



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, SPRING-LOADED  
 TERMINAL

<b>Product function</b>		RPM monitoring relay
<b>Measuring circuit:</b>		
<b>Adjustable response delay time</b>		
<ul style="list-style-type: none"> <li>when starting</li> </ul>	s	0 ... 999.9
<ul style="list-style-type: none"> <li>with lower or upper limit violation</li> </ul>	s	0 ... 999.9
<b>Adjustable response value speed</b>	1/min	0 ... 2 200
<b>Input voltage at digital input 1</b>		
<ul style="list-style-type: none"> <li>initial value for signal&lt;0&gt;-recognition</li> </ul>	V	0
<ul style="list-style-type: none"> <li>Full-scale value for signal&lt;0&gt; recognition</li> </ul>	V	1
<ul style="list-style-type: none"> <li>initial value for signal&lt;1&gt;-recognition</li> </ul>	V	4.5
<ul style="list-style-type: none"> <li>Full-scale value for signal&lt;1&gt; recognition</li> </ul>	V	30
<b>Input current at digital input 2</b>		
<ul style="list-style-type: none"> <li>initial value for signal&lt;0&gt;-recognition</li> </ul>	mA	0
<ul style="list-style-type: none"> <li>Full-scale value for signal&lt;0&gt; recognition</li> </ul>	mA	1.2
<ul style="list-style-type: none"> <li>initial value for signal&lt;1&gt;-recognition</li> </ul>	mA	2.1
<ul style="list-style-type: none"> <li>Full-scale value for signal&lt;1&gt; recognition</li> </ul>	mA	8.2
<b>Design of input feedback input</b>		No
<b>Design of the sensor</b>		
<ul style="list-style-type: none"> <li>at digital input 1 connectable</li> </ul>		PNP switching three-wire sensor or mechanical impulse contact with external DC supply (4.5 V ... 30 V)
<ul style="list-style-type: none"> <li>at digital input 2 connectable</li> </ul>		2-conductor Namur sensor or mechanical impulse contact
<b>Input current at digital input 1 maximum</b>	mA	50
<b>Pulse duration minimum</b>	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
Startup 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		
• for DC Rated value	V	24 ... 24
Operating range factor control supply voltage rated value		
• for DC		0.75 ... 1.25
Surge voltage resistance Rated value	kV	4
Active power consumption	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		

<ul style="list-style-type: none"> <li>• for DC <ul style="list-style-type: none"> <li>— at 24 V maximum</li> </ul> </li> </ul>	V·A	4
<b>Ambient temperature</b>		
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	°C	-25 ... +60
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	°C	-40 ... +80
<ul style="list-style-type: none"> <li>• during transport</li> </ul>	°C	-40 ... +80
<b>Galvanic isolation</b>		
<ul style="list-style-type: none"> <li>• between entrance and outlet</li> </ul>		Yes
<ul style="list-style-type: none"> <li>• between the outputs</li> </ul>		No
<ul style="list-style-type: none"> <li>• between the voltage supply and other circuits</li> </ul>		Yes
<b>Suitability for use safety-related circuits</b>		No
<b>Category acc. to EN 954-1</b>		none
<b>Safety Integrity Level (SIL) acc. to IEC 61508</b>		none

#### Communication/ Protocol:

<b>Type of voltage supply via input/output link master</b>		Yes
<b>IO-Link transfer rate</b>		COM2 (38,4 kBaud)
<b>Protocol is supported IO-Link protocol</b>		Yes
<b>Amount of data</b>		
<ul style="list-style-type: none"> <li>• of the address area of the outputs with cyclical transfer total</li> </ul>	byte	2
<ul style="list-style-type: none"> <li>• of the address area of the inputs with cyclical transfer total</li> </ul>	byte	4
<b>Point-to-point cycle time between master and IO-Link device minimum</b>	ms	10

#### Mechanical data:

<b>Width</b>	mm	22.5
<b>Height</b>	mm	91
<b>Depth</b>	mm	103
<b>mounting position</b>		any
<b>Required spacing for grounded parts</b>		
<ul style="list-style-type: none"> <li>• forwards</li> </ul>	mm	0
<ul style="list-style-type: none"> <li>• Backwards</li> </ul>	mm	0
<ul style="list-style-type: none"> <li>• at the side</li> </ul>	mm	0
<ul style="list-style-type: none"> <li>• upwards</li> </ul>	mm	0
<ul style="list-style-type: none"> <li>• downwards</li> </ul>	mm	0
<b>Required spacing with side-by-side mounting</b>		
<ul style="list-style-type: none"> <li>• forwards</li> </ul>	mm	0
<ul style="list-style-type: none"> <li>• Backwards</li> </ul>	mm	0
<ul style="list-style-type: none"> <li>• at the side</li> </ul>	mm	0
<ul style="list-style-type: none"> <li>• upwards</li> </ul>	mm	0
<ul style="list-style-type: none"> <li>• downwards</li> </ul>	mm	0
<b>Required spacing for live parts</b>		

