SIEMENS

Product data sheet

3UG4511-2BP20



ANALOG MONITORING RELAY PHASE SEQUENCE MONITORING 3X 360 TO 520V AC 50 TO 60 HZ 2 CHANGEOVER CONTACTS SPRING LOADED CONNECTION

Product function		Phase monitoring relay
Measuring circuit:		
Type of voltage / for monitoring		AC
Number of poles / for main current circuit		3
Measurable voltage	-	
• for AC	V	320 500
General technical details:		
Type of display / LED		Yes
Product function		
undervoltage recognition		No
overvoltage recognition		No
phase sequence recognition		Yes
phase disturbance recognition		No
asymmetry recognition		No
 overvoltage recognition of 3 phases 		No
 undervoltage recognition of 3 phases 		No
 tension window recognition of 3 phases 		No
• self-reset		Yes
open-circuit or closed-circuit current principle		No
Starting time / after the control supply voltage has been applied	ms	200

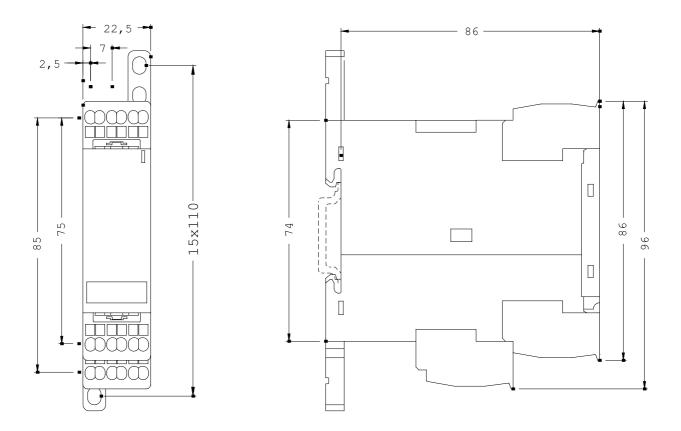
Response time / maximum	ms	450
Type of voltage / of the controlled supply voltage	-	AC
Control supply voltage		
• at 50 Hz / at AC		
• rated value	V	320 500
• at 60 Hz / at AC		
rated value	V	320 500
Operating range factor control supply voltage rated value	-	
• at 50 Hz		
• for AC		11
• at 60 Hz		
• for AC		11
Impulse voltage resistance / rated value	kV	6
Recorded real power	W	2
Protection class IP		IP20
Electromagnetic compatibility		IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4
Resistance against vibration / according to IEC 60068-2-6		1 6 Hz: 15 mm, 6 500 Hz: 2g
Resistance against shock / according to IEC 60068-2-27		sinusoidal half-wave 15g / 11 ms
Installation altitude / at a height over sea level / maximum	m	2,000
Conductor-bound parasitic coupling BURST / according to IEC 61000-4-4		2 kV
Conductor-bound parasitic coupling conductor-earth SURGE / according to IEC 61000-4-5		2 kV
Conductor-bound parasitic coupling conductor-conductor SURGE / according to IEC 61000-4-5		1 kV
Electrostatic discharge / according to IEC 61000-4-2		6 kV contact discharge / 8 kV air discharge
Field-bound parasitic coupling / according to IEC 61000-4-3		10 V/m
Insulation voltage / for overvoltage category III according to IEC 60664 / with degree of pollution 3 / rated value	V	690
Degree of pollution		3
Ambient temperature		
during operating	°C	-25 +60
during storage	°C	-40 +85
during transport	°C	-40 +85
Galvanic isolation		
between entrance and outlet		Yes
between the outputs		Yes
 between the voltage supply and other circuits 		Yes

