

Siemens  
EcoTech



digital monitoring relay current, active current, voltage, cos-phi and performance monitoring 90 to 690 V AC/DC with internal power supply 0.05 to 10 A 24 ... 240 V AC/DC, 50 .. 60 Hz ON delay and tripping delay 0.1..999.9 s 2 changeover contacts spring-loaded terminal

product brand name	SIRIUS
product designation	Network monitoring relay with digital setting
design of the product	monitoring of current, active current, voltage, power factor and power, internally powered without auxiliary voltage
product type designation	3UG5
<b>General technical data</b>	
product function	network monitoring relay with digital setting
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
surge voltage resistance rated value	6 kV
shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
vibration resistance according to IEC 60068-2-6	f = 4 ... 5,81 Hz, dmax = 15 mm; f = 5,81 ... 500 Hz, Amax = 20 m/s <sup>2</sup> ; 10 cycles
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 - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
Net Weight	0.169 kg
<b>Product Function</b>	
product function	
• overcurrent detection 1 phase	Yes
• undercurrent detection 1 phase	Yes
• adjustable open/closed-circuit current principle	Yes
• auto-RESET	Yes
• manual RESET	Yes
<b>Control circuit/ Control</b>	
type of voltage of the control supply voltage	AC
control supply voltage rated value	90 ... 690 V
control supply voltage at AC	

<ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> </ul>	90 ... 690 V
<ul style="list-style-type: none"> <li>• at 60 Hz rated value</li> </ul>	90 ... 690 V
<b>control supply voltage at DC rated value</b>	90 ... 690 V
<b>supply voltage frequency for auxiliary and control circuit rated value</b>	50 ... 60 Hz
<b>operating range factor control supply voltage rated value at DC</b>	
<ul style="list-style-type: none"> <li>• initial value</li> </ul>	0.85
<ul style="list-style-type: none"> <li>• full-scale value</li> </ul>	1.1
<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>	0.85
<ul style="list-style-type: none"> <li>• full-scale value</li> </ul>	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> </ul>	0.85
<ul style="list-style-type: none"> <li>• full-scale value</li> </ul>	1.1
<b>Supply voltage</b>	
supply voltage frequency rated value	70 ... 15 Hz
<b>Measuring circuit</b>	
<b>type of current for monitoring</b>	AC/DC
<b>measurable current</b>	0.05 ... 10 A
<b>measurable voltage at AC</b>	76 ... 760 V
<b>adjustable current response value current limited to 5 s</b>	15 A
<b>adjustable response delay time</b>	
<ul style="list-style-type: none"> <li>• when starting</li> </ul>	0 ... 999.9 s
<ul style="list-style-type: none"> <li>• with lower or upper limit violation</li> </ul>	0 ... 999.9 s
<b>adjustable switching hysteresis for measured current value</b>	0 ... 5 000 mA
<b>accuracy of digital display</b>	+/-1 digit
<b>Communication/ Protocol</b>	
protocol is supported IO-Link protocol	No
<b>Auxiliary circuit</b>	
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
number of CO contacts delayed switching	2
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	1
operating voltage rated value	90 ... 690 V
<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>	6 A
<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>	spring-loaded terminal (push-in)
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	1x (0.5 ... 4 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> )

<ul style="list-style-type: none"> <li>finely stranded without core end processing</li> <li>for AWG cables solid</li> <li>for AWG cables stranded</li> </ul>	<p>0.5 ... 4 mm<sup>2</sup></p> <p>1x (20 ... 12)</p> <p>20 ... 12</p>
<b>connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>solid</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul>	<p>0.5 ... 4 mm<sup>2</sup></p> <p>0.5 ... 2.5 mm<sup>2</sup></p> <p>0.5 ... 4 mm<sup>2</sup></p>
<b>AWG number as coded connectable conductor cross section</b> <ul style="list-style-type: none"> <li>solid</li> <li>stranded</li> </ul>	<p>20 ... 12</p> <p>20 ... 12</p>

**Installation/ mounting/ dimensions**

<b>mounting position</b>	any
<b>fastening method</b>	screw and snap-on mounting
<b>height</b>	100 mm
<b>width</b>	22.5 mm
<b>depth</b>	90 mm
<b>required spacing</b> <ul style="list-style-type: none"> <li>with side-by-side mounting <ul style="list-style-type: none"> <li>forwards</li> <li>backwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> </ul> </li> <li>for grounded parts <ul style="list-style-type: none"> <li>forwards</li> <li>backwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> </ul> </li> <li>for live parts <ul style="list-style-type: none"> <li>forwards</li> <li>backwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> </ul> </li> </ul>	<p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p>

**Ambient conditions**

installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b> <ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> <li>during transport</li> </ul>	<p>-25 ... +60 °C</p> <p>-40 ... +80 °C</p> <p>-40 ... +80 °C</p>

**Approvals Certificates**

<b>Environment</b>	<b>General Product Approval</b>
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[Environmental Confirmations](#)



<b>General Product Approval</b>	other
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[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=3UG5643-2CS20>

