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Data sheet 3UG4624-1CS20



!!! product phase-out !!! the preferred successor is 3UG56251CW30 digital monitoring relay for residual current monitoring (with converter 3UL22) adjustment range 10-100% of transformer nominal value separate for warning threshold and trip value 90 to 690 V AC 50...60 Hz AC ON-delay and tripping delay 0.1 to 20 s shutdown hysteresis up to 50% warning hysteresis 5% fixed 2 changeover contacts

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**	690 V
● **for overvoltage category III according to IEC 60664**	
— with degree of pollution 3 rated value	690 V
degree of pollution	3
type of voltage of the control supply voltage	AC
surge voltage resistance rated value	6 kV
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)	05/01/2012
SVHC substance name	Lead monoxide (lead oxide) - 1317-36-8
Weight	0.171 kg
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
● auto-RESET	No
● manual RESET	No
Control circuit/ Control	
control supply voltage at AC	
● at 50 Hz rated value	90 ... 690 V
● at 60 Hz rated value	90 ... 690 V
operating range factor control supply voltage rated value at AC at 50 Hz	

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● initial value	1
operating range factor control supply voltage rated value at AC at 60 Hz	
● initial value	1
● full-scale value	1
Measuring circuit	
type of current for monitoring	AC
measurable current	30 ... 40 000 mA
measurable line frequency	60 ... 50 Hz
adjustable operating delay time	0.1 ... 20 s
adjustable current response value current	
● 1	30 mA ... 40 A
● 2	30 mA ... 40 A
adjustable response delay time	0.1 ... 20 s
adjustable response delay time when starting	0.1 ... 20 s
adjustable switching hysteresis for measured current value	15 ... 2 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	0.1 %/°C
Communication/ Protocol	
protocol is supported IO-Link protocol	No
Auxiliary circuit	
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	AC
operating voltage rated value	17 ... 400 V
operating frequency rated value	40 ... 60 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	3 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
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	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
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20

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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 ... 4.0mm²), 2x (0.5 ... 2.5 mm²)
● finely stranded with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
● for AWG cables solid	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
tightening torque with screw-type terminals	0.8 ... 1.2 N·m
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail
height	102 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
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	17.1 kg
global warming potential [CO2 eq] during manufacturing	4.44 kg
global warming potential [CO2 eq] during operation	13.7 kg
global warming potential [CO2 eq] after end of life	-1.06 kg

Approvals Certificates

General Product Approval	EMV

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EMV	Test Certificates		Maritime application		other
KC	Special Test Certific-ate	Type Test Certific-ates/Test Report	DNV	Lloyd's Register LRS	产品合格 QC PASS

other	Railway	Environment	
Confirmation	Special Test Certific-ate	EPD	Environmental Con-firmations

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=3UG4624-1CS20
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4624-1CS20
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3UG4624-1CS20
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4624-1CS20&lang=en

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