







Digital monitoring relay Current monitoring, 22.5 mm for IO-Link 0.05...10.0 A  
AC/DC Overcurrent and undercurrent Transformer scaling factor Hysteresis 0.01 to  
5.0 A ON-delay time Tripping delay time 1 change-over contact, screw terminal

product brand name	SIRIUS
product designation	Current monitoring relay with digital setting
product type designation	3UG4
<b>General technical data</b>	
product function	Current monitoring relay
design of the display	LCD
insulation voltage for overvoltage category III according to IEC 60664	
• with degree of pollution 2 rated value	690 V
degree of pollution	2
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	
• between control and auxiliary circuit	690 V
protection class IP	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	10 000 001
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
<b>Product Function</b>	
product function	
• overcurrent detection 1 phase	Yes
• overcurrent detection 3 phase	No
• undercurrent detection 1 phase	Yes
• undercurrent detection 3 phases	No
• overcurrent detection DC	Yes
• undercurrent detection DC	Yes
• current window recognition DC	Yes
• voltage window recognition 1 phase	No
• voltage window recognition 3 phase	No
• adjustable open/closed-circuit current principle	Yes
• external reset	Yes
• auto-RESET	Yes
<b>Supply voltage</b>	
type of voltage of the supply voltage	DC
supply voltage 1 at DC	18 ... 30 V

supply voltage 1 at DC rated value	24 V
<b>Measuring circuit</b>	
type of current for monitoring	AC/DC
measurable current	0.05 ... 10 A
measurable line frequency	500 ... 40 Hz
adjustable current response value current	
• 1	0.05 ... 10 A
• 2	0.05 ... 10 A
adjustable response delay time	
• when starting	0 ... 999.9 s
• with lower or upper limit violation	0 ... 999.9 s
adjustable switching hysteresis for measured current value	5 ... 10 mA
accuracy of digital display	+/-1 digit
relative temperature-related measurement deviation	5 %
internal resistance of the measuring circuit	5 mΩ
<b>Precision</b>	
relative metering precision	5 %
<b>Communication/ Protocol</b>	
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	
• 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
<b>Auxiliary circuit</b>	
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
<b>Main circuit</b>	
number of poles for main current circuit	1
operating voltage rated value	24 ... 24 V
ampacity of the output relay at AC-15	
• at 250 V at 50/60 Hz	3 A
• at 400 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
ampacity of the semiconductor output in SIO mode	200 mA
operational current at 17 V minimum	0.01 A
continuous current of the DIAZED fuse link of the output relay	4 A
<b>Electromagnetic compatibility</b>	
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
<b>Galvanic isolation</b>	
design of the electrical isolation	Protective separation
galvanic isolation	
• between input and output	Yes
• between the voltage supply and other circuits	Yes
<b>Connections/ Terminals</b>	
product component removable terminal for main circuit	Yes

