



digitally adjustable monitoring relay phase failure, phase sequence, asymmetry, frequency, over- and under-voltage monitoring with phase sequence correction 3x 90-690 V AC, 15-70 Hz 2 changeover contacts screw terminal SIL 1/PL c

product brand name	SIRIUS
product designation	Network monitoring relay with digital setting
design of the product	automatic correction of the direction of rotation in case of wrong phase sequence, phase failure, with/without N conductor failure, asymmetry, frequency, overvoltage/undervoltage for safety applications
product type designation	3UG5
<b>General technical data</b>	
product function	line monitoring
display version LED	No
design of the display	LCD
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
• of the control supply voltage	AC
surge voltage resistance rated value	6 kV
protection class IP	IP20
shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15g / 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
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
<b>Product Function</b>	
product function	
• undervoltage detection	Yes
• overvoltage detection	Yes
• phase sequence recognition	Yes
• phase failure detection	Yes; available but limited, detection is problematic with high levels of regenerative power recovery
• asymmetry detection	Yes
• overvoltage detection 3 phase	Yes
• undervoltage detection 3 phases	Yes
• voltage window recognition 3 phase	Yes

• adjustable open/closed-circuit current principle	Yes
• auto-RESET	Yes
suitability for use safety-related circuits	Yes
<b>Control circuit/ Control</b>	
<b>control supply voltage at AC</b>	
• at 50 Hz rated value	200 ... 690 V
• at 60 Hz rated value	200 ... 690 V
<b>operating range factor control supply voltage rated value at AC at 50 Hz</b>	
• initial value	0.85
• full-scale value	1.1
<b>operating range factor control supply voltage rated value at AC at 60 Hz</b>	
• initial value	0.85
• full-scale value	1.1
<b>Supply voltage</b>	
supply voltage frequency rated value	70 ... 15 Hz
<b>Measuring circuit</b>	
<b>measurable voltage at AC</b>	160 ... 760 V
<b>adjustable response delay time</b>	
• when starting	0.1 ... 30 s
• with lower or upper limit violation	0.1 ... 30 s
<b>buffering time in the event of power failure minimum</b>	20 ms
<b>accuracy of digital display</b>	+/-1 digit
<b>Short-circuit protection</b>	
design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required	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>	
• for auxiliary contacts	2
• delayed switching	1
<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
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	4
<b>ampacity of the output relay at AC-15</b>	
• at 250 V at 50/60 Hz	3 A
• at 400 V at 50/60 Hz	3 A
<b>ampacity of the output relay at DC-13</b>	
• 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
<b>operational current at 17 V minimum</b>	5 mA
<b>continuous current of the DIAZED fuse link of the output relay</b>	6 A
<b>Electromagnetic compatibility</b>	
EMC emitted interference according to IEC 60947-1	class A
<b>conducted interference</b>	
• 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
<b>Galvanic isolation</b>	
design of the electrical isolation	galvanic isolation
galvanic isolation	
• between input and output	Yes
• between the outputs	Yes
• between the voltage supply and other circuits	Yes
<b>Safety related data</b>	
Safety Integrity Level (SIL) according to IEC 61508	SIL 1
performance level (PL) according to EN ISO 13849-1	c
<b>Connections/ Terminals</b>	
product component removable terminal for main circuit	Yes
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	screw-type terminals
type of connectable conductor cross-sections	
• solid	1x (0.5 ... 4.0 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
<b>Installation/ mounting/ dimensions</b>	
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
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
relative humidity during operation	70 %
<b>Certificates/ approvals</b>	

## Further information

Siemens has decided to exit the Russian market (see here).

