## **SIEMENS**

Data sheet 3UG4512-1AR20



Analog monitoring relay Phase failure and sequence 3 x 160...690 V 50...60 Hz AC 1 change-over contact screw terminal

Figure similar

product brand name	SIRIUS	
product designation	Network monitoring relay with analog setting	
design of the product	2 functions	
product type designation	3UG4	

product type designation	3UG4
General technical data	
product function	Phase monitoring relay
display version LED	Yes
insulation voltage for overvoltage category III according to IEC 60664	
<ul> <li>with degree of pollution 3 rated value</li> </ul>	690 V
degree of pollution	3
type of voltage	
<ul> <li>for monitoring</li> </ul>	AC
<ul> <li>of the control supply voltage</li> </ul>	AC
surge voltage resistance rated value	6 kV
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 (switching cycles) typical	10 000 000
electrical endurance (switching 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 (Date)	05/01/2012
Product Function	
and dead for all an	

relative repeat accuracy	1 70
Substance Prohibitance (Date)	05/01/2012
Product Function	
product function	
<ul> <li>undervoltage detection</li> </ul>	No
<ul> <li>overvoltage detection</li> </ul>	No
<ul> <li>phase sequence recognition</li> </ul>	Yes
<ul> <li>phase failure detection</li> </ul>	Yes
<ul> <li>asymmetry detection</li> </ul>	No
<ul> <li>overvoltage detection 3 phase</li> </ul>	No
<ul> <li>undervoltage detection 3 phases</li> </ul>	No
<ul> <li>voltage window recognition 3 phase</li> </ul>	No
<ul> <li>adjustable open/closed-circuit current principle</li> </ul>	No
• auto-RESET	Yes
Control circuit/ Control	
control supply voltage at AC	
at 50 Hz rated value	160 690 V

