SIEMENS

Data sheet

3RU2146-4LB0



Overload relay 70...90 A Thermal For motor protection Size S3, Class 10 Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

¥/13	
product brand name	SIRIUS
product designation	thermal overload relay
product type designation	3RU2
General technical data	
size of overload relay	S3
size of contactor can be combined company-specific	S3
power loss [W] for rated value of the current at AC in hot operating state	21 W
• per pole	7 W
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
maximum permissible voltage for protective separation in networks with grounded star point	
 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 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)	03/01/2017
SVHC substance name	Blei - 7439-92-1
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
 during operation 	-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	70 90 A
operating voltage	
rated value	690 V
 at AC-3e rated value maximum 	1 000 V
operating frequency rated value	50 60 Hz
operational current rated value	90 A
operational current at AC-3e at 400 V rated value	90 A



operating power• at AC-3 at 400 V rated value4500 V rated value55 kW at 690 V rated value75 kW• at 690 V rated value at 70 V	
at 690 V rated value 75 kW • at AC-3e - at 400 V rated value 45 kW at 500 V rated value 55 kW at 690 V rated value 55 kW at 690 V rated value 55 kW at 690 V rated value 75 kW at 690 V rated value 1 at 690 V contacts for auxiliary contacts 0 at 120 V 3 A at 120 V 3 A at 120 V 3 A at 230 V 2 A at 690 V 0.75 A at 690 V 0.3 A at 60 V 0.3 A <tr< th=""><td></td></tr<>	
• at AC-3e- at 400 V rated value45 kW- at 500 V rated value55 kW- at 600 V rated value75 kWAuxiliary circuitintegratedfunder of NC contacts for auxiliary contacts1number of CO contacts for auxiliary contacts1number of CO contacts for auxiliary contacts1number of CO contacts for auxiliary contacts0operational current of auxiliary contacts at AC-151• at 24 V3A• at 110 V3A• at 120 V3A• at 120 V3A• at 120 V3A• at 120 V3A• at 420 V0.75 A• at 420 V0.34 A• at 420 V0.22 A• at 420 V0.	
- at 400 V rated value 45 kW - at 500 V rated value 55 kW - at 690 V rated value 75 kW Auxiliary circuit integrated 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 operational current of auxiliary contacts at AC-15 integrated • at 24 V 3 A • at 110 V 3 A • at 125 V 3 A • at 230 V 2 A • at 690 V 075 A operational current of auxiliary contacts at DC-13 int 24 V • at 690 V 03 A • at 24 V 2 A • at 60 V 0.3 A • at 10 V 0.3 A • at 24 V 2 A • at 60 V 0.3 A • at 10 V 0.22 A • at 10 V 0.22 A • at 10 V </th <td></td>	
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• at 24 V 3 A • at 110 V 3 A • at 120 V 3 A • at 120 V 3 A • at 125 V 3 A • at 230 V 2 A • at 230 V 1 A • at 690 V 0.75 A • at 60 V 2 A • at 60 V 0.3 A • at 60 V 0.3 A • at 10 V 0.22 A • at 10 V 0.22 A • at 125 V 0.22 A • at 220 V 0.11 A • at 220 V 6A (SCC less than equal to 0.5 kA; U less than equal to 260V)	
• 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 • at 690 V 0.75 A • at 690 V 0.75 A • at 24 V 2 A • at 60 V 0.3 A • at 10 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 260Vy	
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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)	
of the auxiliary switch required	
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 3-phase AC motor	
• at 480 V rated value 77 A	
• at 600 V rated value 77 A	
Short-circuit protection	
design of the fuse link	
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	
Installation/ mounting/ dimensions	
mounting position any	
fastening method Contactor mounting	
height 105 mm	
width 70 mm	
depth 125 mm	
Connections/ Terminals product component removable terminal for auxiliary and No	
control circuit	
type of electrical connection	
for main current circuit screw-type terminals	
for auxiliary and control circuit screw-type terminals	
arrangement of electrical connectors for main current Top and bottom	
type of connectable conductor cross-sections	