• forwards	mm	0
• Backwards	mm	0
• at the side	mm	0
• upwards	mm	0
• downwards	mm	0
<b>Mounting type</b>		screw and snap-on mounting
<b>Product function removable terminal for auxiliary and control circuit</b>		Yes
<b>Type of electrical connection</b>		spring-loaded terminals
<b>Type of connectable conductor cross-section</b>		
• solid		2x (0.25 ... 1.5 mm <sup>2</sup> )
• finely stranded		
— with core end processing		2 x (0.25 ... 1.5 mm <sup>2</sup> )
— without core end processing		2x (0.25 ... 1.5 mm <sup>2</sup> )
• for AWG conductors		
— solid		2x (24 ... 16)
— stranded		2x (24 ... 16)

Outputs:		
<b>Number of NO contacts delayed switching</b>		0
<b>Number of NC contacts delayed switching</b>		0
<b>Number of CO contacts delayed switching</b>		1
<b>Ampacity of the output relay</b>		
• 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
<b>Operating current at 17 V minimum</b>	mA	5
<b>Continuous current of the DIAZED fuse link of the output relay</b>	A	4
<b>Thermal current of the switching element with contacts maximum</b>	A	5
<b>Mechanical service life (switching cycles) typical</b>		10 000 000
<b>Electrical endurance (switching cycles) at AC-15 at 230 V typical</b>		100 000
<b>Operating frequency with 3RT2 contactor maximum</b>	1/h	5 000

Certificates/ approvals:

## General Product Approval



[Manufacturer  
declaration](#)



## Test Certificates

[Type Test  
Certificates/Test  
Report](#)

[Special Test  
Certificate](#)

## other

[other](#)

[Declaration of  
Conformity](#)

## 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

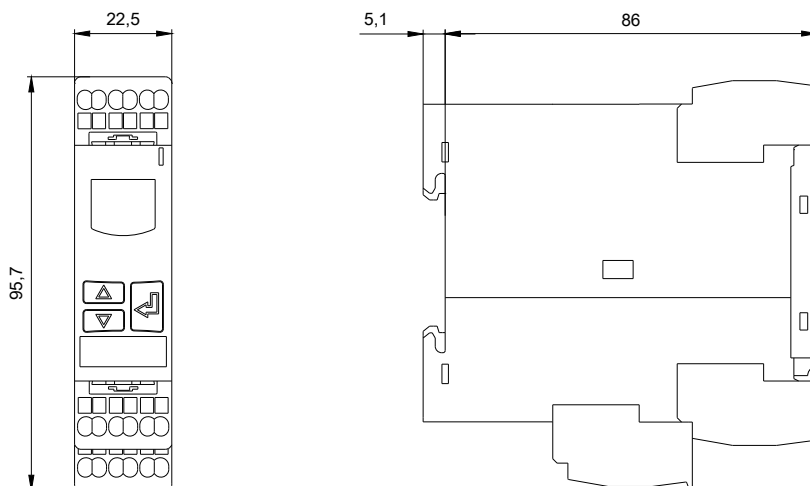
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3UG48512AA40>

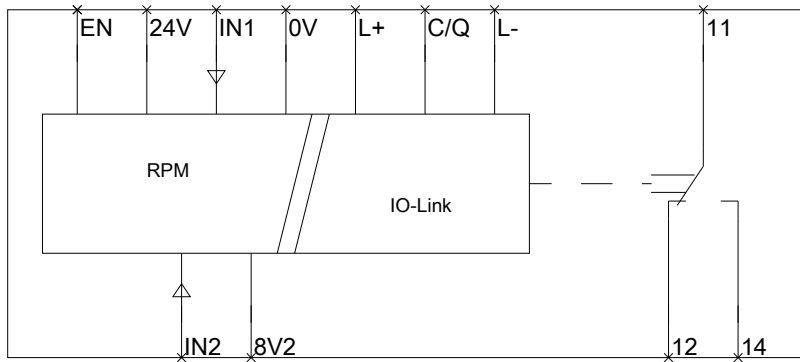
### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3UG48512AA40>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3UG48512AA40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3UG48512AA40&lang=en)





last modified:

15.01.2015