



!!! product phase-out !!! the preferred successor is 3UG5825-1AA40 digital monitoring relay for residual current monitoring with residual-current transformer 3UL23 for IO-Link adjustment range 0.03 A to 40 A separate for warning threshold and trip value ON-delay and tripping delay 0 to 999.9 s shutdown hysteresis up to 50% warning hysteresis 5% fixed width 22.5 mm, 2 changeover contacts with or without fault buffer spring-loaded connection system

product brand name	SIRIUS
product designation	Residual current monitoring relay with digital setting
product type designation	3UG4
<b>General technical data</b>	
product function	for three-phase supplies
design of the display	LCD
insulation voltage	
• rated value	300 V
• for overvoltage category III according to IEC 60664	
— with degree of pollution 3 rated value	300 V
degree of pollution	3
type of voltage	
• for monitoring	AC/DC
• of the control supply voltage	DC
surge voltage resistance rated value	4 kV
protection class IP	
• of the enclosure	IP20
• of the terminal	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	10 000 000
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)	02/14/2013
Weight	0.147 kg
<b>Product Function</b>	
product function	
• residual current display	Yes
• error memory	Yes
• overcurrent detection 1 phase	Yes
• undercurrent detection 1 phase	No
• adjustable open/closed-circuit current principle	Yes
• external reset	Yes
• auto-RESET	No
• manual RESET	No
<b>Control circuit/ Control</b>	

<b>control supply voltage at DC rated value</b>	24 ... 24 V
<b>operating range factor control supply voltage rated value at DC</b>	
• initial value	0.85
• full-scale value	1.1
<b>Measuring circuit</b>	
<b>type of current for monitoring</b>	AC
<b>measurable current</b>	10 mA ... 43 A
<b>measurable line frequency</b>	16 ... 400 Hz
<b>adjustable operating delay time</b>	0 ... 999.9 s
<b>adjustable current response value current</b>	
• 1	30 mA ... 40 A
• 2	30 mA ... 40 A
<b>adjustable response delay time</b>	0 ... 999.9 s
adjustable response delay time when starting	0 ... 999.9 s
<b>buffering time in the event of power failure minimum</b>	10 ms
<b>accuracy of digital display</b>	+/-1 digit
<b>Precision</b>	
<b>relative metering precision</b>	5 %
<b>temperature drift per °C</b>	0.1 %/°C
<b>Communication/ Protocol</b>	
protocol is supported IO-Link protocol	Yes
<b>IO-Link transfer rate</b>	COM2 (38,4 kBaud)
<b>point-to-point cycle time between master and IO-Link device minimum</b>	10 ms
<b>type of voltage supply via input/output link master</b>	Yes
<b>data volume</b>	
• 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>	
<b>number of NC contacts for auxiliary contacts</b>	0
number of NC contacts delayed switching	0
<b>number of NO contacts for auxiliary contacts</b>	0
number of NO contacts delayed switching	0
<b>number of CO contacts</b>	
• for auxiliary contacts	2
• delayed switching	2
<b>operating frequency with 3RT2 contactor maximum</b>	5 000 1/h
<b>Main circuit</b>	
<b>type of voltage</b>	DC
operating voltage rated value	24 ... 24 V
<b>operating frequency rated value</b>	16 ... 400 Hz
<b>ampacity of the output relay at AC-15</b>	
• at 250 V at 50/60 Hz	3 A
• at 400 V at 50/60 Hz	0 A
<b>ampacity of the output relay at DC-13</b>	
• at 24 V	1 A
• at 125 V	0.2 A
• at 250 V	0.1 A
<b>ampacity of the semiconductor output in SIO mode</b>	200 mA
<b>operational current at 17 V minimum</b>	5 mA
<b>continuous current of the DIAZED fuse link of the output relay</b>	4 A
<b>Electromagnetic compatibility</b>	
<b>conducted interference</b>	
• 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	1 kV

