## **SIEMENS**

Data sheet 3UG4511-2BP20



Analog monitoring relay Phase sequence monitoring 3 x 320...500 V 50...60 Hz AC 2 change-over contacts spring-type connection system

Figure similar

product type designation design of the product product type designation 3uG4  Ceneral technical data product function display version LED Yes insulation voltage for overvoltage category III according to IEC 80684 • with degree of pollution 3 rated value degree of pollution 3 type of voltage • for monitoring AC or of the control supply voltage surge voltage resistance rated value protection class IP shock resistance according to IEC 80088-2-27 vibration resistance according to IEC 60068-2-6 mechanical service IIfe (operating cycles) typical electrical endurance (operating cycles) at AC-15 at 220 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 KSubstance Prohibitance (Date) Product Function  product function • underviolage detection • underviolage detection • phase sequence recognition • phase sequence recogniti	product brand name	SIRIUS		
product type designation  General technical data  product function  display version LED  Yes  insulation voltage for overvoltage category ill according to IEC 60664  • with degree of pollution 3 rated value  degree of pollution  3 type of voltage  • for monitoring  AC  • of the control supply voltage  surge voltage rosistance rated value  protection class IP  shock resistance according to IEC 60068-2-27  sinusoidal half-wave 15g / 11 ms  vibration resistance according to IEC 60068-2-6  mechanical service life (operating cycles) typical  electrical endurance (operating cycles) typical  shock resistance according to IEC 80068-2-6  mechanical service life (operating cycles) at AC-15 at 230 V typical  thermal current of the switching element with contacts  maximum  reference code according to IEC 81346-2  Kubstance Prohibitance (Date)  product function  • undervoltage detection  • undervoltage	product designation	Line monitoring relay		
General technical data  product function Phase monitoring relay  display version LED Yes  insulation voltage for overvoltage category Ill according to IEC 60664  • with degree of pollution 3 rated value 690 V  degree of pollution 3 rated value 690 V  degree of pollution 3 rated value 600 V  degree of pollution 3 rated value 600 V  of or monitoring AC  of the control supply voltage AC  surge voltage resistance rated value 9 Rev V  protection class IP IP20  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) typical 10 000 000  thermal current of the switching element with contacts maximum 7 reference code according to IEC 81346-2 K  Substance Prohibitance (Date) 05/01/2012  Product Function  product function No  o undervoltage detection No  o hase sequence recognition Yes  o phase failure detection No  o phase failure detection No  o symmetry detection No  o vervoltage detection 3 phase No  o undervoltage detection 3 phase No  o un	design of the product	1 function		
product function	product type designation	3UG4		
display version LED  insulation voltage for overvoltage category III according to IEC 60664  • with degree of pollution  type of voltage  • for monitoring  • of the control supply voltage  • for monitoring  • of the control supply voltage  • for monitoring  • of the control supply voltage  • for monitoring  • of the control supply voltage  • for monitoring  • of the control supply voltage  • for monitoring  • of the control supply voltage  • for monitoring  • AC  • of the control supply voltage  • for wonitoring  • AC  • of the control supply voltage  • for wonitoring  • AC  • of the control supply voltage  • for wonitoring  • AC  • of the control supply voltage  • for wonitoring  • AC  • of the control supply voltage  • for wonitoring  • AC  • A	General technical data			
Insulation voltage for overvoltage category Ill according to IEC 60064  • with degree of pollution 3 rated value 690 V  degree of pollution 3  type of voltage • for monitoring AC • of the control supply voltage AC  surge voltage resistance rated value P20  protection class IP IP20  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) typical 20 000 000  electrical endurance (operating cycles) typical 35 AC-15 at 230 V typical 40 000 000  typical 40 000 000  reference code according to IEC 81346-2 K  Substance Prohibitance (Date) 05/01/2012  Product Function  product function  • undervoltage detection No • overvoltage detection No • phase sequence recognition Yes • phase failure detection No • overvoltage detection 3 phase • undervoltage detection 3 phases • voltage window recognition 3 phase • voltage window recognition 1 ves • auto-RESET Ves  Control circuit/ Control control supply voltage at AC	product function	Phase monitoring relay		
