



Digital monitoring relay Speed monitoring for IO-Link from 0.1...2200 rpm
Overshoot and undershoot ON-delay time Tripping delay time Hysteresis
0.1 to 99 rpm 1 change-over contact, spring-type connection system

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 DC <ul style="list-style-type: none"> at 24 V maximum 	4 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 2 rated value 	300 V
degree of pollution	2
type of voltage of the control supply voltage	DC
surge voltage resistance rated value	4 kV
protection class IP	IP20
<ul style="list-style-type: none"> of the enclosure of the terminal 	IP40 IP20
shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
vibration resistance according to IEC 60068-2-6	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) at AC-15 at 230 V typical	100 000
thermal current of the switching element with contacts maximum	5 A
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 rotation speed monitoring error memory galvanic isolation adjustable open/closed-circuit current principle external reset auto-RESET manual RESET 	No Yes Yes Yes Yes Yes Yes Yes
suitability for use safety-related circuits	No

Control circuit/ Control

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 0.75
- full-scale value 1.25

Measuring circuit

- adjustable operating delay time** 0 ... 99.9 s
- adjustable response delay time**
 - when starting 0 ... 999.9 s
 - with lower or upper limit violation 0 ... 999.9 s
- accuracy of digital display** +/- 1 Digit

Precision

- relative metering precision** 10 %

Communication/ Protocol

- protocol is supported IO-Link protocol Yes
- IO-Link transfer rate** COM2 (38,4 kBaud)
- point-to-point cycle time between master and IO-Link device minimum** 10 ms
- type of voltage supply via input/output link master data volume** Yes
 - of the address range of the inputs with cyclical transfer total 4 byte
 - of the address range of the outputs with cyclical transfer total 2 byte

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 230 V at 50/60 Hz 3 A
 - at 250 V at 50/60 Hz 3 A
- ampacity of the output relay at DC-13**
 - at 24 V 1 A
 - at 110 V 0.2 A
 - at 125 V 0.2 A
 - at 230 V 0.1 A
 - at 250 V 0.1 A
- ampacity of the semiconductor output in SIO mode** 200 mA
- 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

<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
<ul style="list-style-type: none"> • between the voltage supply and other circuits 	Yes
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	spring-loaded terminals
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • solid 	2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> • finely stranded with core end processing 	2 x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> • finely stranded without core end processing 	2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> • at AWG cables solid 	2x (24 ... 16)
<ul style="list-style-type: none"> • at AWG cables stranded 	2x (24 ... 16)
connectable conductor cross-section	
<ul style="list-style-type: none"> • solid 	0.25 ... 1.5 mm ²
<ul style="list-style-type: none"> • finely stranded with core end processing 	0.25 ... 1.5 mm ²
<ul style="list-style-type: none"> • finely stranded without core end processing 	0.25 ... 1.5 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> • solid 	24 ... 16
<ul style="list-style-type: none"> • stranded 	24 ... 16
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting
height	91 mm
width	22.5 mm
depth	103 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
	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

[Manufacturer Declaration](#)

[Confirmation](#)



Declaration of Conformity

Test Certificates

Marine / Shipping

other



EG-Konf.



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



[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=3UG4851-2AA40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4851-2AA40>