Mechanical design:		
Width	mm	22.5

pephmm91mounting positionaryDistance, to be maintained, to earthed partI• konwardsmm0• sakwardsmm0• sakwardsmm1• sakw	Height	mm	94
Distance, to be maintained, to earthed partImmi drawardsnm0i backwardsnm0i dwardsnm0i dwardsnm<	Depth	mm	91
• InvaridsInvaridsInvarids• IdekwardsInvaridsIdekwards• idekwardsInvareIdekwards• idekwardsInvareIdekwards• idenwardsInvareIdekwards• IdenwardsIdekwardsIdekwards• IdenwardsIdekwardsIdekwards• IdenwardsIdekwardsIdekwards• IdenwardsIdekwardsIdekwards• IdenwardsIdekwardsIdekwards• IdenwardsIdekwardsIdekwards• IdenwardsIdekwardsIdekwards• IdenwardsIdekwardsIdekwards• Idenwards	mounting position		any
backwardsnmm0• idewardsnmm0• upwardsnmm0• downwardsnmm0• lowwardsnmm0• lowwardsnmm0• lowwardsnmm0• lowwardsnmm0• lowwardsnmm0• upwardsnmm0• sold <t< td=""><td>Distance, to be maintained, to earthed part</td><td></td><td></td></t<>	Distance, to be maintained, to earthed part		
• sidewardsnm0• upwardsnm0• downwardsnm0Distance, to be maintained, to the ranks assemblynm0• lowardsnm0• backwardsnm0• upwardsnm0• upwardsnm0• downwardsnm0• upwardsnm0• downwardsnm0• downwardsnm0• downwardsnm0• downwardsnm0• dowardsnm0• dowardsnm2• dowa	• forwards	mm	0
upwardsnm0odornwardsnm0Distance, to be maintained, to the ranks assemblynm0i forwardsnm0i clowardsnm0i clowardsnm2i clowardsi clowards2i clowardsi clowards2i clowardsi clowards2i clowards	backwards	mm	0
. downwardsnm0Distance, to be maintained, to the ranks assemblynm0· forwardsnm0· backwardsnm0· sidewardsnm0· upwardsnm0· downwardsnm0· downwardsnm0· downwardsnm0· backwardsnm0· backwardsnm0· backwardsnm0· backwardsnm0· backwardsnm0· upwardsnm0· downwardsnm0· downwardsnm0· upwardsnm0· downwardsnm0· backwardsnm0· backwardsnm0· backwardsnm0· downwardsnm0· downwardsnm0· backwardsnm0· backwardsnm2· backwardsnm2· backwardsnm2· backwardsnm2· backwardsnm2· backwardsnm2 <td< td=""><td>• sidewards</td><td>mm</td><td>0</td></td<>	• sidewards	mm	0
Distance, to be maintained, to the ranks assembly Imm Output to the ranks assembly • forwards mm 0 • backwards mm 0 • sidewards mm 0 • upwards mm 0 • downwards mm 0 • downwards mm 0 • forwards mm 0 • upwards mm 0 • downwards mm 0 • upwards mm 0 • downwards mm 0 • upwards mm 0 • downwards mm 0 • downwards mm 0 • downwards mm 0 • downwards mm 0 • fowards mm 2x (0.25	• upwards	mm	0
•forwardsmm0•backwardsmm0•idewardsmm0•gwardsmm0•downwardsmm0Distance, to be maintained, conductive elementsmm0•forwardsmm0•forwardsmm0•backwardsmm0•backwardsmm0•backwardsmm0•upwardsyupwardsyupwards•upwardsyupwardsyupwards•upwardsyupwardsyupwards•upwardsyupwardsyupwards•upwardsyupwardsyupwards•upwardsyupwardsyupwards•upwardsyupwardsyupwards•upwardsyupwardsyupwards•upwardsyupwardsyupwards•upwardsyupwards <td>downwards</td> <td>mm</td> <td>0</td>	downwards	mm	0
backwardsmm0• sidewardsmm0• upwardsmm0• downwardsmm0Distance, to be maintained, conductive elementsmm0• forwardsmm0• backwardsmm0• backwardsmm0• backwardsmm0• upwardsmm0• downwardsmm0• downwardsprogetified (mm)2• downwardsprogetified (mm)2• downwardsprogetified (mm)2• downwardsprogetified (mm)2• downwardsprogetified (mm)2• solidprogetified (mm)2• withwire end processingprogetified (mm)2• withwire end processingprogetifi	Distance, to be maintained, to the ranks assembly		
sidewardsnm0.upwardsnm0.downwardsnm0Distance, to be maintained, conductive elementsnm0.forwardsnm0.backwardsnm0.backwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnmm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm0.upwardsnm2.upwards.u	• forwards	mm	0
upwardsmm0.downwardsmm0Distance, to be maintained, conductive elementsmm0.forwardsmm0.backwardsmm0.backwardsmm0.backwardsmm0.isidewardsmm0.upwardsmm0.downwardsmm0.downwardsmm0Type of mountingsnap-on mountingProduct function / removable terminal for auxiliary and control circuitYesDesign of the electrical connectionyes.solidspring-loaded terminals.solidyex (0.25 1.5 mm²).with wire end processing2x (0.25 1.5 mm²).with wire end processing2x (0.25 1.5 mm²).solidyex (0.25 1.5 mm²)<	backwards	mm	0
Advanwardsmm0Distance, to be maintained, conductive elements• forwardsmm0• backwardsmm0• backwardsmm0• sidewardsmm0• upwardsmm0• downwardsmm0• downwardsmm0Type of mountingmmsnap-on mountingProduct function / removable terminal for auxiliary and control circuitYes• solidsping-loaded terminals• solid2 × (0.25 1.5 mm²)• solid2 × (0.25 1.5 mm²)• timk wire end processing2 × (0.25 1.5 mm²)• with wire end processing2 × (0.25 1.5 mm²)• tori AWG conductors2 × (0.25 1.5 mm²)• solid2 × (0.25 1.5 mm²)• tori AWG conductors2 × (0.25 1.5 mm²)• solid2 × (24 16)• stranded2 × (24 16)• tori AWG conductors / delayed switching0• tori AUC contacts / delayed switching0Mumber of NC contacts / delayed switching0Mumber of change-over switches / delayed sw	• sidewards	mm	0