operating range factor control supply voltage rated value at AC at 50 Hz  Initial value at 50 Hz	• at 60 Hz rated value	160 690 V
Initial value I		
* Mulscale value operating range factor control supply voltage rated value at AC at 58 Hz  * Initial value * Unit scale * Unit sca		1
value at AC at 60 Hz  • Initial value  •	full-scale value	1
### ### ### ### ### ### ### ### ### ##		
Measuring circuit   measurable voltage at AC	• initial value	1
measurable voltage at AC  Auxiliary circuit number of NC contacts delayed switching number of NC contacts delayed switching number of NC contacts delayed switching 1 operating frequency with 3RT2 contactor maximum  Mish circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 250 V at 5060 Hz 3 A anapacity of the output relay at DC-13 at 24 V 1 A 1 25 V 2 A 125 V 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A	• full-scale value	1
Auxiliary circuit number of NC contacts delayed switching number of NC contacts delayed switching number of CO contacts delayed switching number of CO contacts delayed switching operating frequency with SRT2 contactor maximum  Main circuit number of poles for main current circuit ampacity of the output relay at AC-15  • at 250 V at 5060 Hz • at 400 V at 5060 Hz • at 250 V • at 125 V • at 125 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay due to burst according to IEC 61000-4-4 • due to bonductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surger according to IEC 61000-4-5 • due to conductor-conductor surger according to IEC 61000-4-5 • due to conductor-conductor surger according to IEC 61000-4	Measuring circuit	
number of NC contacts delayed switching number of NC contacts delayed switching 1 0 number of NC contacts delayed switching 2 0 number of CO contacts delayed switching 3 0 number of CO contacts delayed switching 4 5 000 1/h 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	measurable voltage at AC	160 690 V
number of NC contacts delayed switching number of CC contacts delayed switching 1 operating frequency with 3RT2 contactor maximum 5 000 1/h  Main circuit 1	Auxiliary circuit	
number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum  Main circuit  number of poles for main current circuit ampacity of the output relay at AC-15  * at 250 V at 50/60 Hz * at 24 V 15 A 250 W 15 A 250 W 15 W		0
Main circuit   South   Section   South   Section   South   Section   Secti		
Main circuit  number of poles for main current circuit ampacity of the output relay at AC-15  • at 250 V at 50/60 Hz • at 440 V at 50/60 Hz  ampacity of the output relay at DC-13  • at 24 V • at 125		
number of poles for main current circuit ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz • at 400 V at 50/60 Hz • at 400 V at 50/60 Hz • at 24 V • at 126 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay    Celectromagnetic compatibility   Conducted interference   due to burst according to IEC 61000-4-4   due to conductor-earth surge according to IEC 61000-4-5   due to conductor-earth surge according to IEC 61000-4-5   due to conductor-onductor surge according to IEC 61000-4-5   due to conductor-onductor surge according to IEC 61000-4-5   due to conductor-onductor surge according to IEC 61000-4-5   due to benductor-onductor surge according to IEC 61000-4-5   due to benductor-onductor surge according to IEC 61000-4-5   due to conductor-onductor conductor cross-section   between input and output		5 000 1/h
ampacity of the output relay at AC-15  at 250 V at 50/60 Hz  at 250 V to 40 20 X  at 250 V  operational current at 17 V minimum  continuous current of the DIAZED fuse link of the output relay  eat 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 according to IEC 61000-44  e due to conductor-earth surge according to IEC  61000-45  due to conductor-conductor surge according to IEC  61000-45  electrostatic discharge according to IEC 61000-43  fleid-based interference according to IEC 61000-43  fleid-based interference according to IEC 61000-43  fleid-based interference according to IEC 61000-42  Calvanic Isolation  e) between input and output  between the outputs  between the outputs  between the voltage supply and other circuits  between the voltage supply and other circuits  ype of electrical connection  e) solid  finely stranded with core end processing  at AWC cables solid  at AWC cables stranded  connectable conductor cross-sections  e) solid  finely stranded with core end processing  AWG number as coded connectable conductor cross-section  e) solid  finely stranded with core end processing  AWG number as coded connectable conductor cross-section  e) solid  e) finely stranded with core end processing  AWG number as coded connectable conductor cross-section  e) solid  e) finely stranded with core end processing  AWG number as coded connectable conductor cross-section  e) solid  e) finely stranded with core end processing  AWG number as coded connectable conductor cross-section  e) solid  e) finely stranded with core end processing  AWG number as coded connectable conductor cross-section  e) solid  e) finely stranded with core end processing  AWG number as coded connectable conductor cross-section  e) solid  e) finely stranded with core end processing  AWG number as coded connectable conductor cross-section  e) solid  e) finely stranded with core end processing  AWG number as coded conn		
* at 250 V at 50/60 Hz * at 400 V at 50/60 Hz ampacity of the output relay at DC-13 * at 24V * at 125 V * at 1	•	3
anyacity 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 according to IEC 61000-4-4  due to conductor-earth surge according to IEC 61000-4-5  due to conductor-conductor surge according to IEC 61000-4-3  electrostatic discharge according to IEC 61000-4-2  field-based interference according to IEC 61000-4-3  electrostatic discharge according to IEC 61000-4-2  field-based interference according to IEC 61000-4-3  electrostatic discharge according to IEC 61000-4-2  field-based interference according to IEC 61000-4-3  electrostatic discharge according to IEC 61000-4-2  field-based interference according to IEC 61000-4-3  electrostatic discharge according to Ves  seventional according to Ves  yes  Connections/ Torninals  yes  connectable component removable terminal for auxiliary and control circuit type of electrical connection  type of connectable conductor cross-sections  at AWG cables stoid  at AWG cables stoid  at AWG cables stranded  at AWG cables stranded  at AWG cables stranded  believed at AWG cables according to IEC 61000-4-2  connectable conductor cross-section  at AWG cables according to IEC 61000-4-3  a		2.4
ampacity of the output relay at DC-13  • at 125 V  • at 125 V  • at 125 D  • at 25 D  •		
