SIEMENS

Data sheet

3UG4501-2AA30



Analog monitoring relay Fill level monitoring Resistance monitoring from 2 to 200 kohm 0vershoot and undershoot Supply voltage 24 V AC/DC 50 to 60 Hz DC and AC without galvanic isolation to measuring circuit 2-step or 1-step control Tripping delay 0.5 to 10 s 1 change-over contact spring-type connection system

product designation Level monitoring relay with analog setting product type designation 3UG4 manufacture's article number of the optional sensor 2-pole and 3-pole sensors 3UG3207 General technical data Monitoring relay for level monitoring display version LED Yes • Apparent power consumption at DC - at 24 V maximum - at 24 V maximum 2 V-A • apparent power consumption at AC - display version of rated value • for overvoltage category III according to IEC 60644 300 V with degree of pollution 3 type of voltage AC/DC surget voltage resistance rated value 4 kV production class IP sinusoidal half-wave 15g / 11 ms subock resistance acc. to IEC 60068-2-27 sinusoida half-wave 15g / 11 ms vibration resistance acc. to IEC 60068-2-27 sinusoida half-wave 15g / 11 ms vibration resistance acc. to IEC 60068-2-27 sinusoida half-wave 15g / 11 ms vibration resistance acc. to IEC 60068-2-27 sinus of an above resistance acc. to IEC 60068-2-27 reference code acc. to IEC 6008-2-27 sinus of an above resistance acc. to IEC 6008-2-27 vibration resistance acc. to IEC 6008-2-27 <th>product brand name</th> <th>SIRIUS</th>	product brand name	SIRIUS
manufacturer's article number of the optional sensor 2-pole and 3-pole sensors 3UG3207 Central technical data Monitoring relay for level monitoring gibplay version LED Yes • Apparent power consumption at DC - at 24 V maximum - at 24 V maximum 2 V-A • apparent power consumption at AC - at 24 V maximum - at 24 V maximum 2 V-A insulation voltage 300 V • of ro evervoltage category III according to IEC 60664 300 V with degree of pollution 3 type of voltage AC/DC surge voltage resistance rated value 4 kV protection class IP IP20 shock resistance acc. to IEC 60068-2-27 sinusoidal haft-wave 15g / 11 ms vibration resistance acc. to IEC 60068-2-6 1 6 Hz: 15 mm, 6 500 Hz: 2g mechanical service Iife (switching cycles) typical 10 000 00 reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 0.105.2012 00.00.00 product Function Yes • adjustable responsiveness Yes • adjustable responsiveness Yes	product designation	Level monitoring relay with analog setting
General technical data Monitoring relay for level monitoring product function Monitoring relay for level monitoring display version LED Yes • Apparent power consumption at DC - at 24 V maximum - at 24 V maximum 2 V-A insulation voltage 300 V • for overvoltage category III according to IEC 60664 with degree of pollution 300 V degree of pollution 3 type of voltage AC/DC • of the control supply voltage AC/DC surge voltage resistance rated value 4 kV protection class IP IP20 shock resistance acc. to IEC 60068-2-6 1 6 Hz: 15 mm, 6 500 Hz: 2g mechanical service life (switching cycles) typical 10 000 000 electrical endurance (switching cycles) typical 10 000 000 electrical endurance (switching cycles) typical 100 000 relative repeat accuracy 1% Substance Prohibitance (Date) 90.105.2012 00:00:00 Product Function Yes • adjustable responsiveness Yes • adjustable responsiveness Yes • external reset Yes Control supply voltage a	product type designation	3UG4
product function Monitoring relay for level monitoring display version LED Yes • Apparent power consumption at DC -at 24 V maximum • apparent power consumption at AC -at 24 V maximum -at 24 V maximum 2 V-A insulation voltage 300 V • for overoltage category III according to IEC 60664 300 V with degree of pollution 3 a type of voltage AC/DC • 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 100 000 electrical endurance (switching cycles) typical 10 000 000 reference code acc. to IEC 81346-2 K reference	manufacturer's article number of the optional sensor	2-pole and 3-pole sensors 3UG3207
display version LED Yes • Apparent power consumption at DC	General technical data	
 Apparent power consumption at DC at 24 V maximum apparent power consumption at AC at 24 V maximum at 24 V maximum 2 V-A Insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value degree of pollution 3 rated value degree of pollution 3 rated value degree of pollution 3 rated value 4 kV protection class IP IP20 shock 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 IIf 6 (witching cycles) typical 100 000 electrical endurance (switching cycles) typical 100 000 typical reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function product function outlet monitoring adjustable Yes exitemal reset Yes ves ves external reset Yes Yes outlet monitoring adjustable Yes outlet monitoring adjustable Yes outlet monitoring adjustable Yes at 50 Hz rated value 24 24 V at 50 Hz rated value 24 24 V control supply voltage at AC	product function	Monitoring relay for level monitoring
	display version LED	Yes
	 Apparent power consumption at DC 	
	— at 24 V maximum	2 V·A
insulation voltage • for overvoltage category III according to IEC 60664 300 V with degree of pollution 3 rated value 3 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 100 000 typical 100 000 reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function outlet monitoring adjustable • outlet monitoring adjustable Yes • adjustable responsiveness Yes • intermonitoring adjustable Yes • external reset Yes Control supply voltage at AC ext 50 Hz rated value • at 50 Hz rated value 24 24 V • at 50 Hz rated value	 apparent power consumption at AC 	
• for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value 300 V degree of pollution 3 type of 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) typical 100 000 reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function Yes • outlet monitoring adjustable Yes • adjustable responsiveness Yes • inlet monitoring adjustable Yes • external reset Yes Control supply voltage at AC 24 24 V • at 50 Hz rated value 24 24 V • at 50 Hz rated value 24 24 V	— at 24 V maximum	2 V·A
with degree of pollution 3 degree of pollution 3 type of voltage AC/DC • 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 100 000 000 electrical endurance (switching cycles) at AC-15 at 230 V 100 000 typical 100 000 reference code acc. to IEC 81346-2 K reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function	insulation voltage	
type of voltage AC/DC surge voltage resistance rated value 4 kV protection class IP IP20 shock 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 100 000 typical 1% Substance Prohibitance (Date) 01.05.2012 00:00:00 Product function • outlet monitoring adjustable Yes • external reset Yes • external reset Yes Control supply voltage at AC • at 50 Hz rated value 24 24 V • at 50 Hz rated value 24 24 V • at 50 Hz rated value 24 24 V	J J J J J J J J J J J J J J J J J J J	300 V
