

Siemens  
EcoTech



monitoring relay phase sequence monitoring 3x 160-690 V AC, 15-70 Hz 1  
changeover contact screw terminal

product brand name	SIRIUS
product designation	Line monitoring relay
design of the product	monitoring of phase sequence
product type designation	3UG5
<b>General technical data</b>	
product function	line monitoring
display version LED	Yes
design of the display	LED
power loss [W] maximum	1.8 W
power loss [V·A] maximum	5.1 VA
insulation voltage for overvoltage category III according to IEC 60664	
• with degree of pollution 2 rated value	690 V
• with degree of pollution 3 rated value	690 V
degree of pollution	3
type of voltage	
• for monitoring	AC
• of the operating voltage for actuation	AC/DC
surge voltage resistance rated value	6 kV
shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15 g / 11 ms
vibration resistance according to IEC 60068-2-6	10 ... 55 Hz: 0.35 mm
switching behavior	monostable
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) at AC-15 at 230 V typical	100 000
thermal current of the switching element with contacts maximum	5 A
reference code according to IEC 81346-2	K
Substance Prohibitance (Date)	06/01/2023
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
Net Weight	0.16 kg
<b>Product Function</b>	
product function	
• undervoltage detection	No

<ul style="list-style-type: none"> <li>• overvoltage detection</li> <li>• phase sequence recognition</li> <li>• phase failure detection</li> </ul>	No
	Yes
	No; available but limited, detection is problematic with high levels of regenerative power recovery
<ul style="list-style-type: none"> <li>• asymmetry detection</li> </ul>	No; not adjustable, indirectly by monitoring the voltage limit values
<ul style="list-style-type: none"> <li>• overcurrent detection 1 phase</li> <li>• overvoltage detection 3 phase</li> <li>• undercurrent detection 1 phase</li> <li>• undervoltage detection 3 phases</li> <li>• voltage window recognition 3 phase</li> <li>• adjustable open/closed-circuit current principle</li> <li>• auto-RESET</li> <li>• neutral conductor monitoring adjustable</li> </ul>	No
	No
	No
	No
	No
	No
	No
	No
	Yes
	No
suitability for use safety-related circuits	No
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	AC
<b>control supply voltage 1 at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	200 ... 690 V
	200 ... 690 V
<b>control supply voltage at DC rated value</b>	160 V
<b>operating range factor control supply voltage rated value at AC at 50 Hz</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	0.85
	1.1
<b>operating range factor control supply voltage rated value at AC at 60 Hz</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	0.85
	1.1
<b>Supply voltage</b>	
supply voltage frequency rated value	70 ... 15 Hz
<b>Interfaces</b>	
design of the interface bluetooth	No
<b>Measuring circuit</b>	
<b>measurable voltage 1 at AC</b>	160 ... 760 V
<b>measurable voltage 2 at AC</b>	160 ... 760 V
<b>adjustable response delay time</b>	
<ul style="list-style-type: none"> <li>• when starting</li> <li>• with lower or upper limit violation</li> </ul>	0.1 s
	0.1 s
<b>buffering time in the event of power failure minimum</b>	20 ms
<b>response time maximum</b>	500 ms
<b>Short-circuit protection</b>	
<b>design of the fuse link</b>	
<ul style="list-style-type: none"> <li>• for short-circuit protection of the NO contacts of the relay outputs required</li> <li>• for short circuit protection of the NC contacts of the relay outputs required</li> </ul>	gL/gG: 6 A or MCB type C: 1 A
	gL/gG: 6 A or MCB type C: 1 A
<b>Communication/ Protocol</b>	
protocol is supported IO-Link protocol	No
<b>type of voltage supply via input/output link master</b>	No
<b>Auxiliary circuit</b>	
<b>material of switching contacts</b>	AgSnO2
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
<b>number of CO contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> <li>• delayed switching</li> </ul>	1
	0
<b>operating frequency with 3RT2 contactor maximum</b>	5 000 1/h
<b>contact reliability of auxiliary contacts</b>	one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
<b>contact rating of auxiliary contacts according to UL</b>	R300 / B300