Distance, to be maintained, conductive elements mm 0 • forwards mm 0 • backwards mm 0 • backwards mm 0 • sidewards mm 0 • upwards mm 0 • downwards mm 0 • downwards mm 0 • formounting snap-on mounting Product function / removable terminal for auxiliary and control of removable terminals yes Design of the electrical connectable conductor cross-section spring-loaded terminals • solid xx (0.25 1.5 mm?) • with wire end processing xx (0.25 1.5 mm?) • with wire end processing xx (0.25 1.5 mm?) • solid xx (0.25 1.5 mm?) • solid xx (0.25 1.5 mm?) • solid xx (0.25 1.5 mm?) • stranded xx (0.25 1.5 mm?) • stranded xx (0.25 1.5 mm?) • tot AWG conductors xx (0.25 1.5 mm?) • stranded xx (0.25 1.5 mm?) • tot AWG conductors xx (0.21 1.5 mm?) • stranded 0	• upwards	mm	0
• forwardsmm0• backwardsmm0• sidewardsmm0• upwardsmm0• downwardsmm0• downwardsmm0• downwardsmm0• forduct function / removable terminal for auxiliary and controlresProduct function / removable terminal for auxiliary and controlsing-on mounting• baildisping-loaded terminals• solidsping-loaded terminals• solidsylid• with wire end processingsylid• tor AWS conductorssylid• solidstranded• solidstranded• solidstranded• solidstranded• tor AWS conductorssylid• solidstranded• solidstranded• tor AWS conductorsstranded• tor AWS conductorsstranded• solidstranded• tor AWS conductorsstranded• tor AWS conductorsstranded• solidstranded• tor AUS contacts / delayed switching0Immer of NO contacts / delayed switching0Immer of Along-over switches / delayed switching3Immer of thange-over switches / delayed switching3Immer of thange-over switches / delayed switching6Immer of thange-o	downwards	mm	0
backwardsnm0sidewardsnm0upwardsnm0odownwardsnm0Type of mountingnm0Product function / removable terminal for auxiliary and control circuitresProduct function / removable terminal for auxiliary and control circuitsnap-on mountingPosign of the electrical connectionspring-loaded terminalsType of the connectable conductor cross-section solidspring-loaded terminals* solidsyng-loaded terminals* with wire end processing • without wire end processing • solid2 x (0.25 1.5 mm²)* olid • stranded2 x (0.25 1.5 mm²)* solid • stranded2 x (24 16)* solid • stranded2 x (24 16)* solid • stranded0Outputs:0Cutputs0Number of NO contacts / delayed switching0Mumber of NC contacts / delayed switching2Mumber of change-over switches / delayed switching2Current carrying capacity / of output relayid	Distance, to be maintained, conductive elements		
sidewardsnm0upwards0.downwardsnmType of mountingnmProduct function / removable terminal for auxiliary and control fricultNmDesign of the electrical connectionSering-loaded terminalsType of the connectable conductor cross-section solidspring-loaded terminalsvith wire end processing solid2 x (0.25 1.5 mm²)vithout wire end processing solid2 x (24 16)Totpetts:2 x (24 16)Cutputs:0Number of NO contacts / delayed switching0Immet of NC contacts / delayed switching0Immet of change-over switches / delayed switching2Immet of change-over switches / delayed switching2Immet of change-over switches / delayed switching2Immet carrying capacity / of output relayImmet of Immet o	forwards	mm	0
• upwardsnmm0• downwardsnmm0Type of mountingsnap-on mountingProduct function / removable terminal for auxiliary and control circuitYesDesign of the electrical connectionspring-loaded terminalsType of the connectable conductor cross-section • solidspring-loaded terminalsvith wire end processing • withhout wire end processing • solid • solid2 x (0.25 1.5 mm²)vithout wire end processing • solid • stranded2 x (0.25 1.5 mm²)• for AWG conductors • solid • stranded2 x (0.25 1.5 mm²)• for AWG conductors • solid • stranded2 x (0.25 1.5 mm²)• for AWG conductors • solid • stranded2 x (0.25 1.5 mm²)• for AWG conductors • solid • stranded0• for AWG conductors • solid • stranded0• composition0• composition0• composition0• composition2• composition3• composition3• composition3• composition3• composition3• composition3<	backwards	mm	0
· downwardsmm0Type of mountingsnap-on mountingProduct function / removable terminal for auxiliary and control circuitYesDesign of the electrical connectionspring-loaded terminalsType of the connectable conductor cross-section · solidsyring-loaded terminals· solid2x (0.25 1.5 mm²)· with wire end processing · without wire end processing · solid · solid · solid2x (0.25 1.5 mm²)· for AVVG conductors · solid · stranded2x (0.25 1.5 mm²)· for AVVG conductors · solid · stranded2x (0.25 1.5 mm²)· for AVVG conductors · solid · stranded2x (0.25 1.5 mm²)· for AVVG conductors · solid · stranded0· for AVVG conductors / delayed switching0· for AVVG contacts / delayed switching0· for AVVG contacts / delayed switching0· for AVVG contacts / delayed switching2· for AVVG contacts / delayed switching0· for AVVG contacts / delayed switching0 <td>• sidewards</td> <td>mm</td> <td>0</td>	• sidewards	mm	0
Type of mountingsnap-on mountingProduct function / removable terminal for auxiliary and control circuitYesDesign of the electrical connectionspring-loaded terminalsType of the connectable conductor cross-section • solidSyring-loaded terminals* solid2x (0.25 1.5 mm²)• with wire end processing • without wire end processing • solid2x (0.25 1.5 mm²)• for AWG conductors • solid • stranded2x (24 16)• solid • stranded2x (24 16)• conductors • solid • stranded0Outputs:0Number of NO contacts / delayed switching0Number of Contacts / delayed switching0Number of change-over switches / delayed switching2Current carrying capacity / of output relayImage: Stranded	• upwards	mm	0
