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Data sheet 3UG5825-1AA40

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
General technical data	
product function	residual current monitoring relay
design of the display	LCD
power loss [W] maximum	1.2 W
power loss [V·A] maximum	1.2 V·A
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
surge voltage resistance rated value	6 kV
protection class IP	
• of the enclosure	IP20
• of the terminal	IP20
shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15 g / 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/s²; 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
relative repeat accuracy	1 %
Substance Prohibitance (day/month/year)	06/01/2023
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1
Net Weight	0.146 kg

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Product Function	
product function	
● phase sequence recognition	No
● phase failure detection	No
● asymmetry detection	No
● 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
Control circuit/ Control	
control supply voltage at DC rated value	24 V
operating range factor control supply voltage rated value at DC	
● initial value	0.75
● full-scale value	1.25
Measuring circuit	
type of current for monitoring	AC
measurable current	30 ... 40 000 mA
measurable line frequency	16 ... 400 Hz
adjustable operating delay time	0 ... 999.9 s
adjustable current response value current	
● 1	30 mA ... 40 A
● 2	30 mA ... 40 A
adjustable response delay time	0 ... 999.9 s
adjustable response delay time when starting	0 ... 999.9 s
adjustable switching hysteresis for measured current value	0 mA
buffering time in the event of power failure minimum	10 ms
accuracy of digital display	+/-1 digit
Precision	
relative metering precision	5 %
temperature drift per °C	0 %/°C
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	5 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	
● for auxiliary contacts	1
● delayed switching	1
operating frequency with 3RT2 contactor maximum	5 000 1/h
Main circuit	
type of voltage	DC
operating voltage rated value	24 V
operating frequency rated value	16 ... 400 Hz
ampacity of the output relay at AC-15	
● at 230 V at 50/60 Hz	3 A
● at 250 V at 50/60 Hz	3 A

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● at 400 V at 50/60 Hz	3 A
ampacity of the output relay at DC-13	
● at 24 V	1 A
● at 110 V	0.2 A
● at 125 V	0.2 A
● at 230 V	0.1 A
● at 250 V	0.1 A
ampacity of the semiconductor output in SIO mode	200 mA
operational current at 17 V minimum	5 mA
continuous current of the DIAZED fuse link of the output relay	6 A
Electromagnetic compatibility	
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
Galvanic isolation	
design of the electrical isolation	galvanic isolation
galvanic isolation	
● between input and output	Yes
● between the outputs	Yes
● between the voltage supply and other circuits	Yes
Safety related data	
product function suitable for safety function	No
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	screw terminal
type of connectable conductor cross-sections	
● solid	1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)
● finely stranded with core end processing	1x (0.5 ... 4 mm²), 2x (0.5 ... 1.5 mm²)
● for AWG cables solid	1x (20 ... 12), 2x (20 ... 14)
connectable conductor cross-section	
● solid	0.5 ... 4 mm²
● finely stranded with core end processing	0.5 ... 4 mm²
AWG number as coded connectable conductor cross section	
● solid	20 ... 12
● stranded	20 ... 12
tightening torque with screw-type terminals	0.6 ... 0.8 N·m
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting
height	100 mm
width	22.5 mm
depth	90 mm
required spacing	
● 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

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— 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

Ambient conditions

installation altitude at height above sea level maximum	2 000 m
ambient temperature	
● during operation	-25 ... +60 °C
● during storage	-40 ... +80 °C
● during transport	-40 ... +80 °C

Approvals Certificates

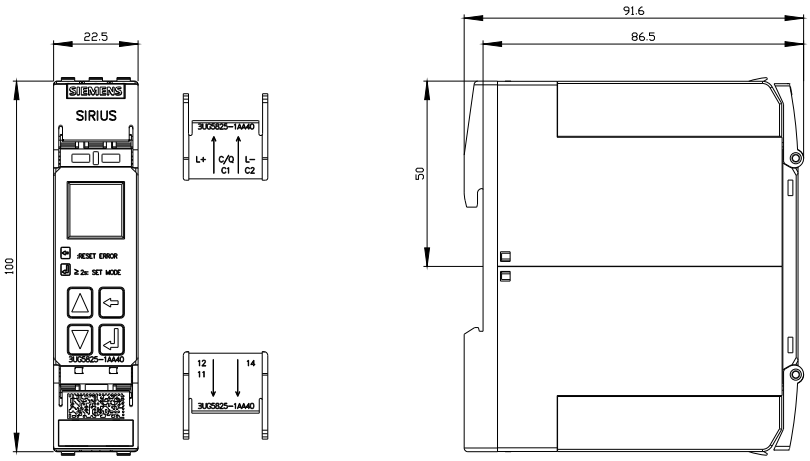
Environment	General Product Approval				
Environmental Confirmations	Siemens EcoTech	CCC	cULus	EAC	CE EG-Konf.

