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Data sheet 3UG5642-1CW30

Siemens EcoTech

digital monitoring relay current, active current, voltage, cos-phi and performance monitoring up to 690 V AC/DC up to 10 A supply voltage 24 ... 240 V AC/DC, 50 .. 60 Hz ON delay and tripping delay 0.1..999.9 s 2 changeover contacts screw terminal



product brand name	SIRIUS
product designation	Network monitoring relay with digital setting
design of the product	monitoring of current, active current, voltage, power factor and power, externally powered with auxiliary voltage
product type designation	3UG5
General technical data	
product function	digitally adjustable monitoring relay for electrical variables
design of the display	LCD
power loss [W] maximum	2 W
power loss [V·A] maximum	5 V·A
insulation voltage 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
surge voltage resistance rated value	6 kV
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 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
Net Weight	0.165 kg
Product Function	
product function	
● phase sequence recognition	No
● phase failure detection	No
● asymmetry detection	No
● voltage monitoring	Yes

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● current monitoring	Yes
● overcurrent detection 1 phase	Yes
● undercurrent detection 1 phase	Yes
● adjustable open/closed-circuit current principle	Yes
● auto-RESET	Yes
● manual RESET	Yes
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage rated value	24 ... 240 V
control supply voltage at AC	
● at 50 Hz rated value	24 ... 240 V
● at 60 Hz rated value	24 ... 240 V
control supply voltage at DC rated value	24 ... 240 V
supply voltage frequency for auxiliary and control circuit rated value	50 ... 60 Hz
operating range factor control supply voltage rated value at DC	
● initial value	0.85
● full-scale value	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
● initial value	0.85
● full-scale value	1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
● initial value	0.85
● full-scale value	1.1
Supply voltage	
supply voltage frequency rated value	60 ... 50 Hz
Interfaces	
design of the interface bluetooth	No
Measuring circuit	
type of current for monitoring	AC/DC
measurable current	0.003 ... 10 A
measurable voltage at AC	0.1 ... 760 V
adjustable current response value current limited to 5 s	15 A
adjustable response delay time	
● when starting	0 ... 999.9 s
● with lower or upper limit violation	0 ... 999.9 s
adjustable switching hysteresis for measured current value	0 ... 5 000 mA
buffering time in the event of power failure minimum	20 ms
accuracy of digital display	+/-1 digit
Precision	
relative metering precision	10 %
Communication/ Protocol	
protocol is supported IO-Link protocol	No
Auxiliary circuit	
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
number of CO contacts delayed switching	2
operating frequency with 3RT2 contactor maximum	5 000 1/h
Main circuit	
number of poles for main current circuit	1
operating voltage rated value	24 ... 240 V
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

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● 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	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	
galvanic isolation	
● between input and output	Yes
● between the outputs	Yes
● between the voltage supply and other circuits	Yes
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
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
— 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	

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● during operation	-25 ... +60 °C
● during storage	-40 ... +80 °C
● during transport	-40 ... +80 °C

