



DIGITAL MONITORING RELAY SPEED MONITORING,
FOR IO-LINK FROM 0.1 TO 2200 RPM OVERSHOOT
AND UNDERSHOOT ON DELAY TIME TRIPPING
DELAY TIME HYSTERESIS 0.1 TO 99 RPM 1
CHANGE-OVER CONTACT, SCREW TERMINAL

Product function		RPM monitoring relay
Measuring circuit:		
Adjustable response delay time		
• when starting	s	0 ... 999.9
• with lower or upper limit violation	s	0 ... 999.9
Adjustable response value speed	1/min	0 ... 2 200
Input voltage at digital input 1		
• initial value for signal<0>-recognition	V	0
• Full-scale value for signal<0> recognition	V	1
• initial value for signal<1>-recognition	V	4.5
• Full-scale value for signal<1> recognition	V	30
Input current at digital input 2		
• initial value for signal<0>-recognition	mA	0
• Full-scale value for signal<0> recognition	mA	1.2
• initial value for signal<1>-recognition	mA	2.1
• Full-scale value for signal<1> recognition	mA	8.2
Design of input feedback input		No
Design of the sensor		

• at digital input 1 connectable		PNP switching three-wire sensor or mechanical impulse contact with external DC supply (4.5 V ... 30 V)
• at digital input 2 connectable		2-conductor Namur sensor or mechanical impulse contact
Input current at digital input 1 maximum	mA	50
Pulse duration minimum	ms	5
Pulse interval minimum	ms	5
Number of sensor signals per revolution		1 ... 10
Switching hysteresis for rotational speed	1/min	0 ... 99.9

General technical data:

Design of the display		LCD
Product function		
• rotation speed monitoring		Yes
• Standstill monitoring		No
• Fault storage		Yes
• External reset		Yes
• Auto-reset		Yes
• Manual RESET		Yes
• Adjustable open/closed-circuit current principle		Yes
Starting time after the control supply voltage has been applied	ms	500
Response time maximum	ms	100
Relative metering precision	%	10
Accuracy of digital display		+/- 1 Digit
Relative repeat accuracy	%	1
Type of voltage of the control supply voltage		DC
Control supply voltage		
• at DC rated value	V	24 ... 24
Operating range factor control supply voltage rated value		
• at DC		0.75 ... 1.25
Surge voltage resistance rated value	kV	4
Consumed active power	W	2
Protection class IP		IP20
Electromagnetic compatibility		IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4
Vibration resistance acc. to IEC 60068-2-6		1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
Shock resistance acc. to IEC 60068-2-27		sinusoidal half-wave 15g / 11 ms
Installation altitude at height above sea level maximum	m	2 000
Conducted interference due to burst acc. to IEC 61000-4-4		2 kV
Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5		2 kV

Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5		1 kV
Electrostatic discharge acc. to IEC 61000-4-2		6 kV contact discharge / 8 kV air discharge
Field-bound parasitic coupling acc. to IEC 61000-4-3		10 V/m
Degree of pollution		2
Apparent power consumption - at DC — at 24 V maximum	V·A	4
Ambient temperature - during operation - during storage - during transport	°C °C °C	-25 ... +60 -40 ... +80 -40 ... +80
Galvanic isolation - between entrance and outlet - between the outputs - between the voltage supply and other circuits		Yes No Yes
Suitability for use safety-related circuits		No
Category acc. to EN 954-1		none
Safety Integrity Level (SIL) acc. to IEC 61508		none

Communication/ Protocol:

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

Mechanical data:

Width	mm	22.5
Height	mm	91
Depth	mm	102
Mounting position		any
Required spacing for grounded parts - forwards - Backwards - at the side - upwards - downwards	mm mm mm mm mm	0 0 0 0 0
Required spacing with side-by-side mounting		

• forwards	mm	0
• Backwards	mm	0
• at the side	mm	0
• upwards	mm	0
• downwards	mm	0
Required spacing for live parts		
• forwards	mm	0
• Backwards	mm	0
• at the side	mm	0
• upwards	mm	0
• downwards	mm	0
Mounting type		screw and snap-on mounting
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)
— stranded		2x (20 ... 14)
Tightening torque with screw-type terminals	N·m	0.8 ... 1.2

Outputs:

Number of NO contacts delayed switching		0
Number of NC contacts delayed switching		0
Number of CO contacts delayed switching		1
Ampacity of the output relay		
• at AC-15		
— at 230 V at 50/60 Hz	A	3
— at 250 V at 50/60 Hz	A	3
• at DC-13		
— at 24 V	A	1
— at 110 V	A	0.2
— at 125 V	A	0.2
— at 230 V	A	0.1
— at 250 V	A	0.1
Operating current at 17 V minimum	mA	5
Continuous current of the DIAZED fuse link of the output relay	A	4
Thermal current of the switching element with contacts maximum	A	5