Product function / removable terminal for auxiliary and control circuitYesDesign of the electrical connectionspring-loaded terminalsType of the connectable conductor cross-section • solidspring-loaded terminals* solid2x (0.25 1.5 mm²)• finely stranded • with wire end processing • without wire end processing • solid • tor AWG conductors • solid • stranded2x (0.25 1.5 mm²)Outputs:2x (24 16)Number of NO contacts / delayed switching0Number of NC contacts / delayed switching0Number of change-over switches / delayed switching0Number of change-over switches / delayed switching0Current carrying capacity / of output relay1	downwards	mm	0
circuitImage: circuitDesign of the electrical connectionspring-loaded terminalsType of the connectable conductor cross-sectionX• solidX• solidX• finely strandedX• with wire end processingX• without wire end processingX• for AWG conductorsX• solidX• solidX• for AWG conductorsX• solidX• solidX• strandedX• strandedX• strandedX• strandedImage: Circuit• strandeImage: Circuit• strandeImage	Type of mounting		snap-on mounting
Type of the connectable conductor cross-section2x (0.25 1.5 mm²)• solid• finely stranded2 x (0.25 1.5 mm²)• with wire end processing2 x (0.25 1.5 mm²)• without wire end processing2 x (0.25 1.5 mm²)• without wire end processing2 x (0.25 1.5 mm²)• for AWG conductors2 x (0.25 1.5 mm²)• solid2 x (24 16)• solid2 x (24 16)• stranded0Number of NO contacts / delayed switchingNumber of NC contacts / delayed switching0Number of change-over switches / delayed switching2Current carrying capacity / of output relay1			Yes
 solid solid finely stranded with wire end processing without wire end processing without wire end processing for AWG conductors solid stranded 2x (0.25 1.5 mm²) 2x (0.25 1.5 mm²) 2x (24 16) 2x (24 16) 2x (24 16) 2x (24 16) 0 Number of NO contacts / delayed switching 0 Number of NC contacts / delayed switching 0 Number of Contacts / delayed switching 0 2x (24 16) 	Design of the electrical connection		spring-loaded terminals
• finely strandedImage: StrandedImage: Stranded• with wire end processing2 x (0.25 1.5 mm²)• without wire end processing2x (0.25 1.5 mm²)• for AWG conductors2x (24 16)• solid2x (24 16)• stranded0Outputs:10Number of NC contacts / delayed switching0Number of NC contacts / delayed switching2Number of NC contacts / delayed switching0Number of Contacts / delayed switching0Number of Contacts / delayed switching0Number of change-over switches / delayed switching2Current carrying capacity / of output relayImage: Stranded	Type of the connectable conductor cross-section		
 with wire end processing without wire end processing without wire end processing without wire end processing for AWG conductors solid solid stranded Outputs: Outputs: 2 Number of NO contacts / delayed switching 0 Number of NC contacts / delayed switching 0 Number of change-over switches / delayed switching 2 Current carrying capacity / of output relay 2	• solid		2x (0.25 1.5 mm²)
 without wire end processing for AWG conductors solid stranded 2x (24 16) 2x (24 16) 2x (24 16) Outputs: Number of NO contacts / delayed switching Number of NC contacts / delayed switching 0 0 Number of change-over switches / delayed switching 2 Current carrying capacity / of output relay Image: Contacts / delayed switching Image: Current carrying capacity / of output relay Image: Current carrying capacity / of output relay Image: Current carrying capacity / of output relay	finely stranded		
• for AWG conductorsImage: Solid so	with wire end processing		2 x (0.25 1.5 mm²)
• solid • stranded2x (24 16) 2x (24 16)Outputs:0Number of NO contacts / delayed switching0Number of NC contacts / delayed switching0Number of NC contacts / delayed switching0Number of change-over switches / delayed switching2Current carrying capacity / of output relay10	without wire end processing		2x (0.25 1.5 mm²)
• stranded2x (24 16)Outputs:0Number of NO contacts / delayed switching0Number of NC contacts / delayed switching0Number of change-over switches / delayed switching2Current carrying capacity / of output relay10	for AWG conductors		
Outputs: Number of NO contacts / delayed switching 0 Number of NC contacts / delayed switching 0 Number of change-over switches / delayed switching 2 Current carrying capacity / of output relay ()	• solid		2x (24 16)
Number of NO contacts / delayed switching 0 Number of NC contacts / delayed switching 0 Number of change-over switches / delayed switching 2 Current carrying capacity / of output relay 1	• stranded		2x (24 16)
Number of NC contacts / delayed switching 0 Number of change-over switches / delayed switching 2 Current carrying capacity / of output relay Image: Contact of Cont	Outputs:		
Number of change-over switches / delayed switching 2 Current carrying capacity / of output relay 4	Number of NO contacts / delayed switching		0
Current carrying capacity / of output relay	Number of NC contacts / delayed switching		0
	Number of change-over switches / delayed switching		2
• at AC-15	Current carrying capacity / of output relay		
	• at AC-15		

