

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
Apparent power consumption	
<ul style="list-style-type: none"> • at AC <ul style="list-style-type: none"> — at 24 V maximum — at 240 V maximum 	4 V·A 9 V·A
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	
<ul style="list-style-type: none"> • of the control supply voltage 	AC/DC
Surge voltage resistance rated value	4 kV
Protection class IP	IP20
Shock resistance	
<ul style="list-style-type: none"> • acc. to IEC 60068-2-27 	sinusoidal half-wave 15g / 11 ms
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • typical 	10 000 000
Electrical endurance (switching cycles)	
<ul style="list-style-type: none"> • at AC-15 at 230 V typical 	100 000
Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	K
Reference code acc. to DIN EN 81346-2	K
Reference code acc. to DIN EN 61346-2	K
Relative repeat accuracy	1 %

Product Function

Suitability for use	
<ul style="list-style-type: none"> • safety-related circuits 	No

Product function	
• rotation speed monitoring	Yes
• Standstill monitoring	No
• Fault storage	Yes
• Adjustable open/closed-circuit current principle	Yes
• External reset	Yes
• Auto-reset	Yes
• Manual RESET	Yes

Control circuit/ Control

Control supply voltage at AC	
• at 50 Hz rated value	24 ... 240 V
• at 60 Hz rated value	24 ... 240 V
Control supply voltage at DC	
• rated value	24 ... 240 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 %
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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

Outputs

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
Operating 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 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
Field-bound parasitic coupling acc. to IEC 61000-4-3	10 V/m
Electrostatic discharge acc. to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge

Galvanic isolation

Galvanic isolation	
• between entrance and outlet	Yes
• between the outputs	No

Safety related data

Safety Integrity Level (SIL) acc. to IEC 61508	none
Category acc. to EN 954-1	none

Connections/ Terminals

Product function	
• removable terminal for auxiliary and control circuit	Yes
Type of electrical connection	screw-type terminals
Type of connectable conductor cross-sections	
• solid	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
• finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• at AWG conductors solid	2x (20 ... 14)
• at AWG conductors stranded	2x (20 ... 14)
Connectable conductor cross-section	
• solid	0.5 ... 4 mm ²
• finely stranded with core end processing	0.5 ... 2.5 mm ²
AWG number as coded connectable conductor cross section	
• solid	20 ... 14
• stranded	20 ... 14
Tightening torque	
• with screw-type terminals	0.8 ... 1.2 N·m

Installation/ mounting/ dimensions

Mounting position	any
Mounting type	screw and snap-on mounting
Height	86 mm
Width	22.5 mm
Depth	102 mm
Required spacing	
• 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

Certificates/ approvals

General Product Approval



[Miscellaneous](#)

Test Certificates

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



other

[Confirmation](#)

Railway

[Vibration and Shock](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

www.siemens.com/ic10

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3UG4651-1AW30>

Cax online generator

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

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