<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=3UG5618-1CR21>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5618-1CR21>

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

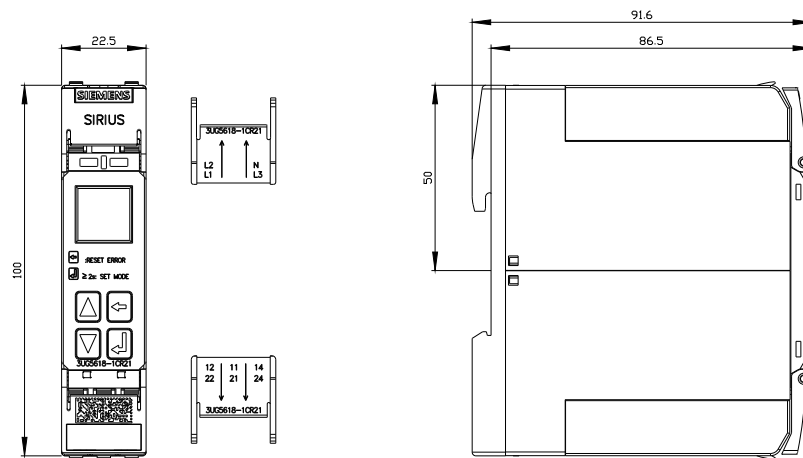
<https://support.industry.siemens.com/cs/ww/en/ps/3UG5618-1CR21>

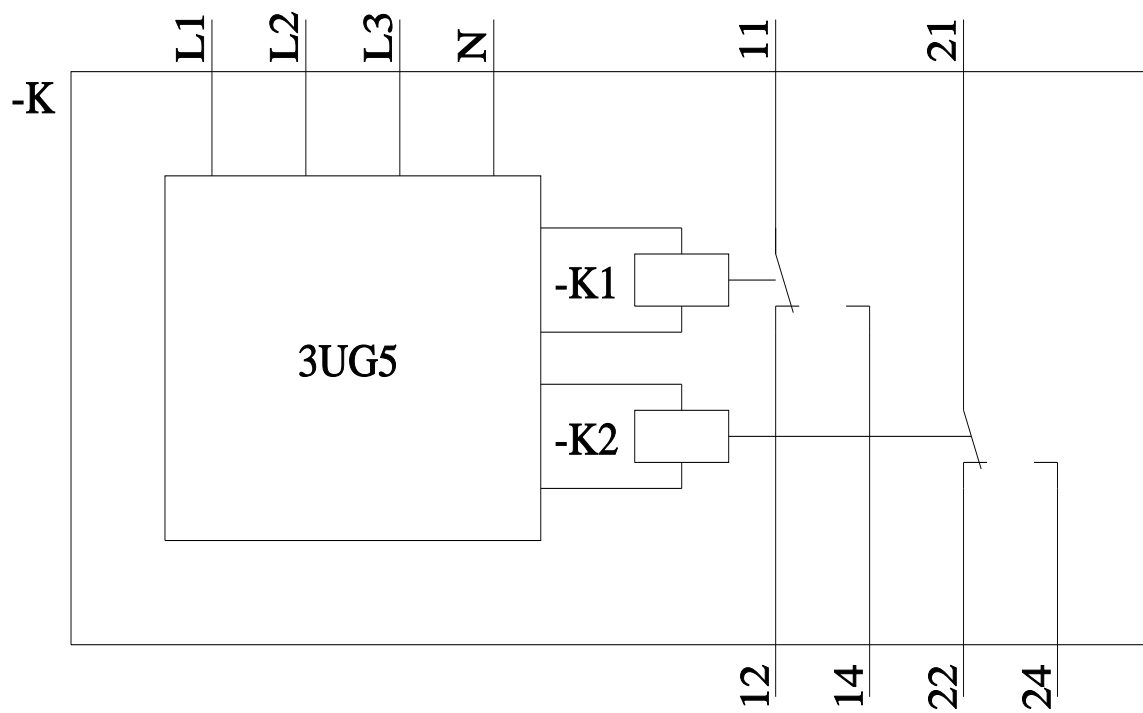
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG5618-1CR21&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5618-1CR21&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG5618-1CR21/manual>





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