



Digital monitoring relay Speed monitoring from 0.1 to 2200 rpm Overshoot and undershoot 24 to 240 V AC/DC 50 to 60 Hz DC and AC 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                             <ul style="list-style-type: none"> <li>— at 24 V maximum</li> <li>— at 240 V maximum</li> </ul> </li> </ul>	4 VA 9 VA
<b>insulation voltage</b> <ul style="list-style-type: none"> <li>for overvoltage category III according to IEC 60664                             <ul style="list-style-type: none"> <li>— with degree of pollution 3 rated value</li> </ul> </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
<b>shock resistance according to IEC 60068-2-27</b>	sinusoidal half-wave 15g / 11 ms
<b>mechanical service life (operating cycles) typical</b>	10 000 000
<b>electrical endurance (operating cycles) at AC-15 at 230 V typical</b>	100 000
<b>reference code according to IEC 81346-2</b>	K
<b>relative repeat accuracy</b>	1 %
<b>Substance Prohibitance (Date)</b>	05/01/2012
<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>Weight</b>	0.165 kg
<b>Product Function</b>	
<b>product function</b>	
<ul style="list-style-type: none"> <li>standstill monitoring</li> <li>rotation speed 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>	No Yes Yes Yes Yes Yes Yes
suitability for use safety-related circuits	No
<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> </ul>	24 ... 240 V

<ul style="list-style-type: none"> <li>at 60 Hz rated value</li> </ul>	24 ... 240 V
<b>control supply voltage at DC rated value</b>	24 ... 240 V
<b>operating range factor control supply voltage rated value at DC</b>	
<ul style="list-style-type: none"> <li>initial value</li> <li>full-scale value</li> </ul>	0.8 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> <li>full-scale value</li> </ul>	1.1 0.8
<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> <li>full-scale value</li> </ul>	1.1 0.8
<b>Measuring circuit</b>	
<b>measurable line frequency</b>	50 ... 60 Hz
<b>adjustable response delay time</b>	
<ul style="list-style-type: none"> <li>when starting</li> <li>with lower or upper limit violation</li> </ul>	1 ... 900 s 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>	
<ul style="list-style-type: none"> <li>for signaling function <ul style="list-style-type: none"> <li>instantaneous contact</li> <li>delayed switching</li> </ul> </li> <li>safety-related <ul style="list-style-type: none"> <li>delayed switching</li> <li>instantaneous contact</li> </ul> </li> </ul>	0 1 0 0
<b>number of outputs as contact-less semiconductor switching element</b>	
<ul style="list-style-type: none"> <li>for signaling function <ul style="list-style-type: none"> <li>delayed switching</li> <li>instantaneous contact</li> </ul> </li> <li>safety-related <ul style="list-style-type: none"> <li>delayed switching</li> <li>instantaneous contact</li> </ul> </li> </ul>	0 0 0 0
<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
<b>ampacity of the output relay at DC-13</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> <li>at 125 V</li> <li>at 250 V</li> </ul>	1 A 0.2 A 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> <li>due to conductor-earth surge according to IEC 61000-4-5</li> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	2 kV 2 kV 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

Galvanic isolation	
<b>galvanic isolation</b>	
• between input and output	Yes
• between the outputs	No
IEC 61508	
Safety Integrity Level (SIL) according to IEC 61508	without
Electrical Safety	
<b>protection class IP on the front according to IEC 60529</b>	IP20
Connections/ Terminals	
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<b>type of electrical connection</b>	screw terminal
<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> )
• for AWG cables solid	2x (20 ... 14)
• for 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
Approvals Certificates	
General Product Approval	



EG-Konf.

[Confirmation](#)



CCC



UL



EMV	Test Certificates	Marine / Shipping
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RCM

[KC](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



DNV



LRS

other	Railway	Environment
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[Confirmation](#)

[Special Test Certificate](#)



[Environmental Confirmations](#)

### Further information

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=3UG4651-1AW30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4651-1AW30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4651-1AW30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4651-1AW30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4651-1AW30&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4651-1AW30/manual>

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