



Digital monitoring relay Speed monitoring from 0.1 to 2200 rpm Overshoot and undershoot Supply voltage: 24 V AC/DC 50 to 60 Hz DC and AC without galvanic isolation to measuring circuit ON delay 1 to 900 s Tripping delay 0.1 to 99.9 s Hysteresis 0.1 to 99 rpm 1 change-over contact with or without fault buffer screw terminal Successor product for 3UG3051

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Speed monitoring relay with digital setting
<b>product type designation</b>	3UG4
<b>General technical data</b>	
<b>product function</b>	RPM monitoring relay
<b>design of the display</b>	LCD
<ul style="list-style-type: none"> <li>apparent power consumption at AC — at 24 V maximum</li> </ul>	2.5 V·A
<b>insulation voltage</b>	
<ul style="list-style-type: none"> <li>for overvoltage category III according to IEC 60664 — with degree of pollution 3 rated value</li> </ul>	300 V
<b>degree of pollution</b>	3
type of voltage of the control supply voltage	AC/DC
<b>surge voltage resistance rated value</b>	4 kV
<b>protection class IP</b>	IP20
shock resistance acc. to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
mechanical service life (switching cycles) typical	10 000 000
electrical endurance (switching cycles) at AC-15 at 230 V typical	100 000
<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>	
suitability for use safety-related circuits	No
<b>product function</b>	
<ul style="list-style-type: none"> <li>rotation speed monitoring</li> <li>standstill monitoring</li> <li>error memory</li> <li>adjustable open/closed-circuit current principle</li> <li>external reset</li> <li>auto-RESET</li> <li>manual RESET</li> </ul>	Yes No Yes Yes Yes Yes Yes
<b>Control circuit/ Control</b>	
<b>control supply voltage at AC</b>	
<ul style="list-style-type: none"> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> </ul>	24 ... 24 V 24 ... 24 V
<b>control supply voltage at DC</b>	
<ul style="list-style-type: none"> <li>rated value</li> </ul>	24 ... 24 V
<b>operating range factor control supply voltage rated</b>	

<b>value at DC</b>	
• initial value	0.8
• full-scale value	1.1
<b>operating range factor control supply voltage rated value at AC at 50 Hz</b>	
• initial value	1.1
• full-scale value	0.8
<b>operating range factor control supply voltage rated value at AC at 60 Hz</b>	
• initial value	1.1
• full-scale value	0.8
<b>Measuring circuit</b>	
<b>measurable line frequency</b>	50 ... 60 Hz
<b>adjustable response delay time</b>	
• when starting	1 ... 900 s
• with lower or upper limit violation	0.1 ... 99.9 s
<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>	10 %
<b>Auxiliary circuit</b>	
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
number of CO contacts delayed switching	1
<b>operating frequency with 3RT2 contactor maximum</b>	5 000 1/h
<b>Inputs/ Outputs</b>	
design of input feedback input	No
<b>number of outputs as contact-affected switching element</b>	
• for signaling function	
— instantaneous contact	0
— delayed switching	1
• safety-related	
— delayed switching	0
— instantaneous contact	0
<b>number of outputs as contact-less semiconductor switching element</b>	
• for signaling function	
— delayed switching	0
— instantaneous contact	0
• safety-related	
— delayed switching	0
— instantaneous contact	0
<b>Outputs</b>	
<b>ampacity of the output relay at AC-15</b>	
• at 250 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>	4 A
<b>Electromagnetic compatibility</b>	
<b>conducted interference</b>	
• due to burst acc. to IEC 61000-4-4	2 kV
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
• due to conductor-conductor surge acc. to IEC 61000-4-5	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

Galvanic isolation			
<b>galvanic isolation</b>			
• between input and output	Yes		
• between the outputs	No		
Safety related data			
<b>Safety Integrity Level (SIL) acc. to IEC 61508</b>	none		
Connections/ Terminals			
<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>			
• solid	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )		
• finely stranded with core end processing	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )		
• at AWG cables solid	2x (20 ... 14)		
• at AWG cables stranded	2x (20 ... 14)		
<b>connectable conductor cross-section</b>			
• solid	0.5 ... 4 mm <sup>2</sup>		
• finely stranded with core end processing	0.5 ... 2.5 mm <sup>2</sup>		
<b>AWG number as coded connectable conductor cross section</b>			
• solid	20 ... 14		
• stranded	20 ... 14		
tightening torque with screw-type terminals	0.8 ... 1.2 N·m		
Installation/ mounting/ dimensions			
<b>mounting position</b>	any		
<b>fastening method</b>	screw and snap-on mounting		
<b>height</b>	86 mm		
<b>width</b>	22.5 mm		
<b>depth</b>	102 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 ... +80 °C		
• during transport	-40 ... +80 °C		
Certificates/ approvals			
<b>General Product Approval</b>	<b>EMC</b>	<b>Declaration of Conformity</b>	<b>Test Certificates</b>



[Type Test Certificates/Test Report](#)

Test Certificates	Marine / Shipping	other	Railway
<a href="#">Special Test Certificate</a>	 	<a href="#">Confirmation</a>	<a href="#">Vibration and Shock</a>

#### 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=3UG4651-1AA30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4651-1AA30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4651-1AA30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4651-1AA30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4651-1AA30&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4651-1AA30/manual>

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