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

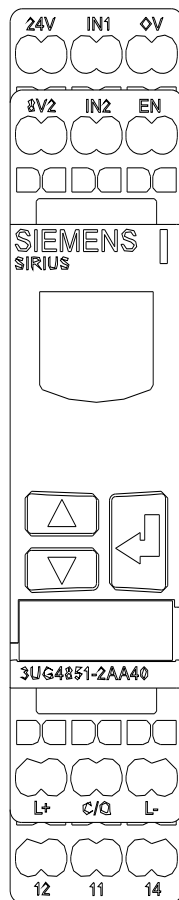
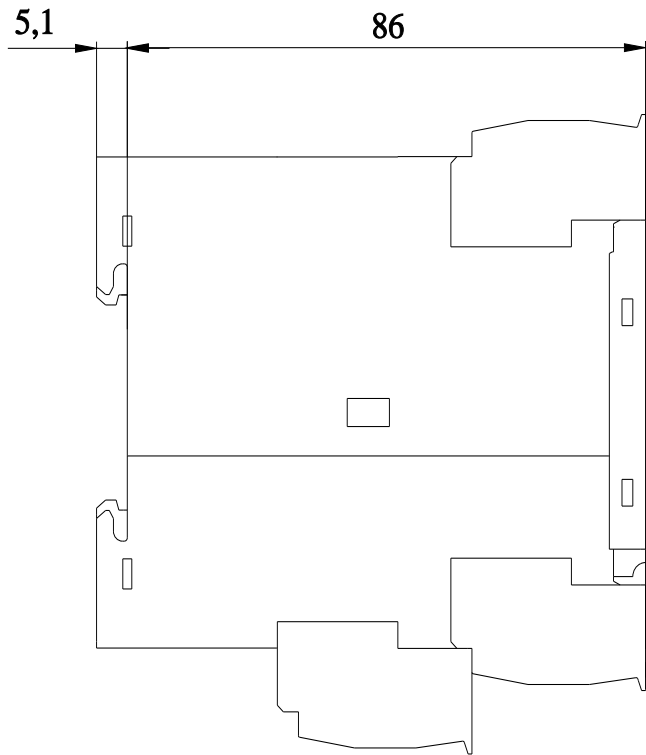
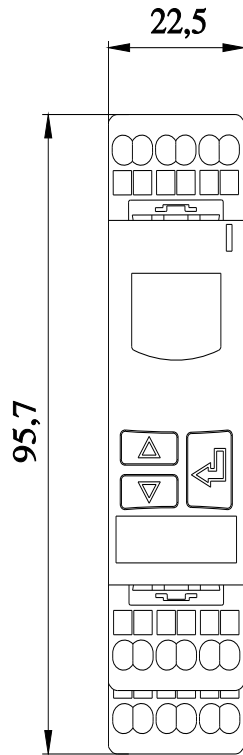
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4851-2AA40>

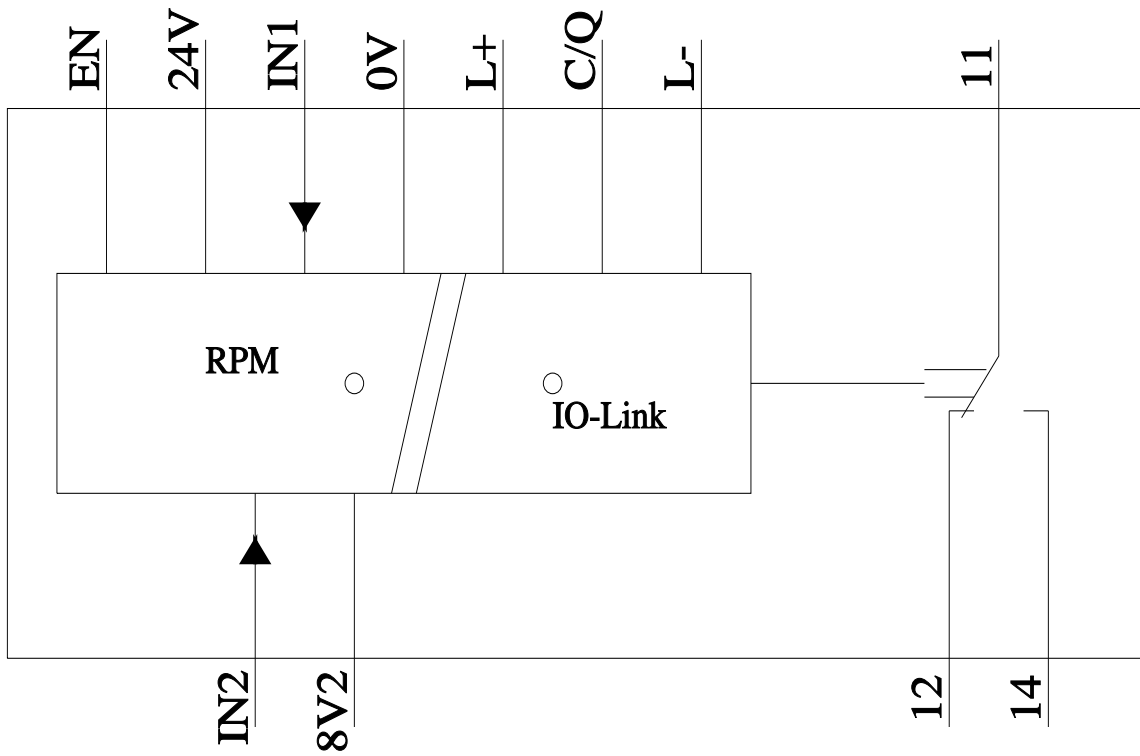
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4851-2AA40&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4851-2AA40/manual>





last modified:

1/25/2022 