product component removable terminal for auxiliary and control circuit	Yes		
type of electrical connection			
<ul style="list-style-type: none"><li>for main current circuit</li><li>for auxiliary and control circuit</li></ul>	screw-type terminals screw-type terminals		
type of connectable conductor cross-sections			
<ul style="list-style-type: none"><li>solid</li><li>finely stranded with core end processing</li><li>for AWG cables solid</li><li>for AWG cables stranded</li></ul>	1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²) 2x (20 ... 14) 2x (20 ... 14)		
connectable conductor cross-section			
<ul style="list-style-type: none"><li>solid</li><li>finely stranded with core end processing</li></ul>	0.5 ... 4 mm² 0.5 ... 2.5 mm²		
AWG number as coded connectable conductor cross section			
<ul style="list-style-type: none"><li>solid</li><li>stranded</li></ul>	20 ... 14 20 ... 14		
tightening torque with screw-type terminals	0.8 ... 1.2 N·m		
Installation/ mounting/ dimensions			
mounting position	any		
fastening method	snap-on mounting		
height	92 mm		
width	22.5 mm		
depth	91 mm		
required spacing			
<ul style="list-style-type: none"><li>with side-by-side mounting<ul style="list-style-type: none"><li>forwards</li><li>backwards</li><li>upwards</li><li>downwards</li><li>at the side</li></ul></li><li>for grounded parts<ul style="list-style-type: none"><li>forwards</li><li>backwards</li><li>upwards</li><li>at the side</li><li>downwards</li></ul></li><li>for live parts<ul style="list-style-type: none"><li>forwards</li><li>backwards</li><li>upwards</li><li>downwards</li><li>at the side</li></ul></li></ul>	0 mm 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm 0 mm 0 mm 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"><li>during operation</li><li>during storage</li><li>during transport</li></ul>	-25 ... +60 °C -40 ... +85 °C -40 ... +85 °C		
Certificates/ approvals			
General Product Approval			
EMC			
<div><div> CCC</div><div><a href="#">Confirmation</a></div><div><a href="#">Manufacturer Declaration</a></div><div> UL</div><div></div><div> RCM</div></div>			
Declaration of Conformity	Test Certificates	Marine / Shipping	other

## 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=3UG4822-1AA40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4822-1AA40>

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

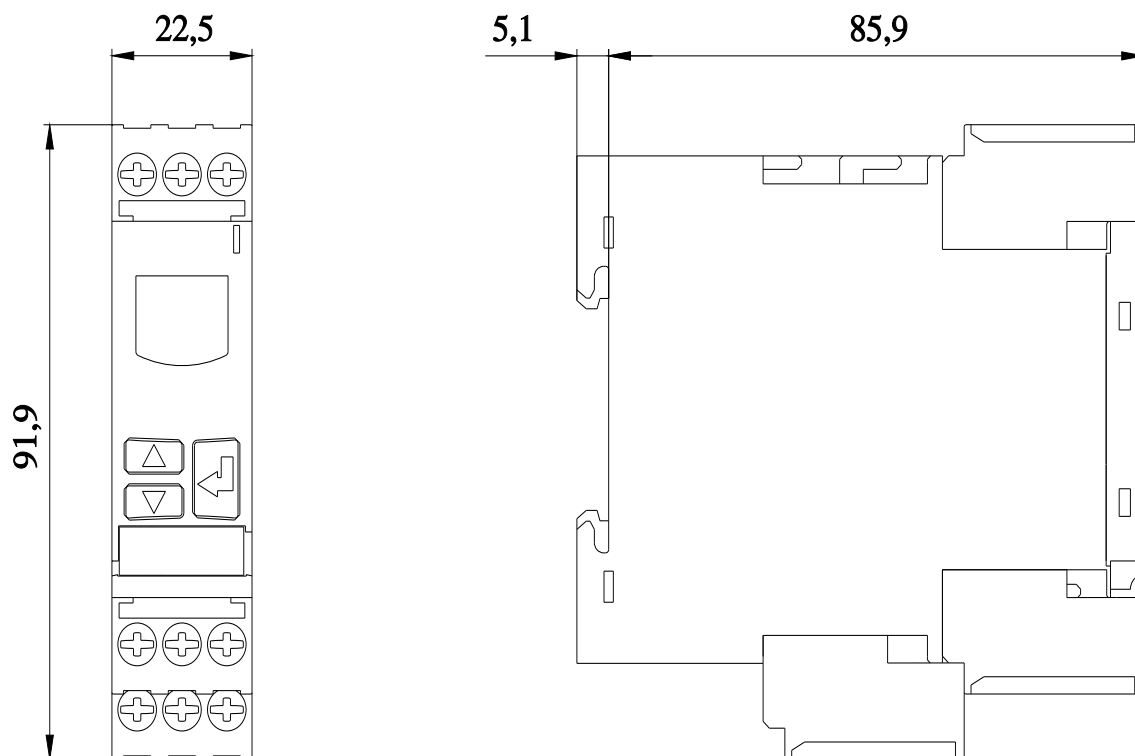
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4822-1AA40>

