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Data sheet 3UG4825-2CA40

Digital monitoring relay for residual current monitoring with residual-current transformer 3UL23 for IO-Link Setting range 0.03 A to 40 A separate for warning threshold and switch-off value ON delay and tripping delay 0 to 999.9 s Shutdown hysteresis up to 50% Warning hysteresis 5% fixed Width 22.5mm, 2 change-over contacts with or without fault buffer spring-type connection system

product brand name	SIRIUS
product designation	Residual current monitoring relay with digital setting
product type designation	3UG4
General technical data	
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 of the control supply voltage	DC
surge voltage resistance rated value	4 kV
protection class IP	IP20
● of the enclosure	IP20
● of the terminal	IP20
shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
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
Product Function	
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
Control circuit/ Control	
control supply voltage at DC	
● rated value	24 ... 24 V
operating range factor control supply voltage rated value at DC	
● initial value	0.85
● full-scale value	1.1
Measuring circuit	

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type of current for monitoring	AC
measurable current	10 mA ... 43 A
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
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	0.1 %/°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	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 for auxiliary contacts	0
number of NC contacts delayed switching	0
number of NO contacts for auxiliary contacts	0
number of NO contacts delayed switching	0
number of CO contacts	
● for auxiliary contacts	2
● delayed switching	2
operating frequency with 3RT2 contactor maximum	5 000 1/h
Main circuit	
type of voltage	DC
operating voltage rated value	24 ... 24 V
operating frequency rated value	16 ... 400 Hz
ampacity of the output relay at AC-15	
● at 250 V at 50/60 Hz	3 A
● at 400 V at 50/60 Hz	0 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	5 mA
continuous current of the DIAZED fuse link of the output relay	4 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	4 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

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● between the voltage supply and other circuits	No
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	spring-loaded terminals
type of connectable conductor cross-sections	
● solid	2x (0.25 ... 1.5 mm²)
● finely stranded with core end processing	2 x (0.25 ... 1.5 mm²)
● finely stranded without core end processing	2x (0.25 ... 1.5 mm²)
● for AWG cables solid	2x (24 ... 16)
● for AWG cables stranded	2x (24 ... 16)
connectable conductor cross-section	
● solid	0.25 ... 1.5 mm²
● finely stranded with core end processing	0.25 ... 1.5 mm²
● finely stranded without core end processing	0.25 mm²
AWG number as coded connectable conductor cross section	
● solid	24 ... 16
● stranded	24 ... 16
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail
height	103 mm
width	22.5 mm
depth	91 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
— 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 ... +85 °C
● during transport	-40 ... +85 °C

Approvals Certificates

General Product Approval					EMC
CCC	Confirmation	Manufacturer Declaration	UL	EAC	RCM

Declaration of Conformity	Test Certificates	Marine / Shipping	other

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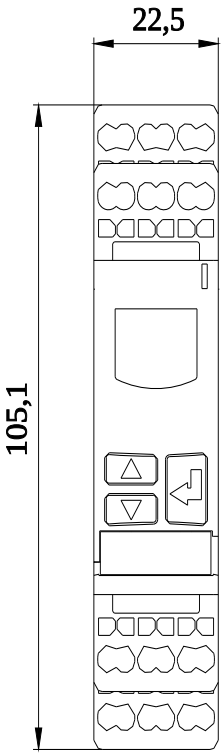
Type Test Certific-ates/Test Report | Special Test Certific-ate | Confirmation

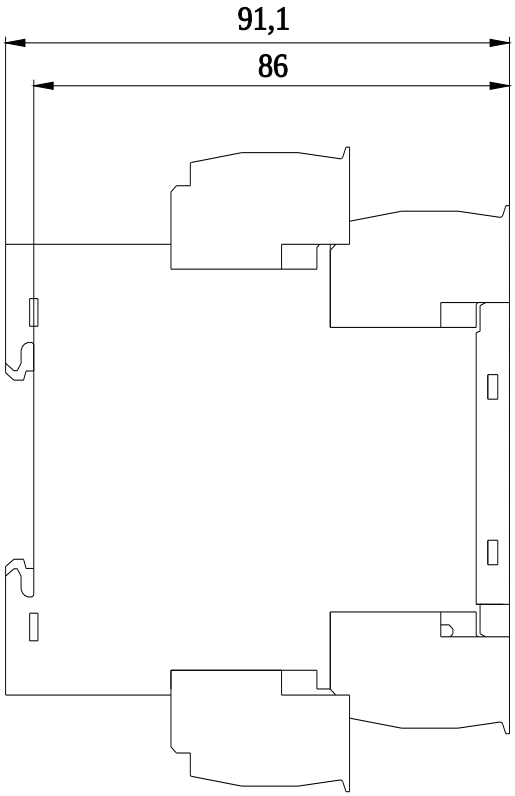
Railway

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=3UG4825-2CA40
Cax online generator
http://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, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4825-2CA40&lang=en
Characteristic: Derating
https://support.industry.siemens.com/cs/ww/en/ps/3UG4825-2CA40/manual