at 24 V at 125 V at 125 V at 250 V 0.2 A at 250 V 0.1 A operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility conducted interference  • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC c1000-4-5 • due to conductor-conductor surge according to IEC c1000-4-5 • due to conductor-conductor surge according to IEC c1000-4-5 • field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 6 kV contact discharge / 8 kV air discharge  Galvanic isolation  galvanic isolation  abelween input and output between the outputs between the outputs between the voltage supply and other circuits  connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections solid finely stranded with core end processing at AWG cables stranded at AWG cables stranded connectable conductor cross-section solid finely stranded with core end processing AWG number as coded connectable conductor cross-section solid stranded stranded tightening torque with screw-type terminals  Do 4 mm³  Do 4 mm³  Do 4 mm³  Do 2.5 mm²  AWG number as coded connectable conductor cross-section solid stranded tightening torque with screw-type terminals Do 14 tightening torque with screw-type terminals nounting position and any fastening method		3 A
at 125 V at 250 V at		1 Δ
• 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 according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 field-based interference according to IEC 61000-4-3 electrostatic discharge /8 kV air discharge  Ves  Obstance in Verse  **Ves  **Operations**  **Ves  **Operations** **Operations** **Yes  **Operations** **Yes  **Operations** **Yes  **Operations** **Operations** **Yes  **Operations*		
operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  conducted interference  • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 field-based interference according to IEC 61000-4-2 follow-4-5 field-based interference according to IEC 61000-4-2 field-based interference according to IEC 61000-4-3 electrostatic discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  7 ks  - between the voltage supply and other circuits - Yes - between the voltage supply and other circuits - Yes - between the voltage supply and other circuits - Yes - very selectrical connection - solid - finely stranded with core end processing - at AWG cables stranded - at AWG cables stranded - at AWG cables stranded - solid - inely stranded with core end processing - woll and - solid - solid - solid - solid - stranded - solid - stranded - solid - stranded - solid - stranded - solid - solid - stranded - solid - solid - stranded - solid - stranded - solid - solid - stranded - solid - stranded - solid - solid - solid - stranded - solid - solid - solid - stranded - solid - solid - stranded - solid - solid - stranded - solid - solid - solid - stranded - solid - solid - solid - solid - solid - solid - s		7.2.7
continuous current of the DIAZED fuse link of the output relay    Conducted interference		****
conducted interference  • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5  filed-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2  Galvanic isolation  • between input and output • between the outputs • between the voltage supply and other circuits  Product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • Solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • Solid • stranded • finely stranded with core end processing • Solid • finely stranded with core end processing • Solid • Solid • Solid • Solid • Solid • Solid • Stranded • Str	continuous current of the DIAZED fuse link of the	4 A
<ul> <li>due to burst according to IEC 61000-4-4</li> <li>due to conductor-earth surge according to IEC 61000-4-5</li> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> <li>due to conductor-conductor surge according to IEC 61000-4-3</li> <li>field-based interference according to IEC 61000-4-2</li> <li>delectrostatic discharge according to IEC 61000-4-2</li> <li>Galvanic isolation</li> <li>between input and output Yes</li> <li>between the outputs Yes</li> <li>between the voltage supply and other circuits Yes</li> <li>Connections/ Terminals</li> <li>product component removable terminal for auxiliary and control circuit</li> <li>type of electrical connection</li> <li>type of connectable conductor cross-sections</li> <li>solid</li> <li>at AWG cables stranded</li> <li>at AWG cables stranded</li> <li>connectable conductor cross-section</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>at AWG number as coded connectable conductor cross-section</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>AWG number as coded connectable conductor cross-section</li> <li>solid</li> <li>stranded</li> <li>stranded</li> <li>tot 4 mm²</li> <li>stranded</li> <li>tot 4 mm²</li> <li>stranded</li> <li>stranded</li> <li>tot 4 mm²</li> <li>stranded</li> <li>tot 4 mm²</li> <li>stranded</li> <li>tot 4 mm²</li> <li>stranded</li> <li>stranded</li> <li>tot 4 mm²</li> <li>stra</li></ul>	Electromagnetic compatibility	
• due to conductor-earth surge according to IEC 61000-4-5     • due to conductor-conductor surge according to IEC 61000-4-5     field-based interference according to IEC 61000-4-2     field-based interference according to IEC 61000-4-2     delectrostatic discharge according to IV/m     deserved to IV/m     deserved according to IV/m     deserved to IV/m	conducted interference	
• due to conductor-conductor surge according to IEC 61000-4-5     field-based interference according to IEC 61000-4-2     electrostatic discharge according to IEC 61000-4-2     Galvanic isolation galvanic isolation     • between input and output     • between the outputs     • between the voltage supply and other circuits  Product component removable terminal for auxillary and control circuit type of electrical connection type of connectable conductor cross-sections     • solid     • at AWG cables solid     • at AWG cables stranded     connectable conductor cross-section     • solid     • at AWG cables stranded     connectable conductor cross-section     • solid     • stranded with core end processing     • solid     • finely stranded with core end processing     • Solid     • stranded with core end processing     • AWG number as coded connectable conductor cross-section     • solid     • stranded     • stranded     • stranded     inhely stranded with core end processing     AWG number as coded connectable conductor cross-section     • solid     • stranded     its processing     AWG number as coded connectable conductor cross-section     • solid     • stranded     its processing     AWG number as coded connectable conductor cross-section     • solid     • stranded     its processing     AWG number as coded connectable conductor cross-section     • solid     • stranded     its processing     AWG number as coded connectable conductor cross-section     • solid     • stranded     its processing     AWG number as coded connectable conductor cross-section     • solid     • stranded     its processing     AWG number as coded connectable conductor cross-section     • solid     • stranded     its processing     its process	<ul> <li>due to burst according to IEC 61000-4-4</li> </ul>	2 kV