with degree of pollution 3 rated value degree of pollution  type of voltage  of monitoring  of the control supply voltage  of the control supply voltage  AC  surge voltage resistance rated value protection class IP  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 electrical endurance (operating cycles) typical electrical endurance (operating cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Product Function  product function  o undervoltage detection o voervoltage detection o phase sequence recognition o ephase sallure detection ANO asymmetry detection No o asymmetry detection o voervoltage detection 3 phase o undervoltage detection 3 phase ovoltage window recognition 3 phase o undervoltage detection 4 overvoltage detection 4 overvoltage detection 4 overvoltage detection 4 overvoltage detection 5 overvoltage detection 6 ove	display version LED	Yes		
type of voltage  • for monitoring  • of the control supply voltage  • for monitoring  • of the control supply voltage  • for monitoring  • of the control supply voltage  AC  surge voltage resistance rated value  protection class IP  shock resistance according to IEC 60068-2-7  sinusoidal half-wave 15g / 11 ms  vibration resistance according to IEC 60068-2-6  mechanical service life (operating cycles) typical  10 000 000  electrical endurance (operating cycles) typical  thermal current of the switching element with contacts maximum  reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Product Function  product function  • undervoltage detection  • undervoltage detection  • overvoltage detection  • phase sequence recognition  • phase failure detection  • asymmetry detection  • overvoltage detection 3 phase  • undervoltage detection 4 phase  • undervoltage detection 5 phase  • undervoltage detection 6 phase  • undervoltage detection 6 phase  • undervoltage detection 9 phase  • undervoltage det				
type of voltage	with degree of pollution 3 rated value	690 V		
of the control supply voltage     of the control supply voltage     surge voltage resistance rated value     protection class IP     shock resistance according to IEC 60068-2-27     sinusoidal half-wave 15g / 11 ms  vibration resistance according to IEC 60068-2-6     shock resistance 15g / 11 ms     vibration 0000      substance (operating cycles) at AC-15 at 230 V to 0000 000      substance (operating cycles) at AC-15 at 230 V to 0000 000      substance Prohibitance (Date)     su	degree of pollution	3		
of the control supply voltage     surge voltage resistance rated value     protection class IP     shock resistance according to IEC 60068-2-27     sinusoidal half-wave 15g / 11 ms     vibration resistance according to IEC 60068-2-6     in. 6 Hz: 15 mm, 6 500 Hz: 2g     mechanical service life (operating cycles) typical     electrical endurance (operating cycles) typical     electrical endurance (operating cycles) at AC-15 at 230 V     typical     thermal current of the switching element with contacts     maximum     reference code according to IEC 81346-2     K Substance Prohibitance (Date)     Product Function  product function      undervoltage detection     overvoltage detection     overvoltage detection     phase sequence recognition     ophase sequence recognition     overvoltage detection     in overvoltage detection overvoltage detection     in overvoltage detection overvoltage det	type of voltage			
surge voltage resistance rated value  protection class IP  shock resistance according to IEC 60068-2-6  shock resistance according to IEC 60068-2-6  inchanical service life (operating cycles) typical  electrical endurance (operating cycles) typical  thermal current of the switching element with contacts maximum  reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Product Function  product function  • undervoltage detection • overvoltage detection • phase sequence recognition • phase failure detection • overvoltage detection • overvoltage detection 3 phase • undervoltage detection 3 phase • undervoltage detection 3 phase • voltage window recognition 3 phase • adjustable open/closed-circuit current principle • auto-RESET  Control circuit/ Control  control supply voltage at AC	• for monitoring	AC		
protection class IP  shock resistance according to IEC 60068-2-27  sinusoidal half-wave 15g / 11 ms  vibration resistance according to IEC 60068-2-6  mechanical service life (operating cycles) typical electrical endurance (operating cycles) typical electrical endurance (operating cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2  Substance Prohibitance (Date)  Product Function  product function  undervoltage detection ophase sequence recognition phase sequence recognition phase failure detection ophase failure detection ophase failure detection overvoltage detection overvoltage detection No overvoltage detection No overvoltage detection No overvoltage detection No overvoltage detection Sphase overvoltage detection Sphase overvoltage detection Sphase overvoltage window recognition 3 phase overvoltage window recognition 4 phase 4 phase 4 phase 5 ph	of the control supply voltage	AC		