• 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 100 000 typical 100 000 reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product function • outlet monitoring adjustable • outlet monitoring adjustable Yes • adjustable responsiveness Yes • external reset Yes Control circuit/ Control Yes control supply voltage at AC 24 24 V • at 50 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V	degree of pollution	3
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 100 000 typical 100 000 reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product function ves • adjustable responsiveness Yes • inlet monitoring adjustable Yes • external reset Yes Control supply voltage at AC 24 24 V • at 50 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V	type of voltage	
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 K relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function inlet monitoring adjustable Yes external reset Yes Control supply voltage at AC Yes e at 50 Hz rated value 24 24 V e at 60 Hz rated value 24 24 V	of the control supply voltage	AC/DC
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 100 000 typical 10 000 000 reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function inlet monitoring adjustable Yes e adjustable responsiveness Yes inlet monitoring adjustable Yes e external reset Yes Control supply voltage at AC 24 24 V e at 60 Hz rated value 24 24 V e at 60 Hz rated value 24 24 V	surge voltage resistance rated value	4 kV
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 100 000 typical 100 000 reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function 0 • outlet monitoring adjustable Yes • adjustable responsiveness Yes • inlet monitoring adjustable Yes • external reset Yes Control supply voltage at AC 24 24 V • at 60 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V	protection class IP	IP20
mechanical service life (switching cycles) typical 10 000 000 electrical endurance (switching cycles) at AC-15 at 230 V 100 000 typical 100 000 reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function 01.05.2012 00:00:00 product function ves • adjustable responsiveness Yes • inlet monitoring adjustable Yes • external reset Yes Control supply voltage at AC 24 24 V • at 60 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V	shock resistance acc. to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
electrical endurance (switching cycles) at AC-15 at 230 V typical 100 000 reference code acc. to IEC 81346-2 K relative repeat accuracy 1% Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function V • outlet monitoring adjustable Yes • adjustable responsiveness Yes • inlet monitoring adjustable Yes • external reset Yes • external reset Yes Control circuit/ Control control supply voltage at AC • at 50 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V control supply voltage at DC	vibration resistance acc. to IEC 60068-2-6	1 6 Hz: 15 mm, 6 500 Hz: 2g
typical reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function 01.05.2012 00:00:00 product function • outlet monitoring adjustable • outlet monitoring adjustable Yes • adjustable responsiveness Yes • inlet monitoring adjustable Yes • external reset Yes Control circuit/ Control Yes • at 50 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V	mechanical service life (switching cycles) typical	10 000 000
relative repeat accuracy 1 % Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function • • outlet monitoring adjustable Yes • adjustable responsiveness Yes • inlet monitoring adjustable Yes • external reset Yes Control circuit/ Control Yes • at 50 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V		100 000
Substance Prohibitance (Date) 01.05.2012 00:00:00 Product Function • • outlet monitoring adjustable Yes • adjustable responsiveness Yes • inlet monitoring adjustable Yes • external reset Yes Control circuit/ Control Yes • at 50 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V • control supply voltage at DC Yes	reference code acc. to IEC 81346-2	К
Product Function product function • outlet monitoring adjustable Yes • adjustable responsiveness Yes • inlet monitoring adjustable Yes • external reset Yes Control circuit/ Control Yes control supply voltage at AC 24 24 V • at 50 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V	relative repeat accuracy	1 %
product function • outlet monitoring adjustable Yes • adjustable responsiveness Yes • inlet monitoring adjustable Yes • external reset Yes Control circuit/ Control control supply voltage at AC • at 50 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V control supply voltage at DC	Substance Prohibitance (Date)	01.05.2012 00:00:00
• outlet monitoring adjustableYes• adjustable responsivenessYes• inlet monitoring adjustableYes• external resetYesControl circuit/ ControlYescontrol supply voltage at AC24 24 V• at 50 Hz rated value24 24 V• at 60 Hz rated value24 24 V	Product Function	
	product function	
 inlet monitoring adjustable external reset Yes Control circuit/ Control control supply voltage at AC at 50 Hz rated value 24 24 V at 60 Hz rated value 24 24 V control supply voltage at DC 	 outlet monitoring adjustable 	Yes
• external reset Yes Control circuit/ Control control supply voltage at AC 24 24 V • at 50 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V control supply voltage at DC	 adjustable responsiveness 	Yes
Control circuit/ Control control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value 24 24 V control supply voltage at DC	 inlet monitoring adjustable 	Yes
control supply voltage at AC 24 24 V • at 50 Hz rated value 24 24 V • at 60 Hz rated value 24 24 V control supply voltage at DC 24 24 V	external reset	Yes
● at 50 Hz rated value 24 24 V ● at 60 Hz rated value 24 24 V control supply voltage at DC 24 24 V	Control circuit/ Control	
• at 60 Hz rated value 24 24 V control supply voltage at DC	control supply voltage at AC	
control supply voltage at DC	• at 50 Hz rated value	24 24 V
	• at 60 Hz rated value	24 24 V
• rated value 24 24 V	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
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	
• 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	4 A
output relay	
Electromagnetic compatibility conducted interference	
due to burst acc. to IEC 61000-4-4	2107
	2 kV 2 kV
 due to conductor-earth surge acc. to IEC 61000-4-5 due to conductor-conductor surge acc. to IEC 	2 KV 1 KV
• due to conductor-conductor surge acc. to rec 61000-4-5	
field-based interference acc. to IEC 61000-4-3	10 V/m
electrostatic discharge acc. 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 	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 mm ²)
 finely stranded without core end processing 	2x (0.25 1.5 mm ²)
at AWG cables solid	2x (24 16)
 at AWG cables stranded 	2x (24 16)
connectable conductor cross-section	

