# **SIEMENS**

Data sheet 3UG4822-1AA40

0101110



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
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 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
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
SVHC substance name	Blei - 7439-92-1 Bleimonoxid (Bleioxid) - 1317-36-8 Dicyclohexylphthalat (DCHP) - 84-61-7
Product Function	
product function	
<ul> <li>overcurrent detection 1 phase</li> </ul>	Yes
<ul> <li>overcurrent detection 3 phase</li> </ul>	No
<ul> <li>undercurrent detection 1 phase</li> </ul>	Yes
<ul> <li>undercurrent detection 3 phases</li> </ul>	No
<ul> <li>overcurrent detection DC</li> </ul>	Yes
<ul> <li>undercurrent detection DC</li> </ul>	Yes
<ul> <li>current window recognition DC</li> </ul>	Yes
<ul> <li>voltage window recognition 1 phase</li> </ul>	No
<ul> <li>voltage window recognition 3 phase</li> </ul>	No
<ul> <li>adjustable open/closed-circuit current principle</li> </ul>	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
• 1	0.05 10 A
adjustable response delay time	0.00 10 A
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	10 ms
device minimum	Vec
type of voltage supply via input/output link master	Yes
data volume	4 byta
<ul> <li>of the address range of the inputs with cyclical transfer total</li> </ul>	4 byte
of the address range of the outputs with cyclical transfer	2 byte
total	
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
ampacity of the output relay at AC-15	2 A
<ul> <li>at 250 V at 50/60 Hz</li> <li>at 400 V at 50/60 Hz</li> </ul>	3 A 3 A
ampacity of the output relay at DC-13	3A
• at 24 V	1A
• 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	
<ul> <li>due to burst according to IEC 61000-4-4</li> </ul>	2 kV
<ul> <li>due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	2 kV
due to conductor-conductor surge according to IEC	1 kV
61000-4-5	10 V/m
field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
Galvanic isolation	O NY CONTROL DISCHARGE / O NY AIT DISCHARGE
design of the electrical isolation	Protective separation
galvanic isolation	
between input and output	Yes
between the voltage supply and other circuits	Yes
Connections/ Terminals	

roduct component removable terminal for main circuit	Yes
product component removable terminal for auxiliary and control circuit	Yes
ype of electrical connection	
for main current circuit	screw-type terminals
for auxiliary and control circuit	screw-type terminals
ype of connectable conductor cross-sections	
• solid	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
<ul> <li>for AWG cables solid</li> </ul>	2x (20 14)
for AWG cables stranded	2x (20 14)
connectable conductor cross-section	
• solid	0.5 4 mm²
finely stranded with core end processing	0.5 2.5 mm²
AWG number as coded connectable conductor cross section	
• solid	20 14
stranded	20 14
ightening torque with screw-type terminals	0.8 1.2 N·m
stallation/ mounting/ dimensions	
nounting position	any
astening method	snap-on mounting
neight	92 mm
vidth	22.5 mm
lepth	91 mm
equired spacing	
<ul> <li>with side-by-side mounting</li> </ul>	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
<ul> <li>for grounded parts</li> </ul>	
— 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
nbient conditions	
nstallation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C
during storage	-40 +85 °C
during transport	-40 +85 °C
provals Certificates	



Confirmation

Manufacturer Declaration







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,...)

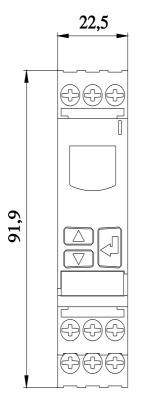
https://support.industry.siemens.com/cs/ww/en/ps/3UG4822-1AA40

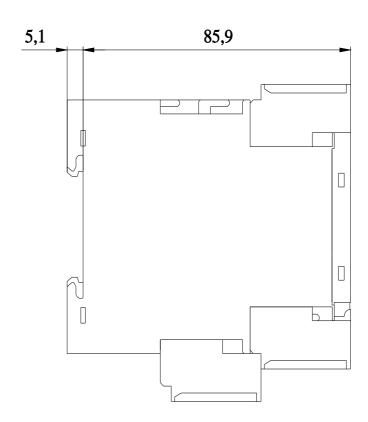
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

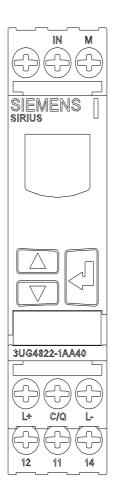
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UG4822-1AA40&lang=en

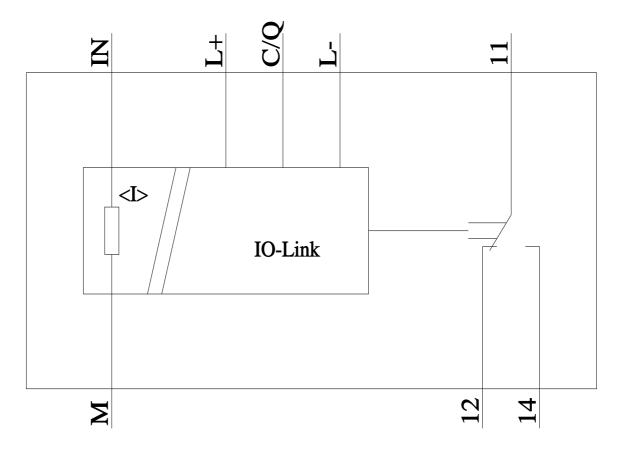
**Characteristic: Derating** 

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









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