



!!! product phase-out !!! the preferred successor is 3UG5851-1AA40 digital monitoring relay speed monitoring for IO-Link from 0.1 to 2200 r/min overshoot and undershoot ON-delay time tripping delay time hysteresis 0.1 to 99 r/min 1 changeover contact, screw terminal

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 <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 15 g / 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 (day/month/year)	05/01/2012
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
Net Weight	0.163 g
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 	No Yes Yes Yes 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 DC rated value	24 V
operating range factor control supply voltage rated value at DC	
<ul style="list-style-type: none"> initial value 	0.75
<ul style="list-style-type: none"> full-scale value 	1.25
Measuring circuit	
adjustable operating delay time	0 ... 99.9 s
adjustable response delay time	
<ul style="list-style-type: none"> when starting 	0 ... 999.8 s
<ul style="list-style-type: none"> with lower or upper limit violation 	0 ... 999.8 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	Yes
data volume	
<ul style="list-style-type: none"> of the address range of the inputs with cyclical transfer total 	4 byte
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> for signaling function <ul style="list-style-type: none"> instantaneous contact delayed switching 	0 1
<ul style="list-style-type: none"> safety-related <ul style="list-style-type: none"> delayed switching instantaneous contact 	0 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 instantaneous contact 	0 0
<ul style="list-style-type: none"> safety-related <ul style="list-style-type: none"> delayed switching instantaneous contact 	0 0
ampacity of the output relay at AC-15	
<ul style="list-style-type: none"> at 230 V at 50/60 Hz 	3 A
<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 110 V 	0.2 A
<ul style="list-style-type: none"> at 125 V 	0.2 A
<ul style="list-style-type: none"> at 230 V 	0.1 A
<ul style="list-style-type: none"> 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
• 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	
• between input and output	Yes
• between the outputs	No
• between the voltage supply and other circuits	Yes
IEC 61508	
Safety Integrity Level (SIL) according to IEC 61508	without
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	screw terminal
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)
• for AWG cables solid	2x (20 ... 14)
• for AWG cables 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	24 ... 16
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	91 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
ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-40 ... +80 °C
• during transport	-40 ... +80 °C

Approvals Certificates

Environment	General Product Approval
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[Environmental Con-
firmations](#)



[Manufacturer Declara-
tion](#)

General Product Ap- proval	EMV	Test Certificates	Maritime application
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[Type Test Certifi-
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other	Railway
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[Confirmation](#)

[Confirmation](#)

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cate](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3UG4851-1AA40>

Cax online generator

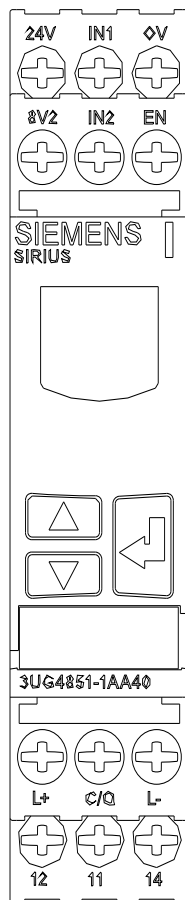
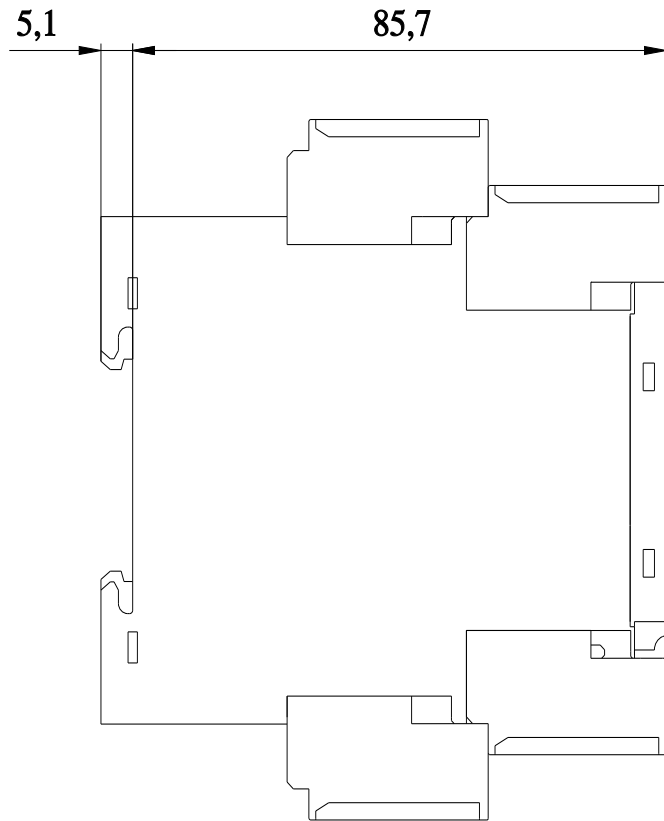
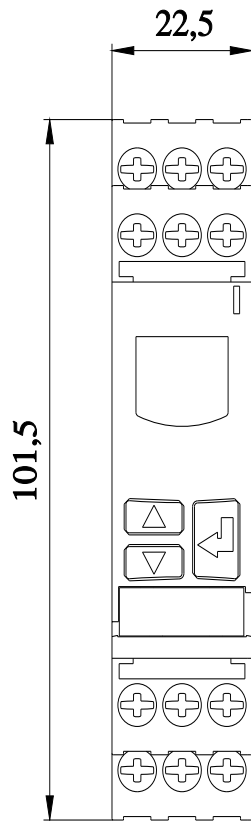
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4851-1AA40>