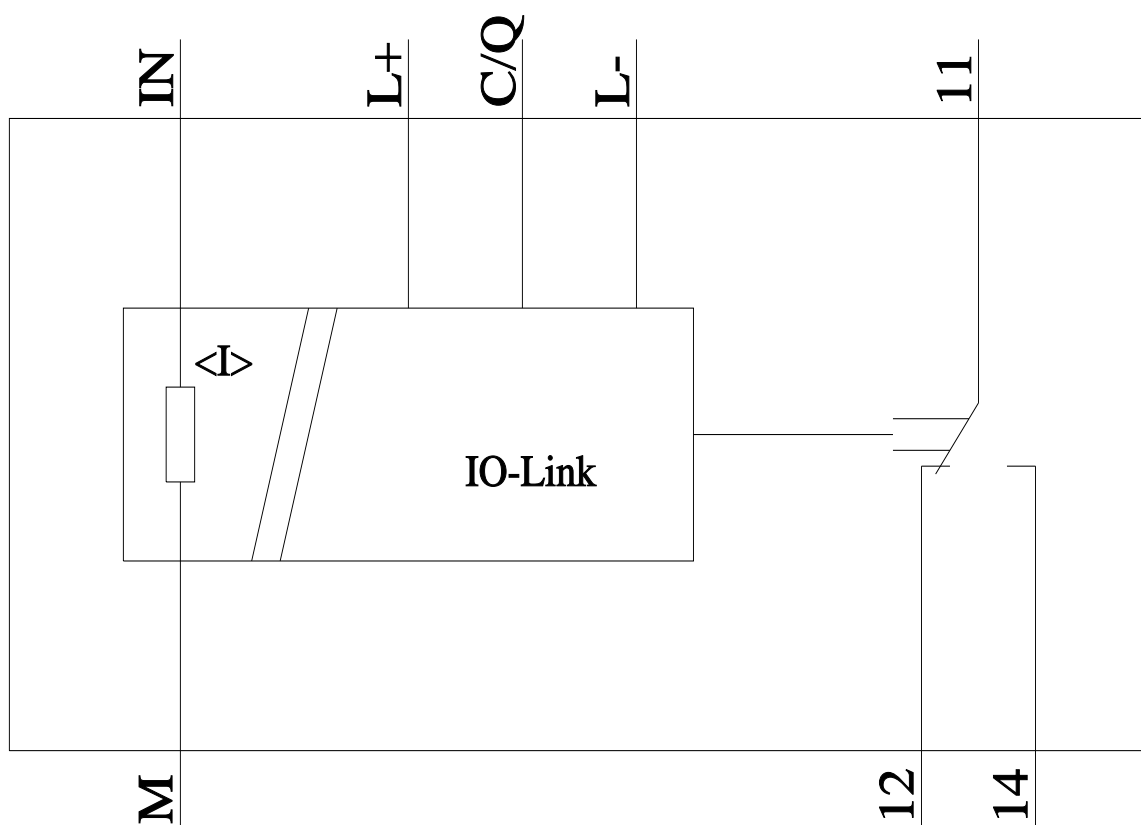
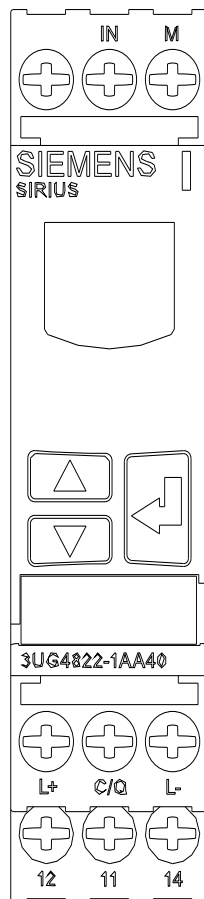
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4822-1AA40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4822-1AA40&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4822-1AA40/manual>





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