SIEMENS

Data sheet

3UG4501-1AW30



Analog monitoring relay Fill level monitoring Resistance monitoring from 2 to 200 kohm 0vershoot and undershoot 24 to 240 V AC/DC 50 to 60 Hz DC and AC 2-step or 1-step control Tripping delay 0.5 to 10 s 1 change-over contact screw terminal Successor product for 3UG3501

Figure sin	nilar
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product brand name	SIRIUS
product designation	Level monitoring relay with analog setting
product type designation	3UG4
manufacturer's article number of the optional sensor	2-pole and 3-pole sensors 3UG3207
General technical data	
product function	Monitoring relay for level monitoring
display version LED	Yes
 Apparent power consumption at DC 	
— at 24 V maximum	2 V·A
— at 240 V maximum	4 V·A
 apparent power consumption at AC 	
— at 24 V maximum	2 V·A
— at 240 V maximum	4 V·A
insulation voltage	
 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 	AC/DC
surge voltage resistance rated value	4 kV
protection class IP	IP20
shock resistance acc. to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
vibration resistance acc. to IEC 60068-2-6	1 6 Hz: 15 mm, 6 500 Hz: 2g
mechanical service life (switching cycles) typical	10 000 000
electrical endurance (switching cycles) at AC-15 at 230 V typical	100 000
reference code acc. to IEC 81346-2	К
relative repeat accuracy	1 %
Substance Prohibitance (Date)	01.05.2012 00:00:00
Product Function	
product function	
 outlet monitoring adjustable 	Yes
 adjustable responsiveness 	Yes
 inlet monitoring adjustable 	Yes
external reset	Yes
Control circuit/ Control	

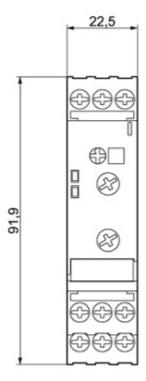
at 50 Hz rated value	24 240 V
at 60 Hz rated value	24 240 V
control supply voltage at DC	
rated value	24 240 V
operating range factor control supply voltage rated value at DC	
● initial value	0.85
full-scale value	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
initial value	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
Measuring circuit	
adjustable response delay time	
 when starting 	0.5 10 s
 with lower or upper limit violation 	0.5 10 s
buffering time in the event of power failure minimum	200 ms
physical measuring principle	conductive
Precision	
relative metering precision	20 %
temperature drift per °C	1 %/°C
Auxiliary circuit	
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
number of CO contacts	
delayed switching	1
operating frequency with 3RT2 contactor maximum	5 000 1/h
Outputs	
ampacity of the output relay at AC-15	3 A
	3 A 3 A
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz	
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz	
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13	3 A
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V	3 A 1 A
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V	3 A 1 A 0.2 A 0.1 A
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the	3 A 1 A 0.2 A
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay	3 A 1 A 0.2 A 0.1 A 5 mA
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility	3 A 1 A 0.2 A 0.1 A 5 mA
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference	3 A 1 A 0.2 A 0.1 A 5 mA 4 A
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst acc. to IEC 61000-4-4	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 KV
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 250 V • a	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 250 V • a	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV 10 V/m
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 250 V • a	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 250 V • a	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV 10 V/m
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 electrostatic discharge acc. to IEC 61000-4-2 Galvanic isolation	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 KV 2 KV 1 KV 10 V/m 6 kV contact discharge / 8 kV air discharge
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 250 V • a	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge Yes
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 250 V • operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-conductor surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-3 electrostatic discharge acc. to IEC 61000-4-3 electrostatic discharge acc. to IEC 61000-4-2 Galvanic isolation • between input and output • between the outputs	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 KV 2 KV 1 KV 10 V/m 6 kV contact discharge / 8 kV air discharge
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 250 V • a	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge Yes
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 250 V • operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-conductor surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-3 electrostatic discharge acc. to IEC 61000-4-3 electrostatic discharge acc. to IEC 61000-4-2 Galvanic isolation • between input and output • between the outputs	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge
ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 250 V • operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-conductor surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-3 electrostatic discharge acc. to IEC 61000-4-2 Galvanic isolation • between input and output • between the outputs Connections/ Terminals product function removable terminal for auxiliary and	3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge Yes No

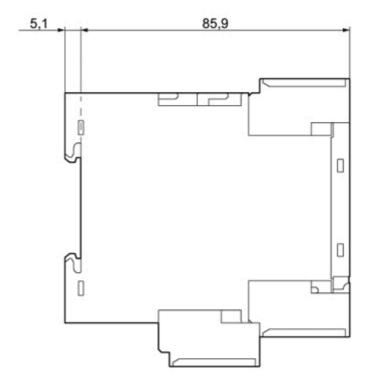
• solid	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)	
 finely stranded with core end processing 	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)	
• at AWG cables solid	2x (20 14)	
at AWG cables stranded	2x (20 14)	
connectable conductor cross-section solid	0.5 4 mm ²	
connectable conductor cross-section finely stranded with core end processing	0.5 2.5 mm²	
 AWG number as coded connectable conductor cross section solid 	20 14	
AWG number as coded connectable conductor cross section 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	
height	92 mm	
width	22.5 mm	
depth	91 mm	
required spacing		
• with side-by-side mounting		
— forwards	0 mm	
— backwards	0 mm	
— upwards — downwards	0 mm	
— at the side	0 mm 0 mm	
 for grounded parts 	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	
 ambient temperature during operation ambient temperature during storage 	-25 +80 °C	
ambient temperature during storage ambient temperature during transport	-40 +80 °C	
Certificates/ approvals		
General Product Approval EMC	Declaration of Conformity	Test Certificates
C C C C C C C C C C C C C C C C C C C	CE <u>Miscellaneous</u>	<u>Type Test</u> <u>Certificates/Test</u>
	EG-Konf.	Report
	63-K011.	
Test Certificates Marine / Shipping	other Railway	
Special Test	Confirmation Vibration and Shock	
Certificate Loyds		
Kegister		
Negister DNV-GL		
INCRISICI DIV-GL		

Further information

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