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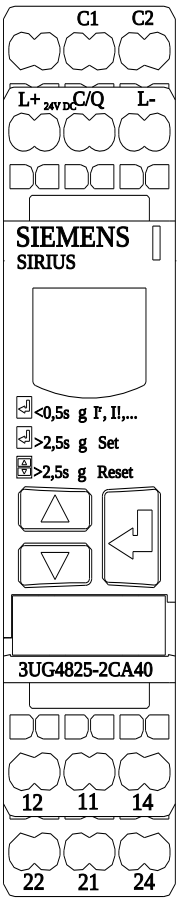

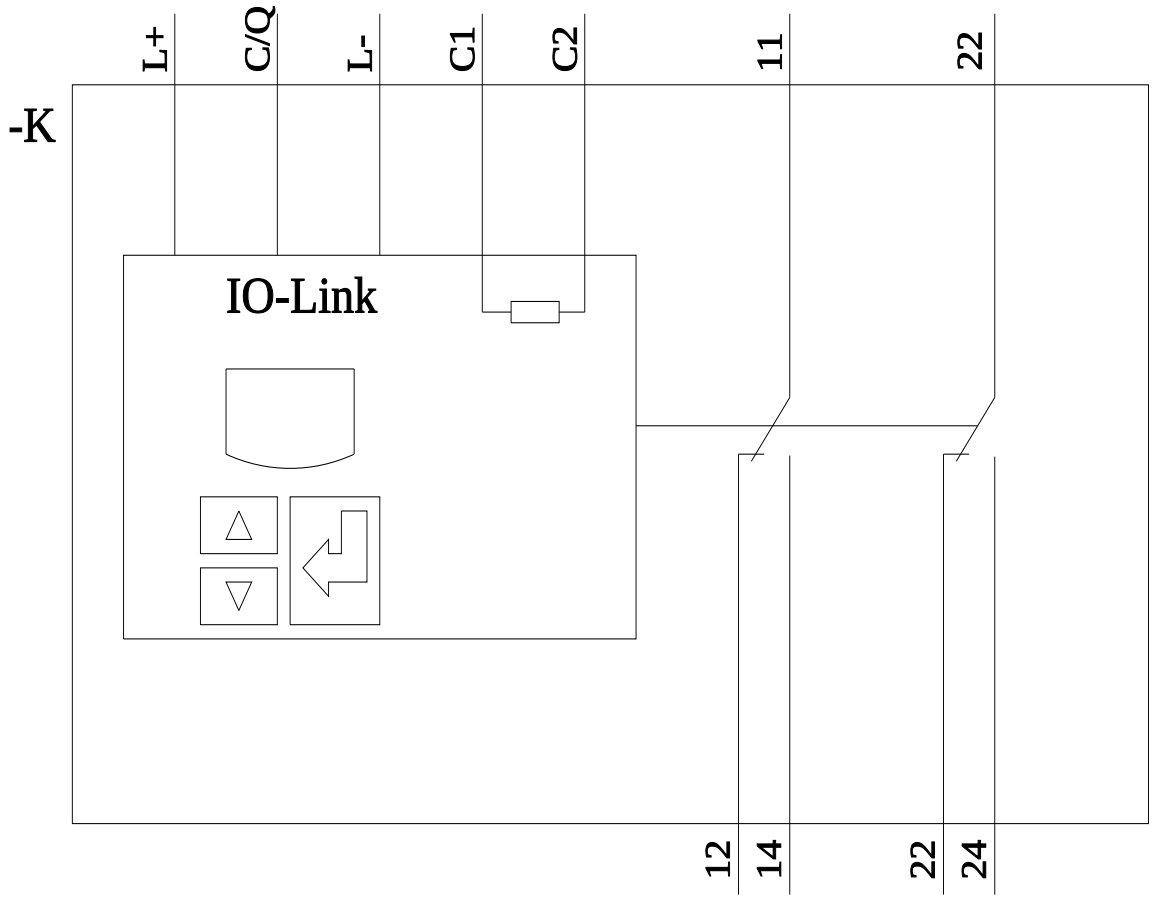

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