Main circuit	
number of poles for main current circuit	3
ampacity of the output relay at AC-15	
• at 250 V at 50/60 Hz	3 A
• at 400 V at 50/60 Hz	3 A
ampacity of the output relay at DC-13	
• at 24 V	1 A
• at 110 V	0.2 A
• at 125 V	0.2 A
• at 230 V	0.1 A
• at 250 V	0.1 A
operational current at 17 V minimum	5 mA
continuous current of the DIAZED fuse link of the output relay	6 A
Electromagnetic compatibility	
EMC emitted interference according to IEC 60947-1	class A
conducted interference	
• due to burst according to IEC 61000-4-4	2 kV (power ports), 2 kV (signal ports)
• due to conductor-earth surge according to IEC 61000-4-5	2 kV
• due to conductor-conductor surge according to IEC 61000-4-5	1 kV
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
Galvanic isolation	
design of the electrical isolation	galvanic isolation
galvanic isolation	
• between input and output	Yes
• between the voltage supply and other circuits	Yes
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
Connections/ Terminals	
product component removable terminal for main circuit	Yes
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	screw terminal
design of terminals with cross-head screw	PZ 1
type of connectable conductor cross-sections	
• solid	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
• finely stranded with core end processing	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
• for AWG cables solid	1x (20 ... 12), 2x (20 ... 14)
connectable conductor cross-section	
• solid	0.5 ... 4 mm <sup>2</sup>
• finely stranded with core end processing	0.5 ... 4 mm <sup>2</sup>
AWG number as coded connectable conductor cross section	
• solid	20 ... 12
• stranded	20 ... 12
tightening torque with screw-type terminals	0.6 ... 0.8 N·m
stripped length	10 mm
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail
height	100 mm
width	22.5 mm
depth	90 mm
required spacing	
• with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm

— downwards	0 mm
— at the side	0 mm
• for grounded parts	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— at the side	0 mm
— downwards	0 mm
• for live parts	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm

#### Ambient conditions

installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
relative humidity during operation maximum	70 %

#### Approvals Certificates

Environmental Product Declaration	
• global warming potential [CO2 eq] / during manufacturing	5.65 kg
• global warming potential [CO2 eq] / during sales	0.0387 kg
• global warming potential [CO2 eq] / during operation	12.3 kg
• global warming potential [CO2 eq] / after end of life	-0.0297 kg
• global warming potential [CO2 eq] / total	18 kg

#### Environment General Product Approval



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[Environmental Con-  
firmations](#)



#### General Product Ap- proval EMV Test Certificates other



[Type Test Certific-  
ates/Test Report](#)

[Confirmation](#)



#### 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=3UG5511-1AR20>

Cax online generator

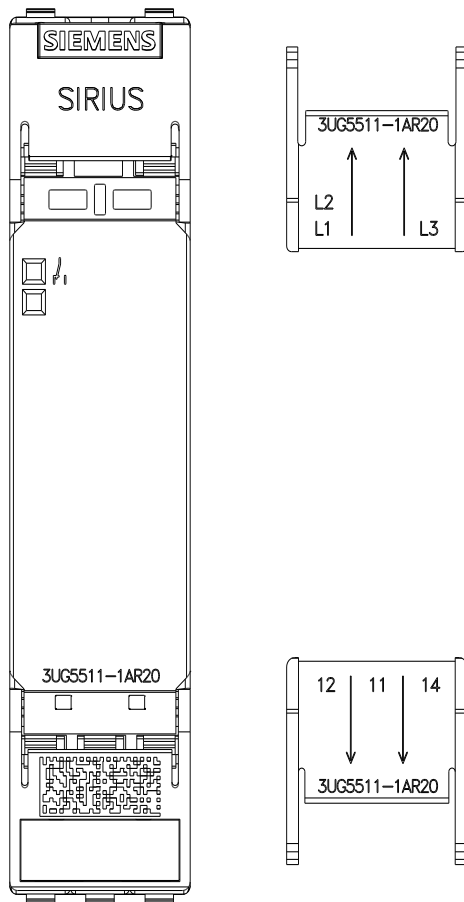
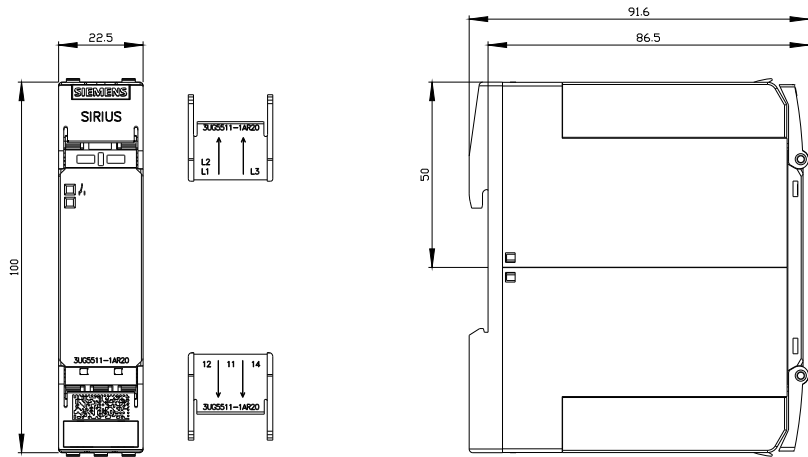
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5511-1AR20>