shock resistance according to IEC 60068-2-27  vibration resistance according to IEC 60068-2-6  mechanical service life (operating cycles) typical  electrical endurance (operating cycles) at AC-15 at 230 V typical  thermal current of the switching element with contacts maximum  reference code according to IEC 81346-2  Substance Prohibitance (Date)  product Function  product function  undervoltage detection  o vervoltage detection  o phase sequence recognition  o phase failure detection  o vervoltage detection 3 phase  undervoltage detection 3 phase  undervoltage detection 3 phase  o voltage window recognition 3 phase  adjustable open/closed-circuit current principle  adjustable open/closed-circuit current principle  auto-RESET  Control circuit/ Control  control supply voltage at AC	surge voltage resistance rated value	6 kV		
vibration resistance according to IEC 60068-2-6  mechanical service life (operating cycles) typical electrical endurance (operating cycles) at AC-15 at 230 V typical  thermal current of the switching element with contacts maximum  reference code according to IEC 81346-2  K Substance Prohibitance (Date)  Product Function  product function  o undervoltage detection o phase sequence recognition o phase failure detection o phase failure detection o vervoltage detection No o asymmetry detection No o vervoltage detection 3 phase o undervoltage detection 3 phase o voltage window recognition 3 phase o adjustable open/closed-circuit current principle atture.  Control circuit/ Control  control supply voltage at AC	protection class IP	IP20		
mechanical service life (operating cycles) typical electrical endurance (operating cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Product Function  product function  • undervoltage detection • overvoltage detection • phase sequence recognition • phase saquence recognition • asymmetry detection • overvoltage detection 3 phase • undervoltage detection 3 phase • undervoltage detection 3 phase • voltage window recognition 3 phase • voltage window recognition 3 phase • adjustable open/closed-circuit current principle • auto-RESET  Control circuit/ Control  control supply voltage at AC	shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms		
electrical endurance (operating cycles) at AC-15 at 230 V typical  thermal current of the switching element with contacts maximum  reference code according to IEC 81346-2 K  Substance Prohibitance (Date) 05/01/2012  Product Function  product function  • undervoltage detection No • overvoltage detection No • phase sequence recognition Yes • phase failure detection No • asymmetry detection No • overvoltage detection No • overvoltage detection No • overvoltage detection No • asymmetry detection No • overvoltage detection 3 phase • undervoltage detection 3 phases • undervoltage detection 3 phases • voltage window recognition 3 phase • adjustable open/closed-circuit current principle • auto-RESET Yes  Control circuit/ Control  control supply voltage at AC	vibration resistance according to IEC 60068-2-6	1 6 Hz: 15 mm, 6 500 Hz: 2g		
thermal current of the switching element with contacts maximum  reference code according to IEC 81346-2  K  Substance Prohibitance (Date)  Product Function  • undervoltage detection • overvoltage detection • phase sequence recognition • phase failure detection • overvoltage detection • overvoltage detection • No • asymmetry detection • No • overvoltage detection 3 phase • undervoltage detection 3 phases • voltage window recognition 3 phase • voltage window recognition 3 phase • adjustable open/closed-circuit current principle • auto-RESET  Control circuit/ Control  control supply voltage at AC	mechanical service life (operating cycles) typical	10 000 000		
reference code according to IEC 81346-2 K  Substance Prohibitance (Date) 05/01/2012  Product Function  product function  • undervoltage detection No • overvoltage detection Yes • phase sequence recognition Yes • phase failure detection No • asymmetry detection No • overvoltage detection No • avervoltage detection No • avervoltage detection No • avervoltage detection No • overvoltage detection 3 phase No • undervoltage detection 3 phases No • voltage window recognition 3 phase No • adjustable open/closed-circuit current principle No • auto-RESET Yes  Control circuit/ Control  control supply voltage at AC		100 000		
