



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, spring-type connection system

product brand name	SIRIUS
product designation	Current monitoring relay with digital setting
product type designation	3UG4
General technical data	
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 safe isolation	
• between control and auxiliary circuit	690 V
protection class IP	IP20
shock resistance acc. to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
vibration resistance acc. to IEC 60068-2-6	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
mechanical service life (switching cycles) typical	10 000 002
electrical endurance (switching cycles) at AC-15 at 230 V typical	100 000
thermal current of the switching element with contacts maximum	5 A
reference code acc. to IEC 81346-2	K
relative repeat accuracy	1 %
Substance Prohibitance (Date)	01.05.2012 00:00:00
Product Function	
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
Supply voltage	
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
Measuring circuit	
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
Precision	
relative metering precision	5 %
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	
• 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
Main circuit	
number of poles for main current circuit	1
operating voltage rated value	24 ... 24 V
Outputs	
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
Electromagnetic compatibility	
conducted interference	
• due to burst acc. to IEC 61000-4-4	2 kV
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV
field-based interference acc. to IEC 61000-4-3	10 V/m
electrostatic discharge acc. to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
Galvanic isolation	
design of the electrical isolation	Protective separation

galvanic isolation		
<ul style="list-style-type: none"> • between input and output • between the voltage supply and other circuits 	<p>Yes</p> <p>Yes</p>	
Connections/ Terminals		
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"> • for main current circuit • for auxiliary and control circuit 	<p>spring-loaded terminals</p> <p>spring-loaded terminals</p>	
type of connectable conductor cross-sections		
<ul style="list-style-type: none"> • solid • finely stranded with core end processing • finely stranded without core end processing • at AWG cables solid • at AWG cables stranded 	<p>2x (0.25 ... 1.5 mm²)</p> <p>2 x (0.25 ... 1.5 mm²)</p> <p>2x (0.25 ... 1.5 mm²)</p> <p>2x (24 ... 16)</p> <p>2x (24 ... 16)</p>	
connectable conductor cross-section		
<ul style="list-style-type: none"> • solid • finely stranded with core end processing • finely stranded without core end processing 	<p>0.25 ... 1.5 mm²</p> <p>0.25 ... 1.5 mm²</p> <p>0.25 ... 1.5 mm²</p>	
AWG number as coded connectable conductor cross section		
<ul style="list-style-type: none"> • solid • stranded 	<p>24 ... 16</p> <p>24 ... 16</p>	
Installation/ mounting/ dimensions		
mounting position	any	
fastening method	snap-on mounting	
height	94 mm	
width	22.5 mm	
depth	91 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 • for grounded parts <ul style="list-style-type: none"> — forwards — backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side 	<p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p>	
Ambient conditions		
installation altitude at height above sea level maximum	2 000 m	
ambient temperature		
<ul style="list-style-type: none"> • during operation • during storage • during transport 	<p>-25 ... +60 °C</p> <p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p>	
Certificates/ approvals		
General Product Approval	EMC	Declaration of Conformity



[Manufacturer Declaration](#)



EG-Konf.

Test Certificates	Marine / Shipping	other	Railway
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



[Confirmation](#)

[Vibration and Shock](#)

Further information

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=3UG4822-2AA40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4822-2AA40>

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

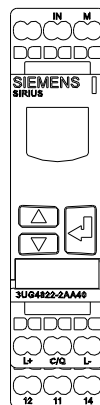
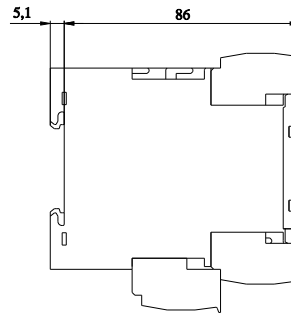
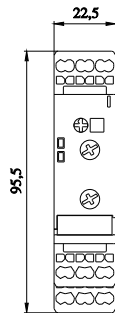
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4822-2AA40>

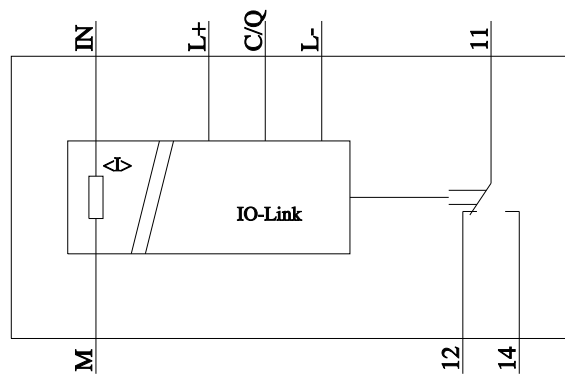
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4822-2AA40&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4822-2AA40/manual>





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