

Siemens  
EcoTech



digital monitoring relay residual current monitoring (with current transformer 3UL23)  
adjustment range 0.03...40 A supply voltage 24 V DC ON delay and tripping delay  
0.1..999.9 s 1 changeover contact screw terminal

product brand name	SIRIUS
product designation	Residual current monitoring relay with digital setting
design of the product	monitoring of residual current, external power supply with auxiliary voltage for IO-Link
product type designation	3UG5
<b>General technical data</b>	
product function	residual current monitoring relay
design of the display	LCD
insulation voltage	
• rated value	690 V
• for overvoltage category III according to IEC 60664	
— with degree of pollution 2 rated value	690 V
— with degree of pollution 3 rated value	690 V
degree of pollution	3
type of voltage	
• for monitoring	AC/DC
• of the control supply voltage	DC
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	f = 4 ... 5,81 Hz, dmax = 15 mm; f = 5,81 ... 500 Hz, Amax = 20 m/s <sup>2</sup> ; 10 cycles
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
Substance Prohibitance (Date)	06/01/2023
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Net Weight	0.172 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	Yes
• manual RESET	Yes
<b>Control circuit/ Control</b>	
control supply voltage at DC rated value	24 V
control supply voltage at DC rated value	24 ... 24 V
<b>operating range factor control supply voltage rated value at DC</b>	
• initial value	0.7
• full-scale value	1.25
<b>operating range factor control supply voltage rated value at AC at 60 Hz</b>	
• full-scale value	1.1
<b>Measuring circuit</b>	
measurable current	30 ... 40 000 mA
measurable line frequency	16 ... 400 Hz
adjustable operating delay time	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>adjustable switching hysteresis for measured current value</b>	0 mA
<b>accuracy of digital display</b>	+/-1 digit
<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>	5 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>	
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
<b>number of CO contacts</b>	
• for auxiliary contacts	1
• delayed switching	1
<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 230 V at 50/60 Hz	3 A
• at 250 V at 50/60 Hz	3 A
• at 400 V at 50/60 Hz	3 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>	6 A
<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	Yes
<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>	screw terminal
<b>type of connectable conductor cross-sections</b>	
• solid	1x (0.5 ... 4.0mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
• finely stranded with core end processing	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
• for AWG cables solid	1x (20 ... 12), 2x (20 ... 14)
<b>connectable conductor cross-section</b>	
• solid	0.5 ... 4 mm <sup>2</sup>
• finely stranded with core end processing	0.5 ... 4 mm <sup>2</sup>
<b>AWG number as coded connectable conductor cross section</b>	
• solid	20 ... 12
• stranded	20 ... 12
tightening torque with screw-type terminals	0.6 ... 0.8 N·m
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	screw and snap-on mounting
<b>height</b>	100 mm
<b>width</b>	22.5 mm
<b>depth</b>	90 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 ... +80 °C
• during transport	-40 ... +80 °C
<b>Approvals Certificates</b>	
<b>General Product Approval</b>	other



Confirmation



Environment



[Environmental Confirmations](#)

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=3UG5825-1AA40>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5825-1AA40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG5825-1AA40>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG5825-1AA40&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5825-1AA40&lang=en)





