SIEMENS

Data sheet 3RU2126-1KB0



Overload relay 9.0...12.5 A Thermal For motor protection Size S0, 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	S0
size of contactor can be combined company-specific	S0
power loss [W] for rated value of the current at AC in hot operating state	6.6 W
• per pole	2.2 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 protective separation	
 in networks with ungrounded 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 ungrounded star point between main and auxiliary circuit 	440 V
in networks with grounded star point between main and auxiliary circuit	440 V
shock resistance according to IEC 60068-2-27	8g / 11 ms
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	10/01/2009
SVHC substance name	Lead - 7439-92-1
Weight	0.18 kg
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 %
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	56.6 kg
global warming potential [CO2 eq] during manufacturing	1.21 kg
global warming potential [CO2 eq] during sales	0.047 kg
global warming potential [CO2 eq] during operation	55.4 kg
global warming potential [CO2 eq] after end of life	-0.027 kg
Main circuit	
number of poles for main current circuit	3

adjustable current response value current of the current-	9 12.5 A
dependent overload release	
operating voltage	
rated value	690 V
at AC-3e rated value maximum	690 V
operating frequency rated value	50 60 Hz
operational current rated value	12.5 A
operational current at AC-3e at 400 V rated value	12.5 A
operating power	
• at AC-3	
— at 400 V rated value	5.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	7.5 kW
• at AC-3e	
— at 400 V rated value	5.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	7.5 kW
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	1A
• at 690 V	0.75 A
operational current of auxiliary contacts at DC-13	0.73 A
•	0.4
• 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
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	12.5 A
at 400 V rated value at 600 V rated value	12.5 A
Short-circuit protection	12.07
design of the fuse link	f
for short-circuit protection of the auxiliary switch required	fuse gG: 6 A, quick: 10 A
Installation/ mounting/ dimensions	
mounting position	for mounting on contactors: with a vertical mounting plane +/-135° rotatable & +/- 22.5° tiltable, stand-alone installation: with a vertical mounting plane +/-135° rotatable and +/-45° tiltable; for more details see manual
fastening method	Contactor mounting
height	85 mm
width	45 mm
depth	85 mm
Connections/ Terminals	
product component removable terminal for auxiliary and	No
control circuit	
type of electrical connection • for main current circuit	screw-type terminals
▼ IOL HIGH GUITZH GIRGUI	acress-type reminals

arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections	for auxiliary and control circuit	screw-type terminals
• for main contacts — solid or stranded — finely stranded with core end processing — for AWG cables for main contacts type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — for AWG cables for auxiliary contacts — solid or stranded with core end processing — for AWG cables for auxiliary contacts 2 x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) — for AWG cables for auxiliary contacts 2 x (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 — for main contacts — with screw-type terminals — for the 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 — M4 — of the auxiliary and control contacts — M3 Safety related data failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate — 2 280 a IEC 61508 T1 value — for proof test interval or service life according to IEC 60529 — ouch procection class IP on the front according to IEC 60529 Figure-safe, for vertical contact from the front Display display version for switching status Slide switch	arrangement of electrical connectors for main current	21
- solid or stranded - finely stranded with core end processing 2x (1 2.5 mm²), 2x (2.5 10 mm²) • for AWG cables for main contacts 2x (0.5 15 mm²), 2x (2.5 6 mm²), 1x 10 mm² • 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) - finely stranded with core end processing 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 amin contacts with screw-type terminals 2 2.5 N·m • 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 MM3 **Safety related data** failure rate [FIT] with low demand rate according to SN 31920 **Ti value** • for proof test interval or service life according to IEC 60529 Flooring Safety protection class IP on the front according to IEC 60529 Flooring Safety protection class IP on the front according to IEC 60529 finger-safe, for vertical contact from the front 5 witching status Slide switch	type of connectable conductor cross-sections	
- finely stranded with core end processing	• for main contacts	
for AWG cables for main contacts type of connectable conductor cross-sections if or auxiliary contacts	— solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
type of connectable conductor cross-sections	 finely stranded with core end processing 	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
• for auxiliary contacts — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts • for AWG cables 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 auxiliary contacts with screw-type terminals • for auxiliary contacts with screw-type terminals • for screwdriver shaft Diameter 5 6 mm size of the screwdriver tip design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts M4 • of the auxiliary and control contacts M3 Safety related data failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate • for proof test interval or service life according to IEC 61508 T1 value • for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 protection class IP on the front according to IEC 60529 finger-safe, for vertical contact from the front Bisplay display version for switching status Slide switch	 for AWG cables for main contacts 	2x (16 12), 2x (14 8)
- 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) • for AWG cables for auxiliary contacts 2x (20 16), 2x (18 14) tightening torque • for main contacts with screw-type terminals 2 2.5 N·m • 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 M4 • of the auxiliary and control contacts M3 Safety related data failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate 2 280 a IEC 61508 T1 value • for proof test interval or service life according to IEC 61529 Electrical Safety protection class IP on the front according to IEC 60529 finger-safe, for vertical contact from the front Display display version for switching status Slide switch	type of connectable conductor cross-sections	
- finely stranded with core end processing • for AWG cables for auxiliary contacts 2x (20 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 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 failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate 2 280 a IEC 61508 T1 value • for proof test interval or service life according to IEC 60529 Flortical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 display version for switching status Slide switch	 for auxiliary contacts 	
• for AWG cables 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 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 M3 Safety related data failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate • for proof test interval or service life according to IEC 61508 T1 value • for proof test interval or service life according to IEC 61508 Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 display version for switching status Slide switch	— solid or 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 M3 Safety related data failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate 2 280 a IEC 61508 T1 value • for proof test interval or service life according to IEC 61508 Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 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 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 M4 of the auxiliary and control contacts M3 Safety related data failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate 2 280 a IEC 61508 T1 value for proof test interval or service life according to IEC 61508 Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 display version for switching status Slide switch	for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14)
• for auxiliary contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts M4 • of the auxiliary and control contacts M3 Safety related data failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate 1 2 280 a IEC 61508 T1 value • for proof test interval or service life according to IEC 61508 Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 display version for switching status Slide switch	tightening torque	
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size of the screwdriver tip design of the thread of the connection screw of the auxiliary and control contacts failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate for proof test interval or service life according to IEC 61508 T1 value of or proof test interval or service life according to IEC 61508 Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 display version for switching status 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 failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate 2 280 a IEC 61508 T1 value • for proof test interval or service life according to IEC 61508 Electrical Safety protection class IP on the front according to IEC 60529 finger-safe, for vertical contact from the front Display display version for switching status M4 M4 M4 A4 A4 A4 A4 A4 A4 A4	design of screwdriver shaft	Diameter 5 6 mm
of the auxiliary and control contacts of the auxiliary and control contacts Safety related data failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate 12 280 a IEC 61508 T1 value of or proof test interval or service life according to IEC 61508 Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 display version for switching status M4 M3 So FIT 30 A 10 B 10 B 10 B 11 B 12 B 13 B 14 B 15 B 16 B 17 B 18 B	size of the screwdriver tip	Pozidriv PZ 2
of the auxiliary and control contacts Safety related data failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate 2 280 a IEC 61508 T1 value • for proof test interval or service life according to IEC 61508 Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 display version for switching status M3 Substitute 50 FIT 2 280 a 1P20 1P20 IP20 Inger-safe, for vertical contact from the front Slide switch	design of the thread of the connection screw	
failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate 2 280 a IEC 61508 T1 value • for proof test interval or service life according to IEC 61508 Electrical Safety 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	• for main contacts	M4
failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate 2 280 a IEC 61508 T1 value • for proof test interval or service life according to IEC 61508 Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 display version for switching status 50 FIT 50 FIT 10 FIT 10 FIT 11 FIT 12 P20 13 FIT 13 FIT 14 FIT 15 FIT 16 FIT 17 FIT 18 FIT 18 FIT 18 FIT 18 FIT 18 FIT 18 FIT 19 FIT 19 FIT 20 FIT 21 FIT 21 FIT 22 FIT 31 FIT 42 FIT 43 FIT 44 FIT 45 FIT 46 FIT 47 FIT 47 FIT 48	 of the auxiliary and control contacts 	M3
MTTF with high demand rate □ 2 280 a □ EC 61508 T1 value □ for proof test interval or service life according to IEC 61508 □ Electrical Safety □ protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 60529 display version for switching status Slide switch	Safety related data	
IEC 61508 T1 value		50 FIT
T1 value • for proof test interval or service life according to IEC 61508 Electrical Safety protection class IP on the front according to IEC 60529 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	MTTF with high demand rate	2 280 a
for proof test interval or service life according to IEC 61508 Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front Display display version for switching status 20 a 20 a Electrical Safety IP20 finger-safe, for vertical contact from the front Slide switch	IEC 61508	
Electrical Safety protection class IP on the front according to IEC 60529 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	T1 value	
protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 Display display version for switching status IP20 finger-safe, for vertical contact from the front Slide switch		20 a
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	Electrical Safety	
Display display version for switching status Slide switch	protection class IP on the front according to IEC 60529	IP20
display version for switching status Slide switch	touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
• •	Display	
Approvals Certificates	display version for switching status	Slide switch
	Approvals Certificates	