field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2  Galvanic Isolation  • between input and output • between the outputs • between the voltage supply and other circuits  Product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections • solid • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • stranded • stranded tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position fastening method  10 V/m 6 kV contact discharge / 8 kV air discharge 6 kV contact discharge / 8 kV air discharge 6 kV contact discharge / 8 kV air discharge 6 kV contact discharge / 8 kV air discharge 6 kV contact discharge / 8 kV air discharge 6 kV contact discharge / 8 kV air discharge 6 kV contact discharge / 8 kV air discharge 6 kV contact discharge / 8 kV air discharge 7 b kV as 6 kV contact discharge / 8 kV air discharge 6 kV contact discharge / 8 kV air discharge 7 b kV as 6 kV contact discharge / 8 kV air discharge 6 kV contact discharge / 8 kV air discharge 7 b kV as 6 kV contact discharge / 8 kV air discharge 7 b kV as 6 kV contact discharge / 8 kV air discharge 7 b kV as 6 kV contact discharge / 8 kV air discharge 7 b kV as 6 kV contact discharge / 8 kV air discharge 8 kV air discharge 8 kV air discharge 8 kV air discharge 9 kV contact discharge / 8 kV air discharge 9 kV contact discharge / 8 kV air discharge 9 kV contact discharge / 8 kV air discharge 9 kV contact discharge / 8 kV air discharge 9 kV contact discharge / 8 kV air discharge 9 kV contact discharge / 8 kV air discharge 9 kV contact discharge / 8 kV air discharg		2 kV
electrostatic discharge according to IEC 61000-4-2  Galvanic isolation  galvanic isolation  • between input and output  • between the outputs  • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection type of connectable conductor cross-sections  • solid  • sinely stranded with core end processing • at AWG cables stranded • at AWG cables stranded • finely stranded with core end processing • solid • at AWG cables stranded • solid • at AWG cables of the conductor cross-section  • solid • finely stranded with core end processing • solid • at AWG cables of the conductor cross-section • solid • finely stranded with core end processing  • solid • finely stranded with core end processing  • solid • finely stranded with core end processing  • solid • finely stranded with core end processing  • solid • finely stranded with core end processing  AWG number as coded connectable conductor cross section • solid • stranded • stra		1 kV
Galvanic isolation  galvanic isolation  • between input and output  • between the outputs  • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • solid  • solid  • at AWG cables solid  • at AWG cables stranded  • at AWG cables stranded  • solid  • solid  • solid  • at AWG cables stranded  • at AWG cables stranded  • solid  • finely stranded with core end processing  • solid  • solid  • solid  • finely stranded with core end processing  • solid  • solid  • solid  • finely stranded with core end processing  AWG number as coded connectable conductor cross section  • solid  • stranded  • stranded  • stranded  tightening torque with screw-type terminals    solid   stranded   20 14   14   14   15   15   15   15   15		1.5 1111
galvanic isolation  • between input and output  • between the outputs • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection type of connectable conductor cross-sections  • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded connectable conductor cross-section  • solid • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross-section • solid • stranded with core end processing  AWG number as coded connectable conductor cross-section • solid • stranded tightening torque with screw-type terminals  number as coded connectable conductor cross-section  • stranded tightening torque with screw-type terminals  number as coded connectable conductor cross-section  • stranded tightening torque with screw-type terminals  number as coded connectable conductor cross-section  • stranded tightening torque with screw-type terminals  number as coded connectable conductor cross-section  • stranded tightening torque with screw-type terminals  number as coded connectable conductor cross-section  • stranded tightening torque with screw-type terminals  number as coded connectable conductor cross-section  • stranded tightening torque with screw-type terminals  number as coded connectable conductor cross-section  any snap-on mounting		6 kV contact discharge / 8 kV air discharge
between input and output     between the outputs     between the outputs     between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection     type of connectable conductor cross-sections     solid         1x (0.5 4 mm2), 2x (0.5 2.5 mm2)         • finely stranded with core end processing         • at AWG cables solid             • at AWG cables stranded             • at AWG cables stranded             • solid             • solid             • solid             • solid             • finely stranded with core end processing             • solid             • at AWG cables stranded             • solid             • stranded with core end processing  AWG number as coded connectable conductor cross section             • solid             • stranded                  • stranded                   • stranded                   • stranded                   • stranded                   • stranded                   • stranded                   • stranded                   • stranded                   • stranded                   • stranded                   • stranded                  • stranded                   • stranded                   • stranded                   • stranded                   • stranded                   • stranded                   • stranded                   • stranded                   • stranded	Galvanic isolation	
between the outputs     between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections     solid     initially stranded with core end processing     at AWG cables solid     at AWG cables stranded     connectable conductor cross-section     solid         initially stranded with core end processing         at AWG cables stranded     connectable conductor cross-section     solid     initially stranded with core end processing     AWG number as coded connectable conductor cross-section     solid     stranded	•	