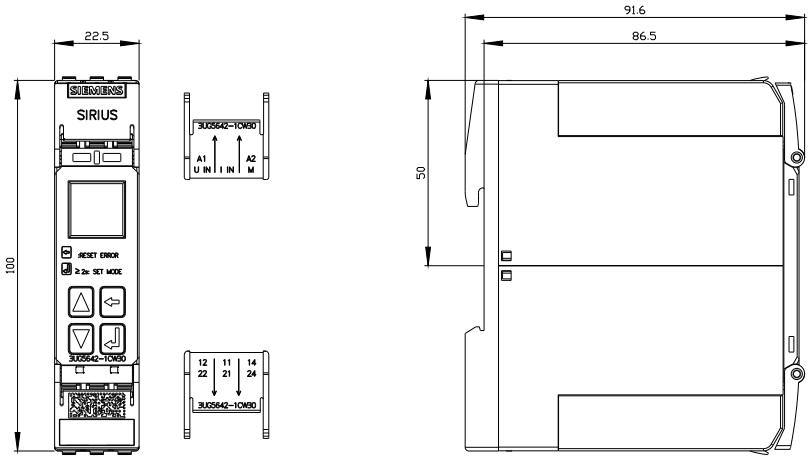
Approvals Certificates

Environment	General Product Approval
Environmental Confirmations	

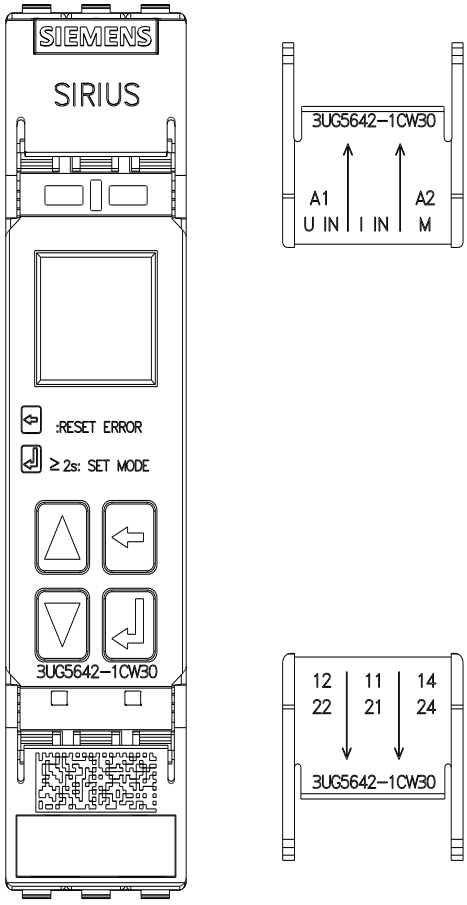
Test Certificates	Maritime application	other
Type Test Certificates/Test Report		Confirmation

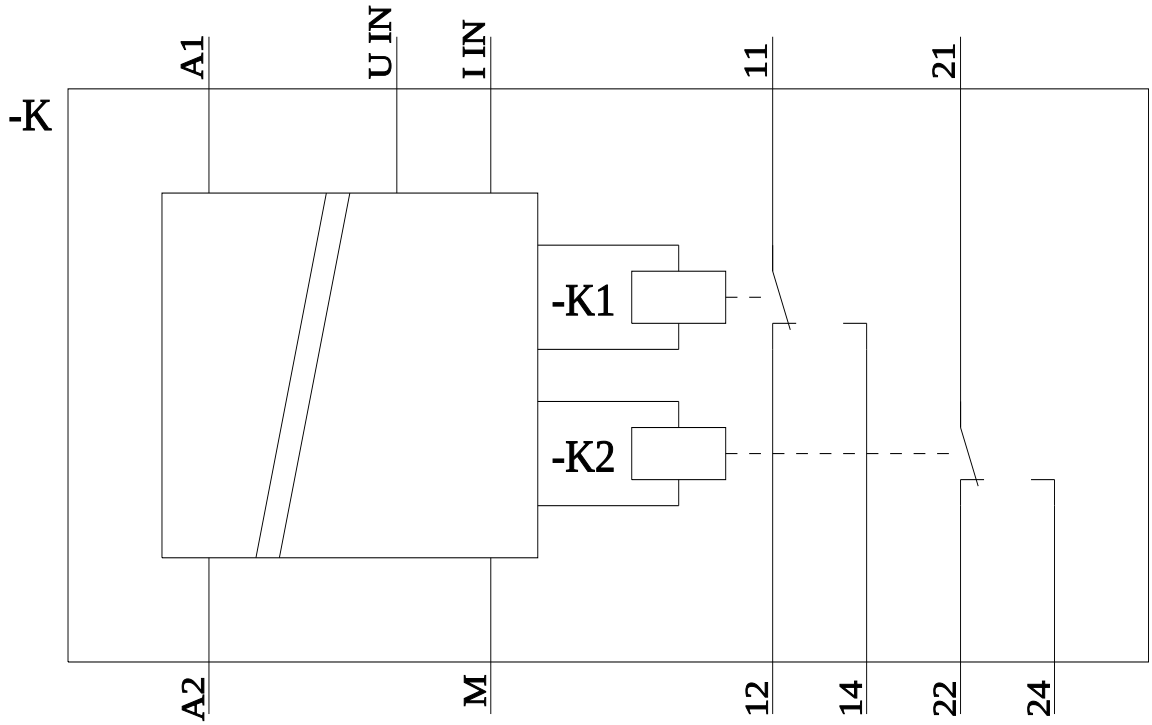
Further information

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=3UG5642-1CW30
Cax online generator
https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5642-1CW30
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3UG5642-1CW30
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5642-1CW30&lang=en



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