



Figure similar

Analog monitoring relay Phase failure and sequence 3 x 160...690 V  
50...60 Hz AC 1 change-over contact screw terminal

**product brand name**  
**product designation**  
**design of the product**  
**product type designation**

SIRIUS  
Network monitoring relay with analog setting  
2 functions  
3UG4

### General technical data

**product function**  
**display version LED**  
**insulation voltage for overvoltage category III according to IEC 60664**  
• with degree of pollution 3 rated value  
**degree of pollution**  
**type of voltage**  
• for monitoring  
• of the control supply voltage  
**surge voltage resistance rated value**  
**protection class IP**  
**shock resistance according to IEC 60068-2-27**  
**vibration resistance according to IEC 60068-2-6**  
**mechanical service life (operating cycles) typical**  
**electrical endurance (operating cycles) at AC-15 at 230 V typical**  
**thermal current of the switching element with contacts maximum**  
**reference code according to IEC 81346-2**  
**relative repeat accuracy**  
**Substance Prohibitance (Date)**

Phase monitoring relay  
Yes  
  
690 V  
3  
  
AC  
AC  
6 kV  
IP20  
sinusoidal half-wave 15g / 11 ms  
1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g  
10 000 000  
100 000  
5 A  
K  
1 %  
05/01/2012

### Product Function

**product function**  
• undervoltage detection  
• overvoltage detection  
• phase sequence recognition  
• phase failure detection  
• asymmetry detection  
• overvoltage detection 3 phase  
• undervoltage detection 3 phases  
• voltage window recognition 3 phase  
• adjustable open/closed-circuit current principle  
• auto-RESET

No  
No  
Yes  
Yes  
No  
No  
No  
No  
No  
Yes

### Control circuit/ Control

**control supply voltage at AC**  
• at 50 Hz rated value

160 ... 690 V

<ul style="list-style-type: none"> <li>• at 60 Hz rated value</li> </ul>	160 ... 690 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> </ul>	1
<ul style="list-style-type: none"> <li>• full-scale value</li> </ul>	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> </ul>	1
<ul style="list-style-type: none"> <li>• full-scale value</li> </ul>	1
<b>Measuring circuit</b>	
<b>measurable voltage at AC</b>	160 ... 690 V
<b>Auxiliary circuit</b>	
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> </ul>	1
<ul style="list-style-type: none"> <li>• delayed switching</li> </ul>	1
<b>operating frequency with 3RT2 contactor maximum</b>	5 000 1/h
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	3
<b>ampacity of the output relay at AC-15</b>	
<ul style="list-style-type: none"> <li>• at 250 V at 50/60 Hz</li> </ul>	3 A
<ul style="list-style-type: none"> <li>• at 400 V at 50/60 Hz</li> </ul>	3 A
<b>ampacity of the output relay at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> </ul>	1 A
<ul style="list-style-type: none"> <li>• at 125 V</li> </ul>	0.2 A
<ul style="list-style-type: none"> <li>• at 250 V</li> </ul>	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>	4 A
<b>Electromagnetic compatibility</b>	
<b>conducted interference</b>	
<ul style="list-style-type: none"> <li>• due to burst according to IEC 61000-4-4</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>• due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>• due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	1 kV
<b>field-based interference according to IEC 61000-4-3</b>	10 V/m
<b>electrostatic discharge according to IEC 61000-4-2</b>	6 kV contact discharge / 8 kV air discharge
<b>Galvanic isolation</b>	
<b>galvanic isolation</b>	
<ul style="list-style-type: none"> <li>• between input and output</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• between the outputs</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• between the voltage supply and other circuits</li> </ul>	Yes
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<b>type of electrical connection</b>	screw-type terminals
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• finely stranded with core end processing</li> </ul>	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• at AWG cables solid</li> </ul>	2x (20 ... 14)
<ul style="list-style-type: none"> <li>• at AWG cables stranded</li> </ul>	2x (20 ... 14)
<b>connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	0.5 ... 4 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• finely stranded with core end processing</li> </ul>	0.5 ... 2.5 mm <sup>2</sup>
<b>AWG number as coded connectable conductor cross section</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	20 ... 14
<ul style="list-style-type: none"> <li>• stranded</li> </ul>	20 ... 14
tightening torque with screw-type terminals	0.8 ... 1.2 N·m
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any

<b>fastening method</b>	snap-on mounting
<b>height</b>	83 mm
<b>width</b>	22.5 mm
<b>depth</b>	91 mm
<b>required spacing</b>	
• 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

#### Certificates/ approvals

<b>General Product Approval</b>	<b>EMC</b>	<b>Declaration of Conformity</b>
---------------------------------	------------	----------------------------------

[Confirmation](#)



<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>Marine / Shipping</b>	<b>other</b>
----------------------------------	--------------------------	--------------------------	--------------



EG-Konf.