61000-4-5	
<b>field-based interference according to IEC 61000-4-3</b>	10 V/m
<b>electrostatic discharge according to IEC 61000-4-2</b>	4 kV contact discharge / 8 kV air discharge
<b>Galvanic isolation</b>	
<b>design of the electrical isolation</b>	galvanic isolation
<b>galvanic isolation</b>	
• between input and output	Yes
• between the outputs	Yes
• between the voltage supply and other circuits	No
<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<b>type of electrical connection</b>	spring-loaded terminals
<b>type of connectable conductor cross-sections</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> )
• finely stranded without core end processing	2x (0.25 ... 1.5 mm <sup>2</sup> )
• for AWG cables solid	2x (24 ... 16)
• for AWG cables stranded	2x (24 ... 16)
<b>connectable conductor cross-section</b>	
• solid	0.25 ... 1.5 mm <sup>2</sup>
• finely stranded with core end processing	0.25 ... 1.5 mm <sup>2</sup>
• finely stranded without core end processing	0.25 mm <sup>2</sup>
<b>AWG number as coded connectable conductor cross section</b>	
• solid	24 ... 16
• stranded	24 ... 16
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	screw and snap-on mounting onto 35 mm DIN rail
<b>height</b>	103 mm
<b>width</b>	22.5 mm
<b>depth</b>	91 mm
<b>required spacing</b>	
• with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
• for grounded parts	
— 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
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-40 ... +85 °C

• during transport

-40 ... +85 °C

## Approvals Certificates

### General Product Approval



[Manufacturer Declaration](#)



EG-Konf.



UL



EMV

Test Certificates

Maritime application

other



RCM

[KC](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



DNV



other

Railway

Environment

[Confirmation](#)

[Special Test Certificate](#)

[Environmental Conformations](#)

## Further information

### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

### Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

### 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=3UG4825-2CA40>

### Cax online generator

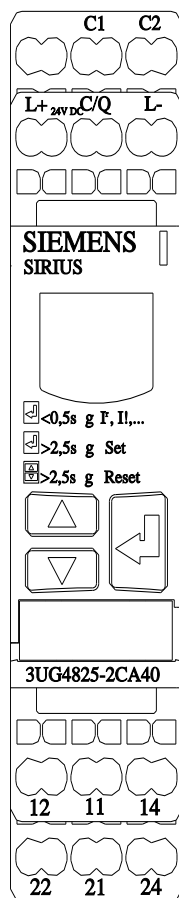
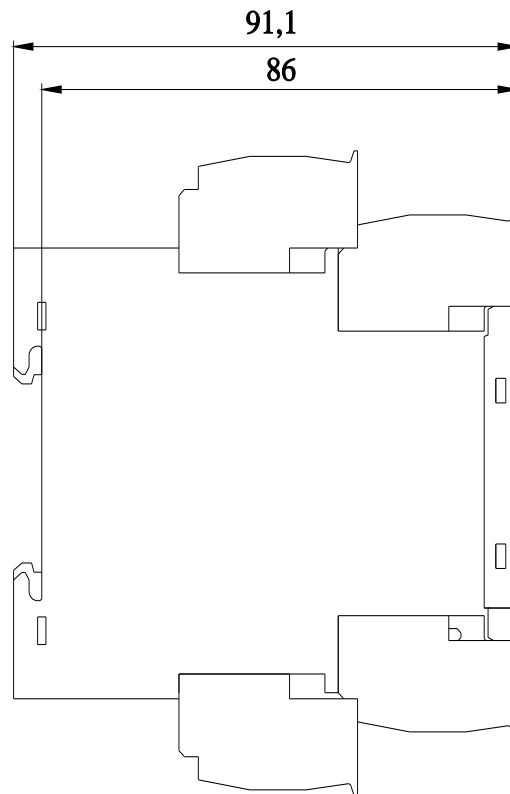
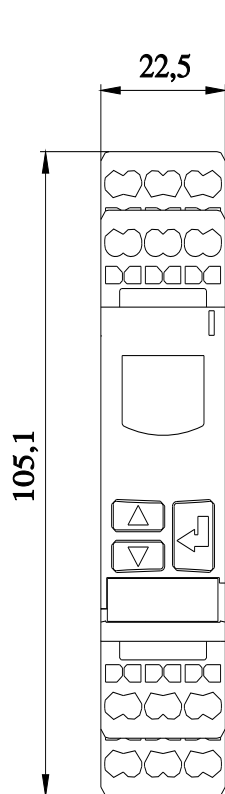
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4825-2CA40>