Mechanical service life (switching cycles) typical		10 000 000
Electrical endurance (switching cycles) at AC-15 at 230 V typical		100 000
Operating frequency with 3RT2 contactor maximum	1/h	5 000

Certificates/ approvals:

General Product Approval			Declaration of Conformity	Test Certificates	
 CCC	Manufacturer Declaration	 UL	 EAC	 EG-Konf.	Type Test Certificates/Test Report

Test Certificates	other	Railway
Special Test Certificate	Confirmation	Vibration and Shock

Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<http://www.siemens.com/industrymall>

Cax online generator

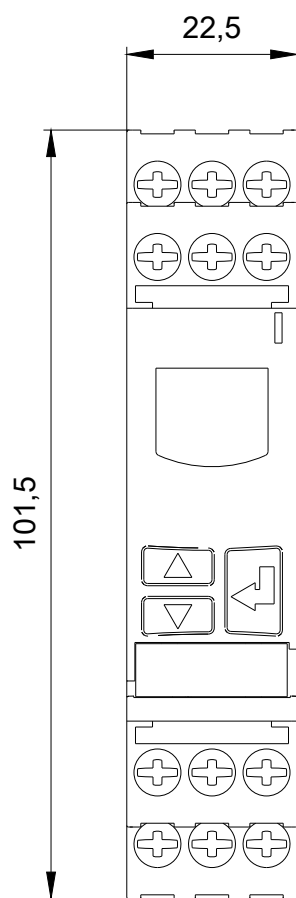
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4851-1AA40>

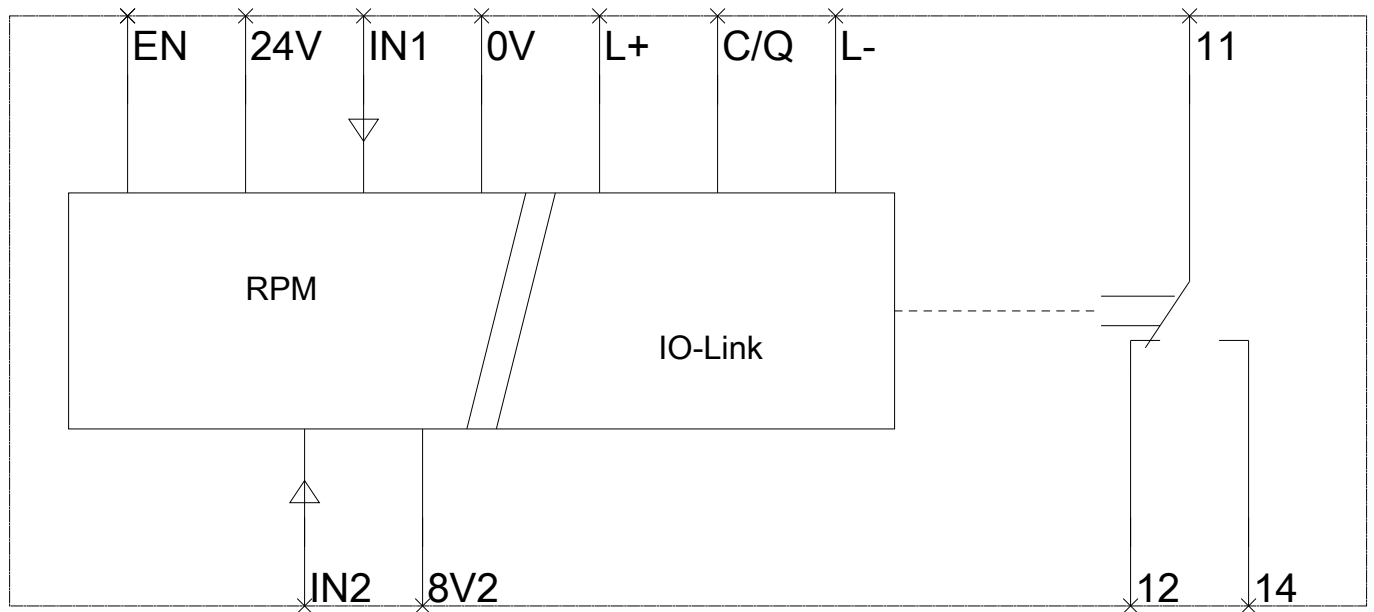
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<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, ...)

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





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