 V	2 A
at 24 V at 60 V bit 10 V at 110 V cat 125 V at 122 V design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required  contact rating of auxiliary contacts according to UL 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 at 480 V rated value at 600 V rated value 57 A Short-circuit protection  design of the fuse link for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method height depth Contactor mounting  product component removable terminal for auxiliary and control circuit for auxiliary and control circuit for auxiliary and control circuit arrangement of electrical connectors for main current circuit Top and bottom	● at 400 V	1 A
at 160 V at 110 V at 1125 V but 125 V cat 220 V  design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class  design of the overload release  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor at 480 V rated value at 480 V rated value at 600 V rated value but 67 A at 600 V rated value at 600 V rated value but 67 A at 600 V rated value but 68 G A, quick: 10 A contact mounting dimensions  mounting position any fastening method but 69 mm  width but 65 mm  Contactor mounting  contact mounting  mounting functions  product component removable terminal for auxiliary and control circuit but 60 or auxiliary and control circuit circuit circuit circuit circuit contection on and buttom  Top and bottom	operational current of auxiliary contacts at DC-13	
e at 110 V e at 125 V e at 220 V Octoor of the miniature circuit breaker for short-circuit protection of the auxiliary switch required Contact rating of auxiliary contacts according to UL Protective and monitoring functions  trip class CLASS 10 design of the overload release UL/CSA ratings  full-load current (FLA) for 3-phase AC motor e at 480 V rated value e 1600 V rated value e 1600 V rated value e 17 A Short-circuit protection  design of the fuse link e for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions  mounting position fastening method Contactor mounting Contacto	● at 24 V	2 A
e at 125 V e at 220 V design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required contact rating of auxiliary contacts according to UL 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 e at 480 V rated value 57 A Short-circuit protection  design of the fuse link for short-circuit protection  design of the fuse link e for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method height 90 mm  width depth 105 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection e for auxiliary and control circuit arrangement of electrical connectors for main current circuit Circuit  Top and bottom	● at 60 V	0.3 A
design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required  contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class  design of the overload release  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor  at 480 V rated value 57 A 55 A	• at 110 V	0.22 A
design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required  contact rating of auxiliary switch required  trip class  CLASS 10  design of the overload release  tul/cost ratings  full-load current (FLA) for 3-phase AC motor  at 480 V rated value  57 A  at 600 V rated value  57 A  Short-circuit protection  design of the fuse link  for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  90 mm  width  55 mm  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  e for main current circuit  errangement of electrical connectors for main current circuit  Top and bottom	● at 125 V	0.22 A
protection of the auxiliary switch required  contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class  design of the overload release  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor  • at 480 V rated value • 57 A  • at 600 V rated value  for short-circuit protection  design of the fuse link • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method height  vidth depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for main current circuit • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  Top and bottom	• at 220 V	0.11 A
trip class  design of the overload release  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor  • at 480 V rated value • at 600 V rated value • for short-circuit protection  design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions  mounting position fastening method height  width depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit arrangement of electrical connectors for main current circuit  Top and bottom		6A (SCC less than equal to 0.5 kA; U less than equal to 260V)
trip class  design of the overload release  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor  • at 480 V rated value • at 600 V rated value • for short-circuit protection  design of the fuse link • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method height  width depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for main current circuit • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  Top and bottom	contact rating of auxiliary contacts according to UL	B600 / R300
design of the overload release  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor  • at 480 V rated value • at 600 V rated value  • at 600 V rated value  57 A  Short-circuit protection  design of the fuse link • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  90 mm  width  55 mm  depth  105 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  Top and bottom	Protective and monitoring functions	
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value • at 600 V rated value • for short-circuit protection  design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions  mounting position fastening method height 90 mm width 55 mm depth 105 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit arrangement of electrical connectors for main current circuit circuit  Top and bottom	trip class	CLASS 10
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value • at 600 V rated value • for short-circuit protection  design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions  mounting position fastening method height 90 mm width 55 mm depth 105 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit arrangement of electrical connectors for main current circuit circuit  Top and bottom	design of the overload release	thermal
full-load current (FLA) for 3-phase AC motor	UL/CSA ratings	
at 480 V rated value  at 600 V rated value  57 A  Short-circuit protection  design of the fuse link  for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method  height  width  depth  Contactor mounting  for main current circuit  for main current circuit  arrangement of electrical connectors for main current circuit  at 657 A  57 A	-	
• at 600 V rated value  Short-circuit protection  design of the fuse link • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method height  width  fuse gG: 6 A, quick: 10 A  Contactor mounting  mounting position  105 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for main current circuit • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  Top and bottom		57 A
design of the fuse link		
design of the fuse link		
for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position     fastening method     height     width     depth     Connections/ Terminals  product component removable terminal for auxiliary and control circuit      for main current circuit     arrangement of electrical connectors for main current circuit      for sand in the auxiliary sand better for auxiliary and bottom  fuse gG: 6 A, quick: 10 A  fuse galleties  fuse gG: 6 A, quick: 10 A  fuse galleties  fuse galle		
mounting position any fastening method Contactor mounting height 90 mm width 55 mm depth 105 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection	for short-circuit protection of the auxiliary switch	fuse gG: 6 A, quick: 10 A
mounting position fastening method Contactor mounting height 90 mm width 55 mm depth 105 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  Top and bottom		
fastening method  height  90 mm  width  55 mm  depth  105 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit  • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  circuit  Contactor mounting  90 mm  No  105 mm  No  Screw-type terminals  screw-type terminals  Top and bottom  Top and bottom		any
height       90 mm         width       55 mm         depth       105 mm         Connections/ Terminals         product component removable terminal for auxiliary and control circuit       No         type of electrical connection       screw-type terminals         for main current circuit       screw-type terminals         arrangement of electrical connectors for main current circuit       Top and bottom		
width     55 mm       depth     105 mm       Connections/ Terminals       product component removable terminal for auxiliary and control circuit       type of electrical connection <ul> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> </ul> screw-type terminals           arrangement of electrical connectors for main current circuit           Top and bottom		·
depth 105 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection		
product component removable terminal for auxiliary and control circuit  type of electrical connection		
product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  Top and bottom	<u> </u>	
type of electrical connection  • for main current circuit  • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  Top and bottom	product component removable terminal for auxiliary	No
<ul> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> <li>arrangement of electrical connectors for main current circuit</li> <li>Screw-type terminals</li> <li>Top and bottom</li> </ul>		
• for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  screw-type terminals  Top and bottom	••	screw-type terminals
arrangement of electrical connectors for main current circuit  Top and bottom		
circuit	<u> </u>	
type of connectable conductor cross-sections	circuit	Top and politing
	type of connectable conductor cross-sections	