!!-!	0.05 4.5 mm²
• solid	0.25 1.5 mm ²
• finely stranded with core end processing	0.25 1.5 mm ²
finely stranded without core end processing	0.25 1.5 mm²
AWG number as coded connectable conductor cross section	
• solid	24 16
stranded	24 16
tightening torque with screw-type terminals	0.8 1.2 N·m
Installation/ mounting/ dimensions	
mounting position	201/
fastening method	_ any screw and snap-on mounting
height	94 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	2 000 m
during operation	-25 +60 °C
during operation orage	-40 +80 °C
during storage during transport	-40 +80 °C
Certificates/ approvals	-40 100 C
General Product Approval	EMC Declaration of Conformity Test Certificates
	RCM EG-Konf. Special Test Certific-
Test Certificates Marine / Shipping	other Railway
Type Test Certific- ates/Test Report Hovds Register Uts	Confirmation Vibration and Shock
Further information	

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=3UG4501-2AA30

Cax online generator

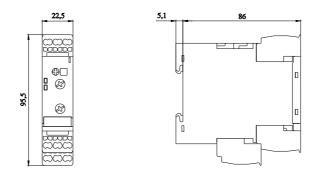
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4501-2AA30

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3UG4501-2AA30

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4501-2AA30&lang=en

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3UG4501-2AA30/manual



last modified:

1/18/2021 🖸