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



LRS



DNV-GL

[Confirmation](#)

#### Railway

[Vibration and Shock](#)

#### 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=3UG4512-1AR20>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4512-1AR20>

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

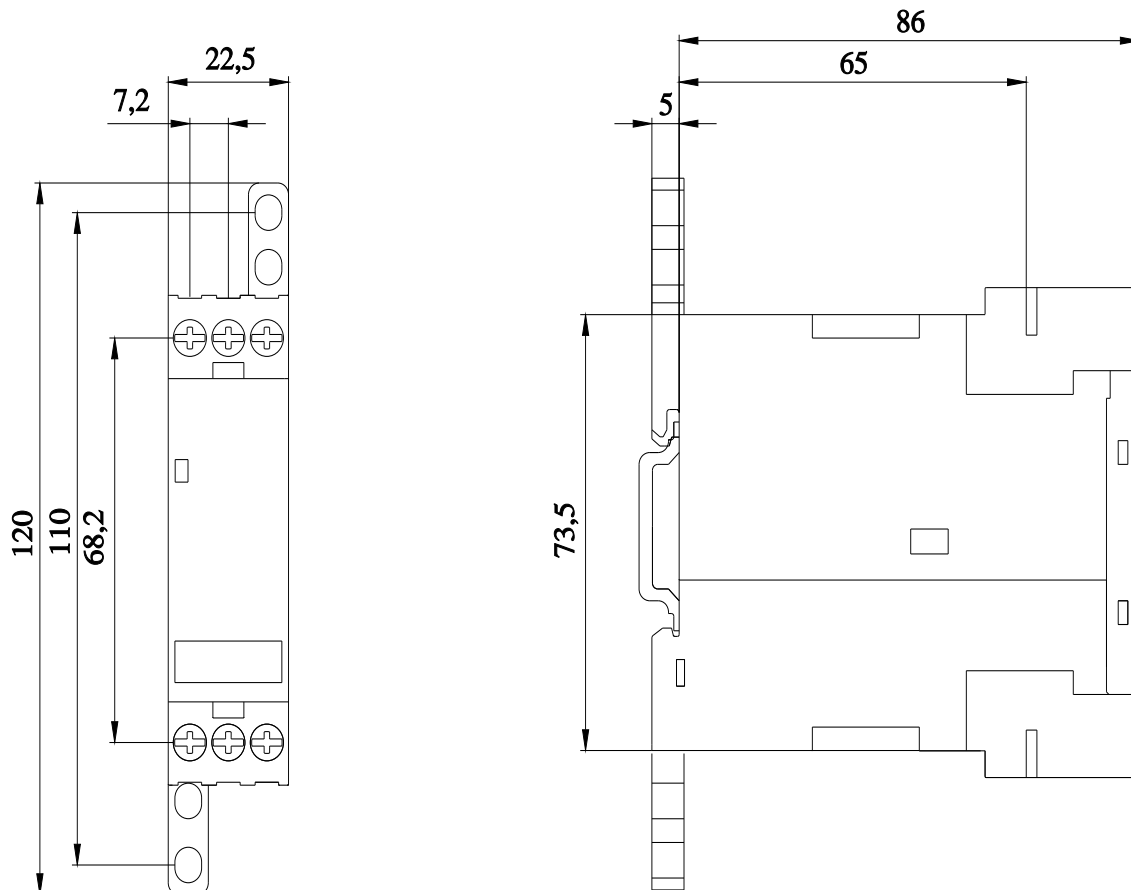
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4512-1AR20>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4512-1AR20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4512-1AR20&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4512-1AR20/manual>



last modified:

3/22/2023 