<ul> <li>for main contacts</li> </ul>	
<ul> <li>solid or stranded</li> </ul>	2x (1 35 mm²), 1x (1 50 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 25 mm²), 1x (1 35 mm²)
<ul> <li>at AWG cables for main contacts</li> </ul>	2x (18 2), 1x (18 1)
type of connectable conductor cross-sections	
<ul> <li>for auxiliary contacts</li> </ul>	
<ul><li>— solid or stranded</li></ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>at AWG cables for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14)
tightening torque	
<ul> <li>for main contacts with screw-type terminals</li> </ul>	3 4.5 N·m
<ul> <li>for auxiliary contacts with screw-type terminals</li> </ul>	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	
<ul> <li>for main contacts</li> </ul>	M6
<ul> <li>of the auxiliary and control contacts</li> </ul>	M3
Safety related data	
T1 value for proof test interval or service life according to IEC 61508	20 y
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according 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





Confirmation







For use in hazardous locations

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping







Special Test Certificate

Type Test Certificates/Test Report



## Marine / Shipping







LRS







other Railway

<u>Confirmation</u> <u>Special Test Certific-</u>

<u>ate</u>

## 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=3RU2136-4QB0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2136-4QB0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4QB0

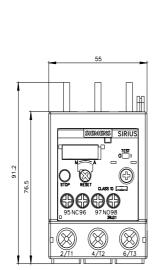
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RU2136-4QB0&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RU2136-4QB0&lang=en</a>

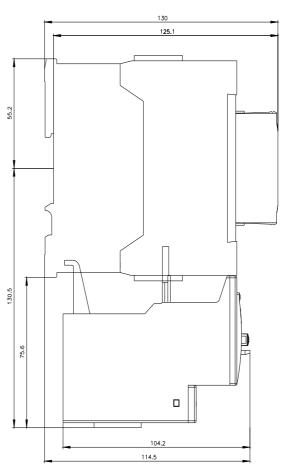
Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4QB0/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2136-4QB0&objecttype=14&gridview=view1





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