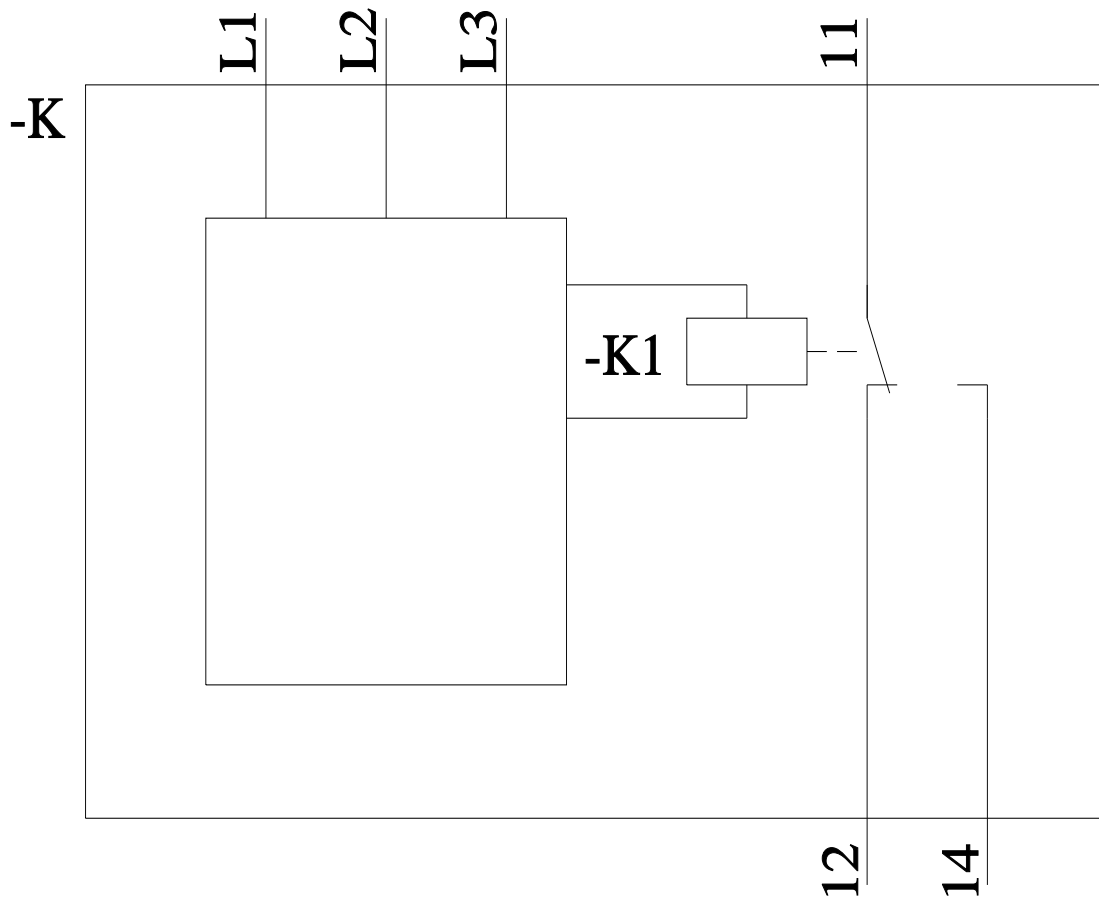
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3UG5511-1AR20>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG5511-1AR20&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5511-1AR20&lang=en)





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