between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections      • solid     • finely stranded with core end processing     • at AWG cables stranded     • at AWG cables stranded     • finely stranded with core end processing     • solid     • finely stranded with core end processing     • solid     • solid     • finely stranded with core end processing     • solid     • finely stranded with core end processing  AWG number as coded connectable conductor cross section     • solid     • solid     • stranded     • stranded     • stranded     tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position fastening method  Yes  Yes  Yes  **Crow-type terminals  **T (0.5 4 mm2), 2x (0.5 2.5 mm2)  1x (0.5 2.5 mm2), 2x (0.5 1.5 mm2)  2x (20 14)  3x (20	·	
product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections  • solid	·	
product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections  • solid  • finely stranded with core end processing • at AWG cables stranded • at AWG cables stranded connectable conductor cross-section  • solid • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing  AWG number as coded connectable conductor cross section • solid • stranded • stranded • stranded tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position fastening method  Yes screw-type terminals  1x (0.5 4 mm2), 2x (0.5 2.5 mm2)  1x (0.5 2.5 mm2), 2x (0.5 1.5 mm2)  2x (20 14)  2x (20 14  2x (	3 11.3	TES
and control circuit type of electrical connection type of connectable conductor cross-sections  • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing  • solid • finely stranded with core end processing  • solid • finely stranded with core end processing  AWG number as coded connectable conductor cross section • solid • stranded • strande		Vos
type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • at AWG cables solid  • at AWG cables stranded  • solid  • solid  • finely stranded with core end processing  • at AWG cables stranded  • at AWG cables stranded  connectable conductor cross-section  • solid  • finely stranded with core end processing  AWG number as coded connectable conductor cross section  • solid  • solid  • solid  • stranded  • stranded  tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position  fastening method  1x (0.5 4 mm2), 2x (0.5 2.5 mm2)  2x (20 14)  2x (20 14)  0.5 4 mm²  0.5 2.5 mm²  0.5 2.5 mm²  0.5 2.5 mm²  0.5 2.5 mm²  1x (0.5 2.5 mm2)  2x (20 14)  2x (20 14)  0.5 4 mm²  0.5 2.5 mm²  0.5 2.5 mm²  1x (0.5 2.5 mm2)  2x (20 14)  2x (20 14)  0.5 4 mm²  0.5 2.5 mm²  1x (0.5 2.5 mm2)  2x (20 14)  2x (20 14)  1x (0.5 2.5 mm2)  2x (20 14)  2x (20 14)  1x (0.5 2.5 mm2)  2x (20 14)  2x (20 14)  0.5 4 mm²  0.5 2.5 mm²  1x (0.5 2.5 mm2)  2x (20 14)  2x (20 14)  1x (0.5 2.5 mm2)  1x (0.5 2.5 mm2)  2x (20 14)  1x (0.5 2.5 mm2)  1x (0.5 2.5 mm2)  2x (20 14)  1x (0.5 2.5 mm2)  2x (20 14)  1x (0.5 2.5 mm2)  1x (0.5 2.5 mm2)  2x (20 14)  1x (0.5 2.5 mm2)  2x (20 14)  1x (0.5 2.5 mm2)  2x (20 14)  1x (0.5 2.5 mm2)  1x (0.5 14)  1x (0.5 2.5 mm2)  1x (0.5 14)	and control circuit	
<ul> <li>solid</li> <li>finely stranded with core end processing</li> <li>at AWG cables solid</li> <li>at AWG cables stranded</li> <li>at AWG number as coded connectable conductor cross section</li> <li>as solid</li> <li>as stranded</li> <li>as stranded</li> <li>as stranded tightening torque with screw-type terminals</li> <li>as any</li> <li>fastening method</li> <li>any</li> <li>snap-on mounting</li> </ul>		screw-type terminals
<ul> <li>finely stranded with core end processing</li> <li>at AWG cables solid</li> <li>at AWG cables stranded</li> <li>at AWG number as coded conductor cross section</li> <li>at AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable c</li></ul>		1v (0.5 4 mm2) 2v (0.5 2.5 mm2)
<ul> <li>at AWG cables solid</li> <li>at AWG cables stranded</li> <li>at AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable conductor cross section</li> <li>at a AWG number as coded connectable</li></ul>		
<ul> <li>at AWG cables stranded</li> <li>connectable conductor cross-section</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>AWG number as coded connectable conductor cross section</li> <li>solid</li> <li>stranded</li> <li>stranded</li> <li>tightening torque with screw-type terminals</li> <li>Installation/ mounting/ dimensions</li> <li>mounting position</li> <li>fastening method</li> <li>2x (20 14)</li> <li>0.5 4 mm²</li> <li>0.5 2.5 mm²</li> <li>20 14</li> <li>tightening torque with screw-type terminals</li> <li>any</li> <li>fastening method</li> </ul>		
connectable conductor cross-section  • solid  • finely stranded with core end processing  AWG number as coded connectable conductor cross section  • solid  • stranded  • stranded  • stranded  tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position  fastening method  0.5 4 mm²  0.5 2.5 mm²  20 14  20 14  20 14  30 1.2 N·m		
solid     finely stranded with core end processing  AWG number as coded connectable conductor cross section     solid     stranded     stranded     tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position fastening method  0.5 4 mm²  0.5 2.5 mm²  20 14  20 14  20 14  10 .8 1.2 N·m  Installation/ mounting/ dimensions		(
finely stranded with core end processing  AWG number as coded connectable conductor cross section      solid     stranded     stranded     tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position fastening method  0.5 2.5 mm²  20 14  20 14  10 .8 1.2 N·m  Installation/ mounting/ dimensions  any fastening method		0.5 4 mm²
AWG number as coded connectable conductor cross section  • solid • stranded • stranded tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position fastening method  any fastening method		
● stranded  tightening torque with screw-type terminals  0.8 1.2 N·m  Installation/ mounting/ dimensions  mounting position any fastening method snap-on mounting	AWG number as coded connectable conductor cross	
tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position any fastening method snap-on mounting	• solid	20 14
Installation/ mounting/ dimensions  mounting position any fastening method snap-on mounting	• stranded	20 14
mounting position any fastening method snap-on mounting	tightening torque with screw-type terminals	0.8 1.2 N·m
fastening method snap-on mounting	Installation/ mounting/ dimensions	
	mounting position	any
height 83 mm	•	snap-on mounting
	height	83 mm