Cax online generator

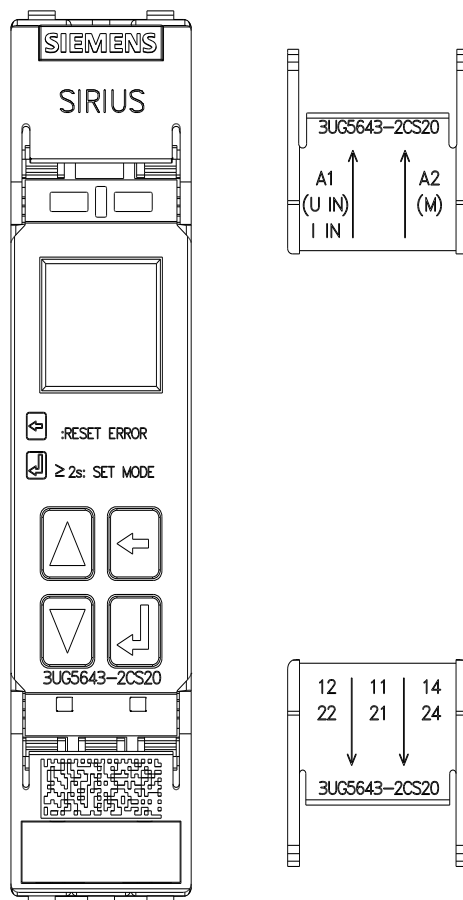
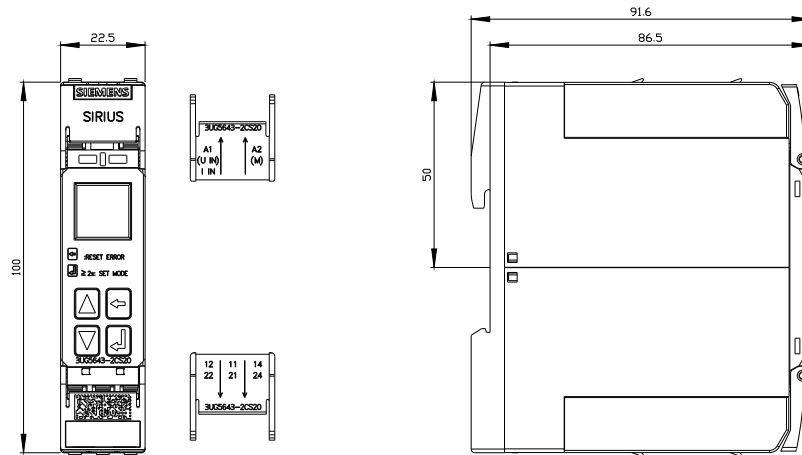
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5643-2CS20>

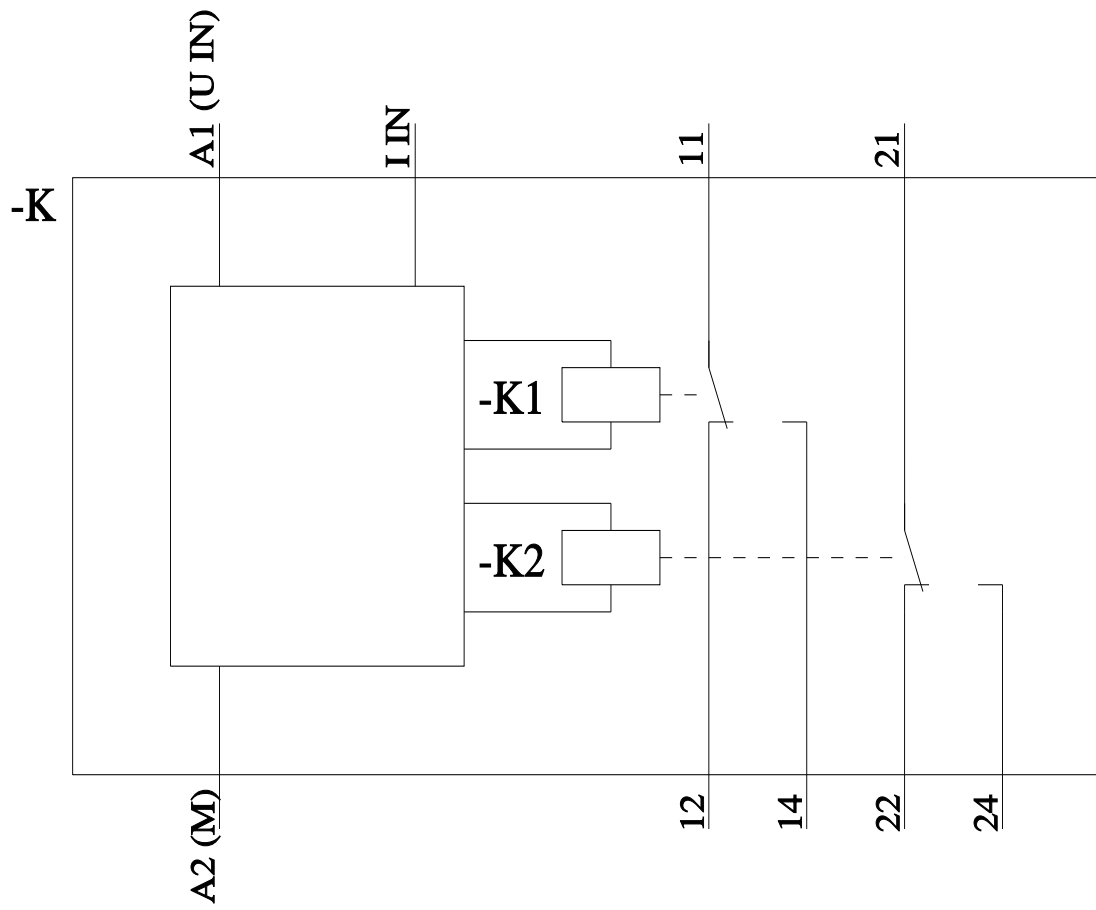
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3UG5643-2CS20>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG5643-2CS20&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5643-2CS20&lang=en)





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