



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 (switching cycles) typical	10 000 000
electrical endurance (switching 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	
suitability for use safety-related circuits	No
product function	
<ul style="list-style-type: none"> rotation speed monitoring standstill monitoring error memory adjustable open/closed-circuit current principle external reset auto-RESET manual RESET 	Yes No Yes Yes Yes Yes Yes
Control circuit/ Control	
control supply voltage at AC	
<ul style="list-style-type: none"> at 50 Hz rated value at 60 Hz rated value 	24 ... 24 V 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	
• initial value	0.8
• full-scale value	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	1.1
• full-scale value	0.8
operating range factor control supply voltage rated value at AC at 60 Hz	
• initial value	1.1
• full-scale value	0.8
Measuring circuit	
measurable line frequency	50 ... 60 Hz
adjustable response delay time	
• when starting	1 ... 900 s
• 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	
• for signaling function	
— instantaneous contact	0
— delayed switching	1
• safety-related	
— delayed switching	0
— instantaneous contact	0
number of outputs as contact-less semiconductor switching element	
• for signaling function	
— delayed switching	0
— instantaneous contact	0
• safety-related	
— delayed switching	0
— instantaneous contact	0
ampacity of the output relay at AC-15	
• at 250 V at 50/60 Hz	3 A
ampacity of the output relay at DC-13	
• at 24 V	1 A
• at 125 V	0.2 A
• 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	
• 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
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"> • solid 	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)	
<ul style="list-style-type: none"> • finely stranded with core end processing 	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)	
<ul style="list-style-type: none"> • at AWG cables solid 	2x (20 ... 14)	
<ul style="list-style-type: none"> • at AWG cables stranded 	2x (20 ... 14)	
connectable conductor cross-section		
<ul style="list-style-type: none"> • solid 	0.5 ... 4 mm ²	
<ul style="list-style-type: none"> • finely stranded with core end processing 	0.5 ... 2.5 mm ²	
AWG number as coded connectable conductor cross section		
<ul style="list-style-type: none"> • solid 	20 ... 14	
<ul style="list-style-type: none"> • 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	
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"> — forwards — backwards — upwards — downwards — at the side 	0 mm	
	0 mm	
	0 mm	
	0 mm	
	0 mm	
<ul style="list-style-type: none"> • for grounded parts <ul style="list-style-type: none"> — forwards — backwards — upwards — at the side — downwards 	0 mm	
	0 mm	
	0 mm	
	0 mm	
	0 mm	
<ul style="list-style-type: none"> • for live parts <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side 	0 mm	
	0 mm	
	0 mm	
	0 mm	
	0 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	
<ul style="list-style-type: none"> • during storage 	-40 ... +80 °C	
<ul style="list-style-type: none"> • during transport 	-40 ... +80 °C	
Certificates/ approvals		
General Product Approval	EMC	Declaration of Conformity



[Confirmation](#)



EG-Konf.

Test Certificates	Marine / Shipping	other	Railway
Type Test Certificates/Test Report Special Test Certificate	 LRS	 DNV-GL	Confirmation Vibration and Shock

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?mfb=3UG4651-1AA30>

Cax online generator

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

Characteristic: Derating

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

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