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 for main contacts 						
 Ior main contacts — solid 			2x (2.5 16 mm²)			
— stranded			2x (2.5 16 mm²), 2x (10 50 mm²), 1x (10 70 mm²)			
— solid or stranded	1		2x (6 16 mm²), 2x (10 50 mm²), 1x (10 70 mm²)			
	vith core end proces	sina	2x (2,5 35 mm²), 1x (2.5 50 mm²)			
 for AWG cables for m 		Joing	2x (2.5 35 mm ²), 1x (2.5 50 mm ²) 2x (10 1/0), 1x (10 2/0)			
type of connectable condu		20	2X (10 1/0), 1X (10 2/0)			
	ictor cross-section	15				
 for auxiliary contacts 	1		0 (0.5	0.5		
 — solid or stranded — finely stranded with core end processing 			2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²)			
			2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)			
for AWG cables for auxiliary contacts			2x (20 16), 2x (18 14)			
tightening torque						
for main contacts for ring cable lug			4.5 6 N·m			
outer diameter of the usable ring cable lug maximum			19 mm			
tightening torque						
 for main contacts with screw-type terminals 			4.5 6 N·m			
 for auxiliary contacts 	with screw-type term	ninals	0.8 1.2 N·m			
design of screwdriver sha	ft		Hexagonal socket			
size of the screwdriver tip			4 mm hexagon socket			
design of the thread of the	connection screw	/				
 for main contacts 			M8			
 of the auxiliary and co 	ontrol contacts		M3			
Safety related data						
T1 value for proof test interv 61508	al or service life acc	cording to IEC	20 a			
protection class IP on the	front according to	IEC 60529	IP20			
touch protection on the fro	ont according to IE	C 60529	finger-safe, for vertical contac	t from the front		
Display						
display version for switching	status		Slide switch			
Approvals Certificates						
General Product Approval						
General Product Approval				For use in hazardou	is locations	
		-		For use in hazardou		
General Product Approval		Ē	rnr	For use in hazardou	is locations	
)	(III)	FAL	For use in hazardou	is locations	
		(Ų)	EAC	For use in hazardou		
		(U) u	EAC	IECE×	IS locations	
Confirmation			EAC	IECEx IECEx	is locations	
		UL UL	ERC	IECE×	IS locations	
Confirmation	CCC	Test Certificate		IECEx IECEx	IS locations	
Confirmation	<u>س</u> ۳		ific- Special Test Certific-	IECEx IECEx	IS locations	
Confirmation Declaration of Conformity	<u>س</u> ۳	Type Test Cert	ific- Special Test Certific-	IECEx IECEx	IS locations	
Confirmation	CCC	Type Test Cert	ific- Special Test Certific-	IECEx IECEx	IS locations	
Confirmation Declaration of Conformity	<u>س</u> ۳	Type Test Cert	ific- Special Test Certific-	IECEx IECEx	IS locations	
Confirmation Declaration of Conformity EG-Konf.	<u>س</u> ۳	Type Test Cert	ific- Special Test Certific-	IECEx IECEx		
Confirmation Declaration of Conformity	<u>س</u> ۳	Type Test Cert	ific- Special Test Certific-	IECEx IECEx	IS locations	
Confirmation Declaration of Conformity EG-Konf.	<u>س</u> ۳	Type Test Cert	ific- Special Test Certific-	IECEx IECEx		
Confirmation Declaration of Conformity EG-Konf.	<u>س</u> ۳	Type Test Cert	ific- Special Test Certific-	IECEx IECEx	ATEX EXAMPLE EXAMPL	
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Confirmation Declaration of Conformity EG-Konf. Marine / Shipping Kailway Special Test Certific-		Type Test Cert	ific- Special Test Certific-	IECEx IECEx	ATEX EXAMPLE EXAMPL	
Confirmation Declaration of Conformity EG-Konf. Marine / Shipping Railway Special Test Certific- ate		Type Test Cert	ific- Special Test Certific-	IECEx IECEx	ATEX EXAMPLE EXAMPL	
Confirmation Declaration of Conformity EG-Konf. Marine / Shipping Kailway Special Test Certific-		Type Test Certi ates/Test Rep	ific- Special Test Certific-	IECEx IECEx	ATEX EXAMPLE EXAMPL	



https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RU2146-4LB0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2146-4LB0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RU2146-4LB0

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

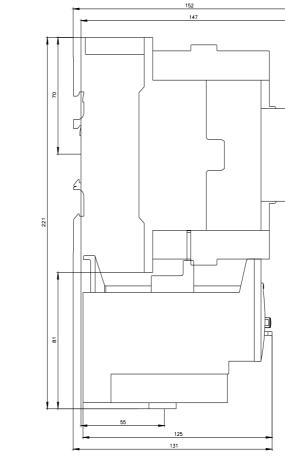
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2146-4LB0&lang=en

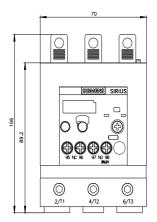
Characteristic: Tripping characteristics, I²t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RU2146-4LB0/char

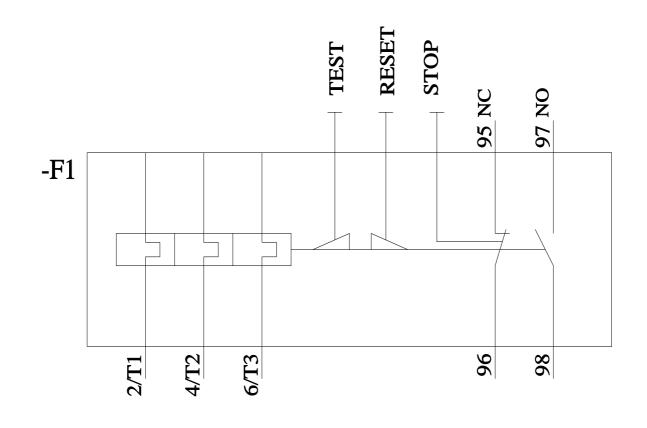
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2146-4LB0&objecttype=14&gridview=view1









last modified:

9/5/2023 🖸

