







Digital monitoring relay for residual current monitoring (with converter 3UL22) Setting range 10-100% of transformer rated value separate for warning threshold and switch-off value 90 to 690 V AC 50...60 Hz AC ON delay and tripping delay 0.1 to 20 s Shutdown hysteresis up to 50% Warning hysteresis 5% fixed 2 change-over contacts with or without fault buffer screw terminal Successor product: 3UG4625-1CW30 with transformer 3UL23

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Residual current monitoring relay with digital setting
<b>product type designation</b>	3UG4
<b>General technical data</b>	
<b>product function</b>	for three-phase supplies
<b>design of the display</b>	LCD
<b>insulation voltage</b>	
• rated value	690 V
• for overvoltage category III according to IEC 60664	
— with degree of pollution 3 rated value	690 V
<b>degree of pollution</b>	3
<b>type of voltage of the control supply voltage</b>	AC
<b>surge voltage resistance rated value</b>	6 kV
<b>protection class IP</b>	IP20
<b>shock resistance acc. to IEC 60068-2-27</b>	sinusoidal half-wave 15g / 11 ms
<b>vibration resistance acc. to IEC 60068-2-6</b>	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
<b>mechanical service life (switching cycles) typical</b>	10 000 000
<b>electrical endurance (switching cycles) at AC-15 at 230 V typical</b>	100 000
<b>thermal current of the switching element with contacts maximum</b>	5 A
<b>reference code acc. to IEC 81346-2</b>	K
<b>relative repeat accuracy</b>	1 %
<b>Substance Prohibitance (Date)</b>	01.05.2012 00:00:00
<b>Product Function</b>	
<b>product function</b>	
• residual current display	Yes
• error memory	Yes
• overcurrent detection 1 phase	Yes
• undercurrent detection 1 phase	No
• adjustable open/closed-circuit current principle	Yes
• external reset	Yes
<b>Control circuit/ Control</b>	
<b>control supply voltage at AC</b>	
• at 50 Hz rated value	90 ... 690 V
• at 60 Hz rated value	90 ... 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
<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>type of current for monitoring</b>	AC
<b>measurable current</b>	30 ... 40 000 mA
<b>measurable line frequency</b>	60 ... 50 Hz
<b>adjustable operating delay time</b>	0.1 ... 20 s
<b>adjustable current response value current</b>	
<ul style="list-style-type: none"> <li>1</li> </ul>	30 mA ... 40 A
<ul style="list-style-type: none"> <li>2</li> </ul>	30 mA ... 40 A
<b>adjustable response delay time</b>	0.1 ... 20 s
<ul style="list-style-type: none"> <li>adjustable response delay time when starting</li> </ul>	0.1 ... 20 s
<b>adjustable switching hysteresis for measured current value</b>	15 ... 2 mA
<b>buffering time in the event of power failure minimum</b>	10 ms
<b>accuracy of digital display</b>	+/-1 digit
<b>Precision</b>	
<b>relative metering precision</b>	5 %
<b>temperature drift per °C</b>	0.1 %/°C
<b>Auxiliary circuit</b>	
<b>number of NC contacts delayed switching</b>	0
<b>number of NO contacts for auxiliary contacts</b>	0
<b>number of NO contacts delayed switching</b>	0
<b>number of CO contacts</b>	
<ul style="list-style-type: none"> <li>for auxiliary contacts</li> </ul>	2
<ul style="list-style-type: none"> <li>delayed switching</li> </ul>	2
<b>operating frequency with 3RT2 contactor maximum</b>	5 000 1/h
<b>Main circuit</b>	
<b>type of voltage</b>	AC
<ul style="list-style-type: none"> <li>operating voltage rated value</li> </ul>	17 ... 400 V
<b>operating frequency rated value</b>	40 ... 60 Hz
<b>Outputs</b>	
<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 acc. to IEC 61000-4-4</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>due to conductor-earth surge acc. to IEC 61000-4-5</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	1 kV
<b>field-based interference acc. to IEC 61000-4-3</b>	10 V/m
<b>electrostatic discharge acc. to IEC 61000-4-2</b>	6 kV contact discharge / 8 kV air discharge
<b>Galvanic isolation</b>	
<b>design of the electrical isolation</b>	galvanic isolation
<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

• between the voltage supply and other circuits	Yes				
Connections/ Terminals					
product function 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 mm²), 2x (0.5 ... 2.5 mm²)				
• finely stranded with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)				
• at AWG cables solid	2x (20 ... 14)				
• at AWG cables stranded	2x (20 ... 14)				
• connectable conductor cross-section solid	0.5 ... 4 mm²				
• connectable conductor cross-section finely stranded with core end processing	0.5 ... 2.5 mm²				
• AWG number as coded connectable conductor cross section solid	20 ... 14				
• AWG number as coded connectable conductor cross section stranded	20 ... 14				
• tightening torque with screw-type terminals	0.8 ... 1.2 N·m				
Installation/ mounting/ dimensions					
mounting position	any				
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail				
height	102 mm				
width	22.5 mm				
depth	91 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				
• ambient temperature during operation	-25 ... +60 °C				
• ambient temperature during storage	-40 ... +85 °C				
• ambient temperature during transport	-40 ... +85 °C				
Certificates/ approvals					
General Product Approval	EMC	Declaration of Conformity	Test Certificates		
 CCC	 UL	 RCM	 EG-Konf.	<a href="#">Miscellaneous</a>	<a href="#">Special Test Certificate</a>
Test Certificates	Marine / Shipping	other	Railway		

#### Further information

**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=3UG4624-1CS20>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4624-1CS20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4624-1CS20>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4624-1CS20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4624-1CS20&lang=en)

**Characteristic: Derating**

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4624-1CS20/manual>

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