Substance Prohibitance (Date)  Product Function  oundervoltage detection overvoltage detection oundervoltage detection 3 phase oundervoltage detection 3 phases oundervoltage window recognition 3 phase oundervoltage window recognition 3 phase oundervoltage detection 4 phase oundervoltage detect		5 A		
Product Function  product function  undervoltage detection  overvoltage detection  phase sequence recognition  phase failure detection  asymmetry detection  overvoltage detection 3 phase  undervoltage detection 3 phases  voltage window recognition 3 phase  voltage window recognition 3 phase  adjustable open/closed-circuit current principle  auto-RESET  Control circuit/ Control  control supply voltage at AC	reference code according to IEC 81346-2	K		
product function  • undervoltage detection  • overvoltage detection  • phase sequence recognition  • phase failure detection  • phase failure detection  • overvoltage detection  • overvoltage detection 3 phase  • undervoltage detection 3 phases  • voltage window recognition 3 phase  • voltage window recognition 3 phase  • adjustable open/closed-circuit current principle  • auto-RESET  Control circuit/ Control  control supply voltage at AC	Substance Prohibitance (Date)	05/01/2012		
<ul> <li>undervoltage detection</li> <li>overvoltage detection</li> <li>phase sequence recognition</li> <li>phase failure detection</li> <li>asymmetry detection</li> <li>overvoltage detection 3 phase</li> <li>undervoltage detection 3 phases</li> <li>voltage window recognition 3 phase</li> <li>voltage window recognition 3 phase</li> <li>adjustable open/closed-circuit current principle</li> <li>auto-RESET</li> <li>Control circuit/ Control</li> </ul> Control supply voltage at AC	Product Function			
overvoltage detection     phase sequence recognition     phase failure detection     phase failure detection         No         asymmetry detection         No         overvoltage detection 3 phase         undervoltage detection 3 phases         voltage window recognition 3 phase         voltage window recognition 3 phase         adjustable open/closed-circuit current principle         auto-RESET         Yes  Control circuit/ Control  control supply voltage at AC	product function			
phase sequence recognition     phase failure detection     phase failure detection     asymmetry detection     overvoltage detection 3 phase     undervoltage detection 3 phases     voltage window recognition 3 phase     voltage window recognition 3 phase     adjustable open/closed-circuit current principle     auto-RESET     Yes  Control circuit/ Control  control supply voltage at AC	<ul> <li>undervoltage detection</li> </ul>	No		
phase failure detection     asymmetry detection     overvoltage detection 3 phase     undervoltage detection 3 phases     voltage window recognition 3 phase     voltage window recognition 3 phase     adjustable open/closed-circuit current principle     auto-RESET     Yes  Control circuit/ Control  control supply voltage at AC	<ul> <li>overvoltage detection</li> </ul>	No		
asymmetry detection overvoltage detection 3 phase oundervoltage detection 3 phases oundervoltage detection 3 phases oundervoltage window recognition 3 phase oundervoltage window recognition 3 phase output	<ul> <li>phase sequence recognition</li> </ul>	Yes		
overvoltage detection 3 phase     undervoltage detection 3 phases     voltage window recognition 3 phase     adjustable open/closed-circuit current principle     auto-RESET     Yes  Control circuit/ Control  control supply voltage at AC	<ul> <li>phase failure detection</li> </ul>	No		
undervoltage detection 3 phases     voltage window recognition 3 phase     adjustable open/closed-circuit current principle     auto-RESET     Yes  Control circuit/ Control  control supply voltage at AC	<ul> <li>asymmetry detection</li> </ul>	No		
voltage window recognition 3 phase     adjustable open/closed-circuit current principle     auto-RESET     Yes  Control circuit/ Control  control supply voltage at AC	<ul> <li>overvoltage detection 3 phase</li> </ul>	No		
adjustable open/closed-circuit current principle     auto-RESET     Yes  Control circuit/ Control  control supply voltage at AC	<ul> <li>undervoltage detection 3 phases</li> </ul>	No		
auto-RESET     Yes  Control circuit/ Control  control supply voltage at AC	<ul> <li>voltage window recognition 3 phase</li> </ul>	No		
Control circuit/ Control control supply voltage at AC	<ul> <li>adjustable open/closed-circuit current principle</li> </ul>	No		
control supply voltage at AC	• auto-RESET	Yes		
	Control circuit/ Control			
• at 50 Hz rated value 320 500 V	control supply voltage at AC			
	at 50 Hz rated value	320 500 V		

