



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

product brand name	SIRIUS
product designation	Speed monitoring relay with digital setting
product type designation	3UG4
General technical data	
product function	RPM monitoring relay
design of the display	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>	<div>4 VA</div> <div>9 VA</div>
insulation voltage <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>	<div>300 V</div>
degree of pollution	3
type of voltage of the control supply voltage	AC/DC
surge voltage resistance rated value	4 kV
shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) at AC-15 at 230 V typical	100 000
reference code according to IEC 81346-2	K
relative repeat accuracy	1 %
Substance Prohibittance (Date)	05/01/2012
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
Weight	0.161 kg
Product Function	
product function <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>	<div>No</div> <div>Yes</div> <div>Yes</div> <div>Yes</div> <div>Yes</div> <div>Yes</div> <div>Yes</div>
suitability for use safety-related circuits	No
Control circuit/ Control	
control supply voltage at AC <ul style="list-style-type: none"><li>at 50 Hz rated value</li><li>at 60 Hz rated value</li></ul>	<div>24 ... 240 V</div> <div>24 ... 240 V</div>

<b>control supply voltage at DC rated value</b>	24 ... 240 V
<b>operating range factor control supply voltage rated 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>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 according to IEC 61000-4-4	2 kV
• due to conductor-earth surge according to IEC 61000-4-5	2 kV
• due to conductor-conductor surge according to IEC 61000-4-5	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
<b>Galvanic isolation</b>	

<b>galvanic isolation</b>	
• between input and output	Yes
• between the outputs	No
<b>IEC 61508</b>	
Safety Integrity Level (SIL) according to IEC 61508	without
<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>Connections/ Terminals</b>	
<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
<b>Installation/ mounting/ dimensions</b>	
<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
<b>Ambient conditions</b>	
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
<b>Environmental footprint</b>	
global warming potential [CO <sub>2</sub> eq] total	17.1 kg
global warming potential [CO <sub>2</sub> eq] during manufacturing	4.44 kg
global warming potential [CO <sub>2</sub> eq] during operation	13.7 kg
global warming potential [CO <sub>2</sub> eq] after end of life	-1.06 kg
<b>Approvals Certificates</b>	



[KC](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



[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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