



digital monitoring relay current, active current, voltage, cos-phi and performance monitoring up to 690 V AC/DC up to 15 A supply voltage 24 ... 240 V AC/DC, 50 .. 60 Hz ON delay and tripping delay 0.1..999.9 s 2 changeover contacts screw terminal SIL 1/PL c

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Network monitoring relay with digital setting
<b>design of the product</b>	monitoring of current, active current, voltage, power factor and power, externally powered with auxiliary voltage for Safety applications
<b>product type designation</b>	3UG5
<b>General technical data</b>	
<b>product function</b>	network monitoring relay with digital setting
<b>design of the display</b>	LCD
<b>insulation voltage for overvoltage category III according to IEC 60664</b>	
• with degree of pollution 2 rated value	690 V
• with degree of pollution 3 rated value	690 V
<b>degree of pollution</b>	3
<b>surge voltage resistance rated value</b>	6 kV
<b>shock resistance according to IEC 60068-2-27</b>	sinusoidal half-wave 15g / 11 ms
<b>vibration resistance according to IEC 60068-2-6</b>	f = 4 ... 5,81 Hz, dmax = 15 mm; f = 5,81 ... 500 Hz, Amax = 20 m/s <sup>2</sup> ; 10 cycles
<b>mechanical service life (operating cycles) typical</b>	10 000 000
electrical endurance (operating cycles) at AC-15 at 230 V typical	100 000
<b>thermal current of the switching element with contacts maximum</b>	5 A
<b>reference code according to IEC 81346-2</b>	K
<b>Substance Prohibitance (Date)</b>	06/01/2023
<b>SVHC substance name</b>	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
<b>Net Weight</b>	0.189 kg
<b>Product Function</b>	
<b>product function</b>	
• overcurrent detection 1 phase	Yes
• undercurrent detection 1 phase	Yes
• adjustable open/closed-circuit current principle	Yes
• auto-RESET	Yes
• manual RESET	Yes
suitability for use safety-related circuits	Yes
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	AC/DC
<b>control supply voltage rated value</b>	24 ... 240 V
<b>control supply voltage at AC</b>	
• at 50 Hz rated value	24 ... 240 V
• at 60 Hz rated value	24 ... 240 V
<b>control supply voltage at DC rated value</b>	24 ... 240 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>	
• initial value	0.85
• full-scale value	1.1
<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	60 ... 50 Hz
<b>Measuring circuit</b>	
<b>type of current for monitoring</b>	AC/DC
<b>measurable current</b>	0.003 ... 10 A
<b>measurable voltage at AC</b>	0.1 ... 760 V
<b>adjustable current response value current limited to 5 s</b>	15 A
<b>adjustable response delay time</b>	
• when starting	0 ... 999.9 s
• with lower or upper limit violation	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	24 ... 240 V
<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 125 V	0.2 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>Galvanic isolation</b>	
<b>galvanic isolation</b>	
• between input and output	Yes
• between the outputs	Yes
• between the voltage supply and other circuits	Yes
<b>Safety related data</b>	
product function suitable for safety function	Yes
<b>safe state</b>	off
<b>function test interval maximum</b>	1 a
<b>IEC 62061</b>	
<b>Safety Integrity Level (SIL) according to IEC 62061</b>	SIL 1
PFHD with high demand rate according to IEC 62061	1.3E-6 1/h
<b>ISO 13849</b>	
<b>performance level (PL) according to ISO 13849-1</b>	PL c
<b>category according to ISO 13849-1</b>	2
<b>IEC 61508</b>	
Safety Integrity Level (SIL) according to IEC 61508	SIL 1
<b>safety device type according to IEC 61508-2</b>	Type B
PFDAvg with low demand rate according to IEC 61508	0.0016
<b>Safe failure fraction (SFF)</b>	90 %
hardware fault tolerance according to IEC 61508	0
<b>T1 value</b>	
• of service life according to IEC 61508	20 a

Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	screw terminal
type of connectable conductor cross-sections <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• for AWG cables solid</li> </ul>	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> ) 2x (0.5 ... 1.5 mm <sup>2</sup> ), 1x (0.5 ... 4 mm <sup>2</sup> ) 1x (20 ... 12), 2x (20 ... 14)
connectable conductor cross-section <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> </ul>	0.5 ... 4 mm <sup>2</sup> 0.5 ... 4 mm <sup>2</sup>
AWG number as coded connectable conductor cross section <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded</li> </ul>	20 ... 12 20 ... 12
tightening torque with screw-type terminals	0.6 ... 0.8 N·m

Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting
height	100 mm
width	22.5 mm
depth	90 mm
required spacing <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>	0 mm 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm 0 mm 0 mm 0 mm

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

Approvals Certificates	
Environment	General Product Approval

Siemens EcoTech



[Environmental Confirmations](#)



General Product Approval	Test Certificates	other
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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=3UG5642-1CW31>