General Product Approval











For use in hazard-

ous locations

For use in hazardous locations

Test Certificates

Maritime application



Miscellaneous

Type Test Certificates/Test Report

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





Maritime application











Miscellaneous

other

other Railway Environment





Further information

Information on the packaging

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

Information for data generation and storage

https://support.industry.siemens.com/cs/ww/en/view/109995012

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=3RU2126-1KB0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2126-1KB0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RU2126-1KB0

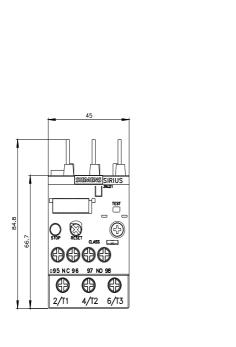
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2126-1KB0&lang=en

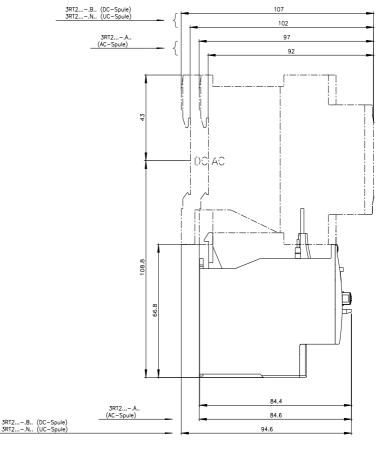
Characteristic: Tripping characteristics, I2t, Let-through current

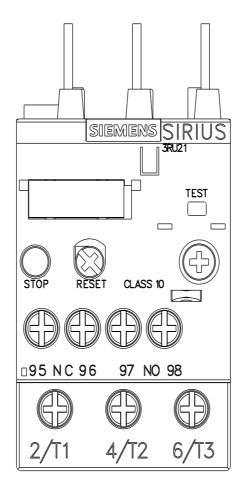
https://support.industry.siemens.com/cs/ww/en/ps/3RU2126-1KB0/char

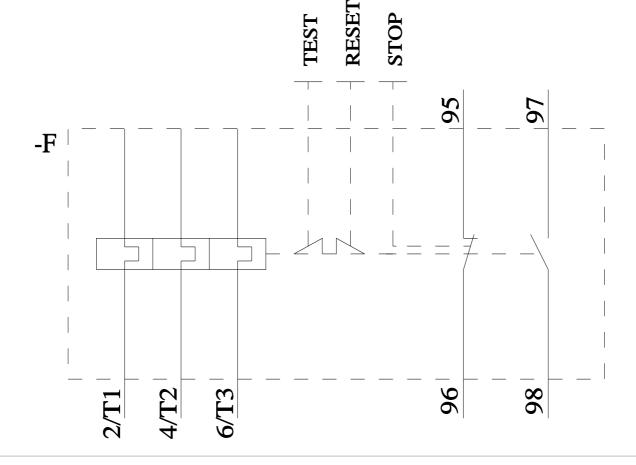
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2126-1KB0&objecttype=14&gridview=view1









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