• at 250 V / at 50/60 Hz		А	3
• at 400 V / at 50/60 Hz		А	3
• at DC-13			
• at 24 V		А	1
• at 125 V		А	0.2
• at 250 V		А	0.1
Thermal current / of the contact-affected switc maximum	hing element /	A	5
Operating current / at 17 V / minimum		mA	5
Continuous current / of the DIAZED fuse link o	of the output relay	А	4
Mechanical operating cycles as operating time	e / typical		10,000,000
Electrical operating cycles as operating time / V / typical	at AC-15 / at 230		100,000
Operating cycles / with 3RT2 contactor / maxim	num	1/h	5,000
Certificates/approvals:			
General Product Approval E	EMC	Test Certificates	
	C-TICK	Special Test Certificate	
Shipping Approval		other	
	Llovd's Register Lrs	Declaration of <u>other</u> Conformity	
Further information:			
Information- and Downloadcenter (Catalogs, Brochures,) http://www.siemens.com/industrial-controls/catalogs			
Industry Mall (Online ordering system) http://www.siemens.com/industrial-controls/mall			
Cax online generator: http://www.siemens.com/cax			
Service&Support (Manuals, Certificates, Characteristics, FAQs,) http://support.automation.siemens.com/WW/view/en/3UG4511-2BP20/all			

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3UG4511-2BP20



last change:

Feb 18, 2013