Cax online generator

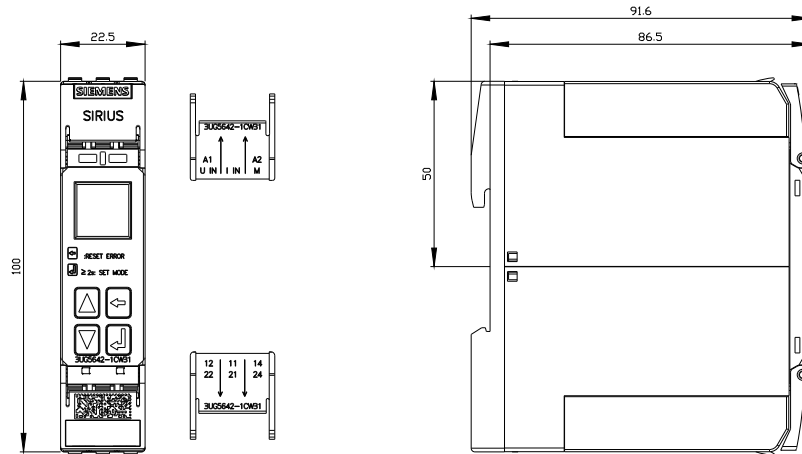
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5642-1CW31>

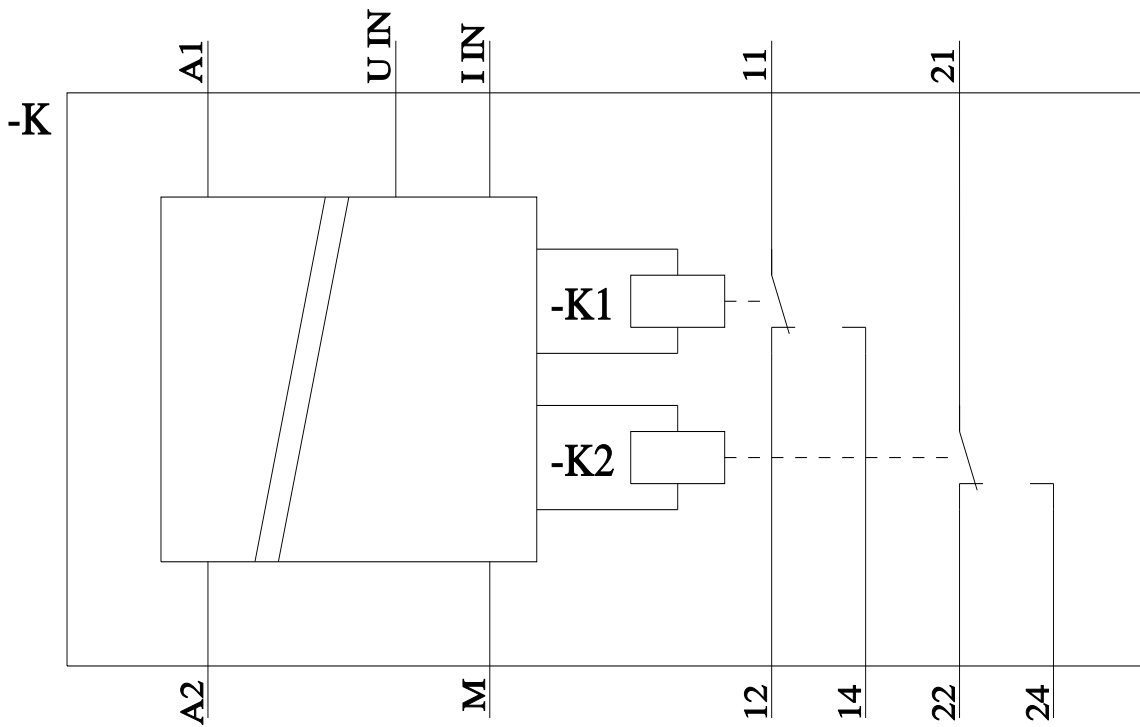
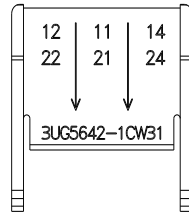
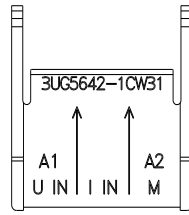
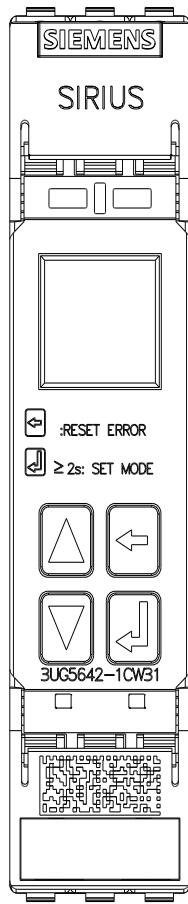
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3UG5642-1CW31>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG5642-1CW31&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5642-1CW31&lang=en)





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