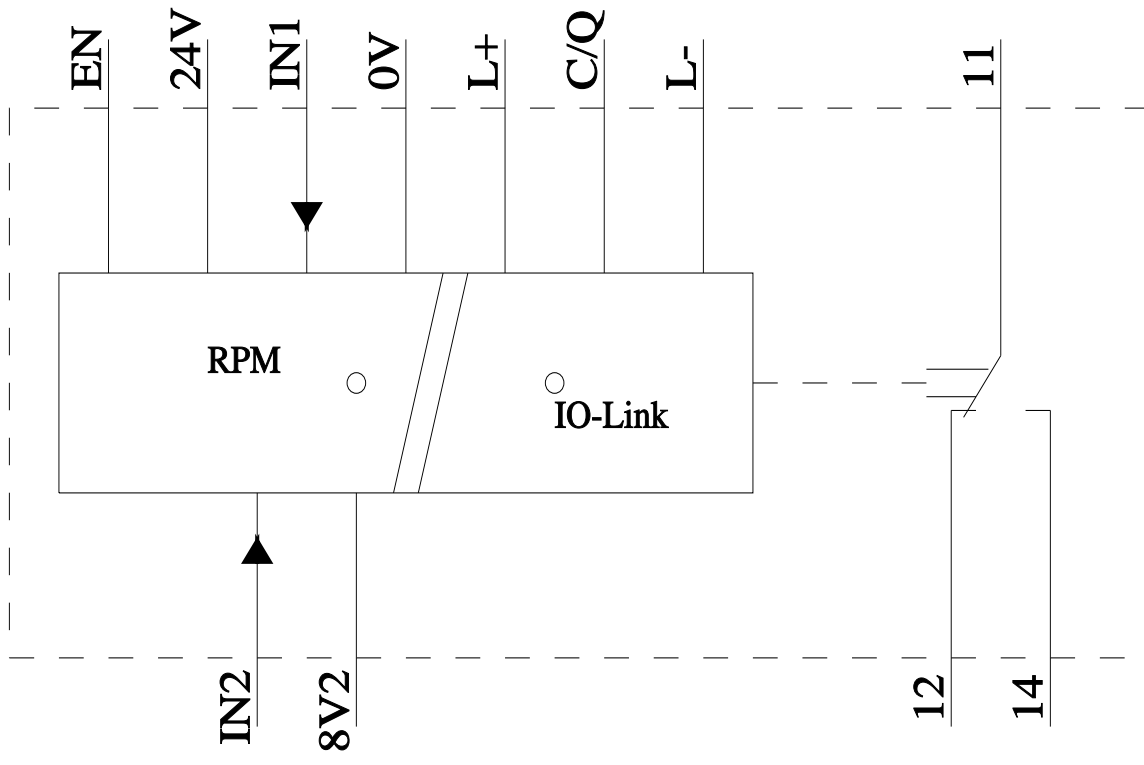
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4851-1AA40>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4851-1AA40&lang=en





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