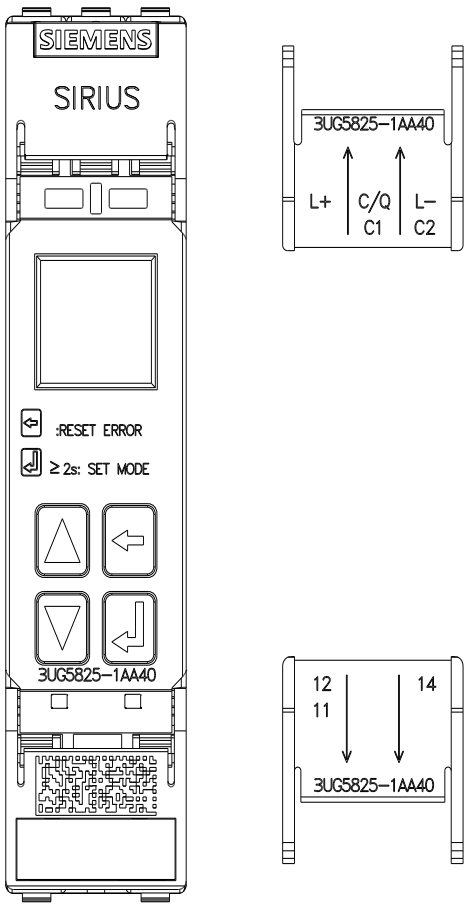
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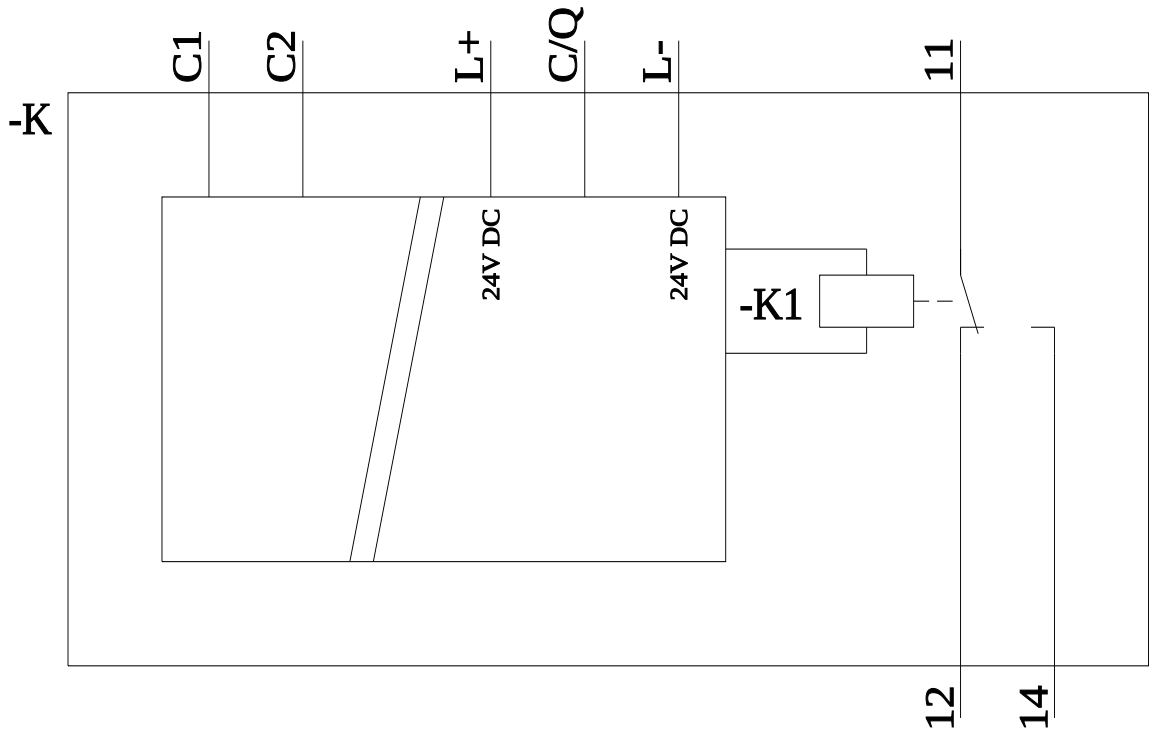
Information on the packaging
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Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
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