SIEMENS

Data sheet 3RU2146-4KB0



Overload relay 57...75 A Thermal For motor protection Size S3, 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

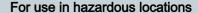
General technical data	
size of overload relay	S3
size of contactor can be combined company-specific	S3
power loss [W] for rated value of the current	
 at AC in hot operating state 	18.9 W
 at AC in hot operating state per pole 	6.3 W
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
maximum permissible voltage for safe isolation	
 in networks with grounded star point between auxiliary and auxiliary circuit 	440 V
 in networks with grounded star point between auxiliary and auxiliary circuit 	440 V
 in networks with grounded star point between main and auxiliary circuit 	440 V

 in networks with grounded star point between main and auxiliary circuit 	440 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
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 acc. to IEC 81346-2	F
Ambient conditions	
• installation altitude at height above sea level	2 000 m
maximum	
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	57 75 A
operating voltage	
• rated value	690 V
at AC-3 rated value maximum	690 V
operating frequency rated value	50 60 Hz
operational current rated value	75 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

operational 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
operational 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	6A (SCC less than equal to 0.5 kA; U less than equal to 260V)
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	65 A
• at 600 V rated value	62 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	fuse gG: 6 A, quick: 10 A
required	
Installation/ mounting/ dimensions	
mounting position	any
fastening method	Contactor mounting
height	105 mm
width	70 mm
depth	125 mm
Connections/ Terminals	
product function	
 removable terminal for auxiliary and control 	No
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
circuit	Top and bottom
type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (2.5 16 mm²)
— stranded	2x (6 16 mm²), 2x (10 50 mm²), 1x (10 70 mm²)
— solid or stranded	2x (2,5 50 mm²), 1x (10 70 mm²)
— finely stranded with core end processing	2x (2.5 35 mm²), 1x (2.5 50 mm²)
at AWG cables for main contacts	2x (10 1/0), 1x (10 2/0)
 type of connectable conductor cross-sections for auxiliary contacts 	
— solid or stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)
— finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 type of connectable conductor cross-sections at 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 terminals 	0.8 1.2 N·m
design of screwdriver shaft	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 control contacts 	M3
Safety related data	
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













IECEx



Declaration of Conformity

Test Certificates

Marine / Shipping



Miscellaneous

Type Test Certificates/Test Report

Special Test Certificate





Railway

Marine / Shipping

Lloyd's Register







Confirmation

other

Special Test Certificate

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=3RU2146-4KB0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2146-4KB0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RU2146-4KB0

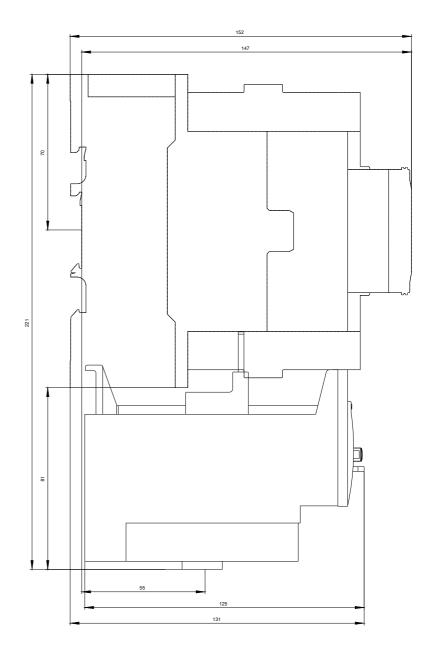
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2146-4KB0&lang=en

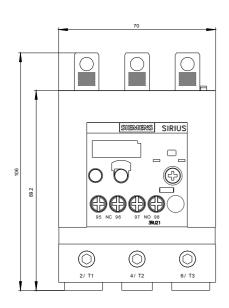
Characteristic: Tripping characteristics, I2t, Let-through current

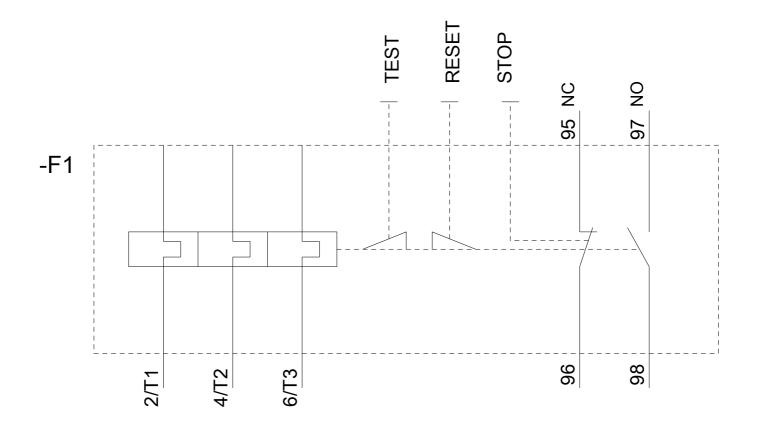
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Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2146-4KB0&objecttype=14&gridview=view1







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