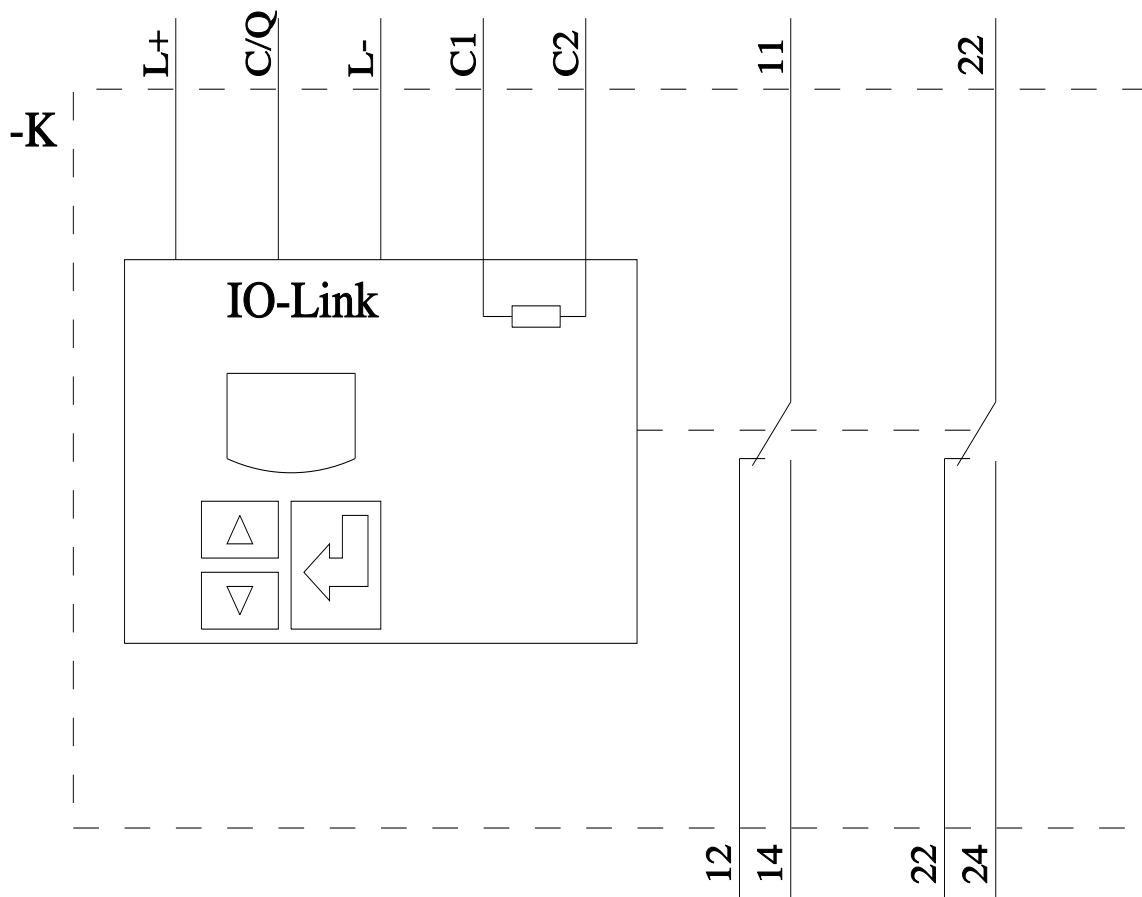
### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4825-2CA40>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4825-2CA40&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4825-2CA40&lang=en)





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