depth required spacing	91 mm		
with side-by-side mounting			
— forwards	0 mm		
— lorwards — backwards	0 mm		
— upwards	0 mm		
— dpwards — downwards	0 mm		
— at the side	0 mm		
	O IIIIII		
<ul><li>for grounded parts</li><li>forwards</li></ul>	0 mm		
— lorwards — backwards	0 mm		
— packwards — upwards	0 mm		
— upwards — at the side	0 mm		
— downwards	0 mm		
for live parts	O IIIIII		
— forwards	0 mm		
— lorwards — backwards	0 mm		
— packwards — upwards	0 mm		
— upwards — downwards	0 mm		
— at the side	0 mm		
	O IIIIII		
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











Conformity

**Declaration of Test Certificates** Marine / Shipping other Conformity



**Special Test Certific**ate

Type Test Certificates/Test Report





Confirmation

Railway

Vibration and Shock

## **Further information**

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

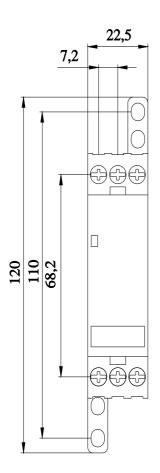
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UG4512-1AR20

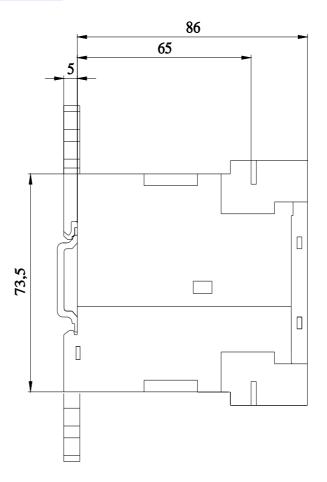
Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4512-1AR20

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3UG4512-1AR20

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





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