








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

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"> apparent power consumption at AC <ul style="list-style-type: none"> at 24 V maximum 	2.5 VA
insulation voltage <ul style="list-style-type: none"> for overvoltage category III according to IEC 60664 <ul style="list-style-type: none"> with degree of pollution 3 rated value 	300 V
degree of pollution	3
type of voltage of the control supply voltage	AC/DC
surge voltage resistance rated value	4 kV
protection class IP	IP20
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 Prohibitance (Date)	05/01/2012
Product Function	
product function	
<ul style="list-style-type: none"> standstill monitoring 	No
<ul style="list-style-type: none"> rotation speed monitoring 	Yes
<ul style="list-style-type: none"> error memory 	Yes
<ul style="list-style-type: none"> adjustable open/closed-circuit current principle 	Yes
<ul style="list-style-type: none"> external reset 	Yes
<ul style="list-style-type: none"> auto-RESET 	Yes
<ul style="list-style-type: none"> manual RESET 	Yes
suitability for use safety-related circuits	No
Control circuit/ Control	
control supply voltage at AC	
<ul style="list-style-type: none"> at 50 Hz rated value 	24 ... 24 V
<ul style="list-style-type: none"> at 60 Hz rated value 	24 ... 24 V
control supply voltage at DC	
<ul style="list-style-type: none"> rated value 	24 ... 24 V
operating range factor control supply voltage rated value at DC	

<ul style="list-style-type: none"> • initial value 	0.8
<ul style="list-style-type: none"> • full-scale value 	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
<ul style="list-style-type: none"> • initial value 	1.1
<ul style="list-style-type: none"> • full-scale value 	0.8
operating range factor control supply voltage rated value at AC at 60 Hz	
<ul style="list-style-type: none"> • initial value 	1.1
<ul style="list-style-type: none"> • full-scale value 	0.8
Measuring circuit	
measurable line frequency	50 ... 60 Hz
adjustable response delay time	
<ul style="list-style-type: none"> • when starting 	1 ... 900 s
<ul style="list-style-type: none"> • with lower or upper limit violation 	0.1 ... 99.9 s
buffering time in the event of power failure minimum	10 ms
accuracy of digital display	+/- 1 Digit
Precision	
relative metering precision	10 %
Auxiliary circuit	
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
number of CO contacts delayed switching	1
operating frequency with 3RT2 contactor maximum	5 000 1/h
Inputs/ Outputs	
design of input feedback input	No
number of outputs as contact-affected switching element	
<ul style="list-style-type: none"> • for signaling function <ul style="list-style-type: none"> — instantaneous contact 	0
<ul style="list-style-type: none"> — delayed switching 	1
<ul style="list-style-type: none"> • safety-related <ul style="list-style-type: none"> — delayed switching 	0
<ul style="list-style-type: none"> — instantaneous contact 	0
number of outputs as contact-less semiconductor switching element	
<ul style="list-style-type: none"> • for signaling function <ul style="list-style-type: none"> — delayed switching 	0
<ul style="list-style-type: none"> — instantaneous contact 	0
<ul style="list-style-type: none"> • safety-related <ul style="list-style-type: none"> — delayed switching 	0
<ul style="list-style-type: none"> — instantaneous contact 	0
ampacity of the output relay at AC-15	
<ul style="list-style-type: none"> • at 250 V at 50/60 Hz 	3 A
ampacity of the output relay at DC-13	
<ul style="list-style-type: none"> • at 24 V 	1 A
<ul style="list-style-type: none"> • at 125 V 	0.2 A
<ul style="list-style-type: none"> • at 250 V 	0.1 A
operational current at 17 V minimum	5 mA
continuous current of the DIAZED fuse link of the output relay	4 A
Electromagnetic compatibility	
conducted interference	
<ul style="list-style-type: none"> • due to burst according to IEC 61000-4-4 	2 kV
<ul style="list-style-type: none"> • due to conductor-earth surge according to IEC 61000-4-5 	2 kV
<ul style="list-style-type: none"> • due to conductor-conductor surge according to IEC 61000-4-5 	1 kV
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
Galvanic isolation	
galvanic isolation	
<ul style="list-style-type: none"> • between input and output 	Yes
<ul style="list-style-type: none"> • between the outputs 	No

Safety related data		
Safety Integrity Level (SIL) according to IEC 61508	without	
Connections/ Terminals		
product component removable terminal for auxiliary and control circuit	Yes	
type of electrical connection	screw-type terminals	
type of connectable conductor cross-sections	<ul style="list-style-type: none">• solid1x (0.5 ... 4 mm2), 2x (0.5 ... 2.5 mm2)• finely stranded with core end processing1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)• for AWG cables solid2x (20 ... 14)• for AWG cables stranded2x (20 ... 14)	
connectable conductor cross-section	<ul style="list-style-type: none">• solid0.5 ... 4 mm²• finely stranded with core end processing0.5 ... 2.5 mm²	
AWG number as coded connectable conductor cross section	<ul style="list-style-type: none">• solid20 ... 14• stranded20 ... 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	
height	86 mm	
width	22.5 mm	
depth	102 mm	
required spacing	<ul style="list-style-type: none">• with side-by-side mounting<ul style="list-style-type: none">— forwards0 mm— backwards0 mm— upwards0 mm— downwards0 mm— at the side0 mm• for grounded parts<ul style="list-style-type: none">— forwards0 mm— backwards0 mm— upwards0 mm— at the side0 mm— downwards0 mm• for live parts<ul style="list-style-type: none">— forwards0 mm— backwards0 mm— upwards0 mm— downwards0 mm— at the side0 mm	
Ambient conditions		
installation altitude at height above sea level maximum	2 000 m	
ambient temperature	<ul style="list-style-type: none">• during operation-25 ... +60 °C• during storage-40 ... +80 °C• during transport-40 ... +80 °C	
Certificates/ approvals		
General Product Approval	EMC	Declaration of Con- formity
<div><div> CCC</div><div>Confirmation</div><div> UL</div><div></div><div> RCM</div><div></div></div>		
Declaration of Con- formity	Test Certificates	Marine / Shipping
		other



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



[Confirmation](#)

Railway

[Vibration and Shock](#)

Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3UG4651-1AA30>

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

Characteristic: Derating

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

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