at 60 Hz rated value	320 500 V
operating range factor control supply voltage rated value at AC at 50 Hz	
	4
• initial value	1
full-scale value	1
operating range factor control supply voltage rated value at AC at 60 Hz	
• initial value	1
• full-scale value	1
Measuring circuit	
measurable voltage at AC	320 500 V
Auxiliary circuit	020 000 V
	0
number of NC contacts delayed switching	0
number of NO contacts delayed switching number of CO contacts	O
	2
for auxiliary contacts     delayed switching	2
delayed switching  Operating frequency with 3PT2 contactor maximum.	
operating frequency with 3RT2 contactor maximum	5 000 1/h
Main circuit	
number of poles for main current circuit	3
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	
<ul> <li>due to burst according to IEC 61000-4-4</li> </ul>	2 kV
<ul> <li>due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	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	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 with our end processing     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	<u> </u>
solid	0.25 1.5 mm²
	0.25 1.5 mm²
finely stranded with core end processing     finely stranded without core and processing	
• finely stranded without core end processing  ANC number as goded connectable conductor process.	0.25 1.5 mm²
AWG number as coded connectable conductor cross section	
• solid	24 16
stranded	24 16
Installation/ mounting/ dimensions	

mounting position	any		
fastening method	snap-on mounting		
height	94 mm		
width	22.5 mm		
depth	91 mm		
required spacing			
<ul><li>with side-by-side mounting</li></ul>			
— forwards	0 mm		
— backwards	0 mm		
— upwards	0 mm		
— downwards	0 mm		
— at the side	0 mm		
<ul> <li>for grounded parts</li> </ul>			
— 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			
<ul> <li>during operation</li> </ul>	-25 +60 °C		
during storage	-40 +85 °C		
during transport	-40 +85 °C		
Certificates/ approvals			
General Product Approval		EMC	Declaration of Conformity

Confirmation











Declaration of Conformity

**Test Certificates** 

Marine / Shipping

other



Type Test Certificates/Test Report

Special Test Certificate





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=3UG4511-2BP20

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4511-2BP20

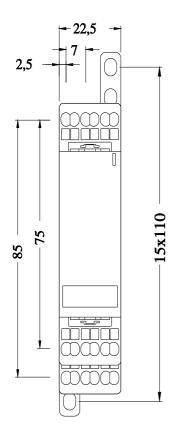
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

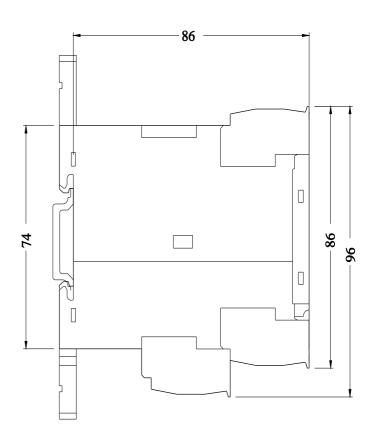
https://support.industry.siemens.com/cs/ww/en/ps/3UG4511-2BP20

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

**Characteristic: Derating** 

https://support.industry.siemens.com/cs/ww/en/ps/3UG4511-2BP20/manual





last modified: 7/5/2023 🖸

## **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Siemens:

3UG45112BP20