## SIEMENS

## Data sheet

Figure similar

## 3UG4511-1AP20



Analog monitoring relay Phase sequence monitoring 3 x 320...500 V 50...60 Hz AC 1 change-over contact screw terminal Successor product for 3UG3511-1AQ50

product brand name         SIRIUS           product designation         Network monitoring relay with analog setting           design of the product         1 function           product function         3UG4           Ceneral technical data         Phase monitoring relay           product function         Phase monitoring relay           display version LED         Yes           insulation voltage for overvoltage category III         690 V           according to IEC 60664         690 V           • with degree of pollution 3 rated value         690 V           degree of pollution         3           type of voltage         AC           • of the control supply voltage         AC           surge voltage resistance rated value         6 kV           protection class IP         IP20           sinusoidal half-wave 15g / 11 ms         10 000 000           electrical endurance (operating cycles) at AC-15 at         100 000 00           230 V typical         5 A           thermal current of the switching element with         5 A           contacts maximum         reference code according to IEC 81346-2           wide voltage detection         No           • undervoltage detection         No           • undervoltage detection				
design of the product product type designation       3//G4         Central technical data       Product function         display version LED       Yes         insulation voltage for overvoltage category III according to IEC 60664       690 V         • with degree of pollution 3 rated value       690 V         • degree of pollution       3         type of voltage       AC         • of the control supply voltage       AC         • of the control supply voltage       AC         surge voltage resistance rated value       6 kV         protection class IP       sinusoidal half-wave 15g / 11 ms         vibration resistance according to IEC 60068-2-27       sinusoidal half-wave 15g / 11 ms         vibration resistance according to IEC 60068-2-61       1 6 Hz: 15 mm, 6 500 Hz: 2g         mechanical service life (operating cycles) typical       100 000 00         electrical endurance (operating 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         Substance Prohibitance (Date)       Yes         Product function       No         • phase sequence recognition       No         • phase failure detection       Yes         • phase fai	product brand name	SIRIUS		
product type designation         3UG4           Ceneral technical data         Phase monitoring relay           product function         Phase monitoring relay           display version LED         Yes           insulation voltage for overvoltage category III according to IEC 60664         690 V           • with degree of pollution 3 rated value         690 V           degree of pollution         3           type of voltage         AC           • for monitoring         AC           of the control supply voltage         AC           surge voltage resistance rated value         6 kV           protection class IP         IP20           shock resistance according to IEC 60068-2-6         1 6 Hz: 15 mm, 6 500 Hz: 2g           mechanical service life (operating cycles) typical         100 000           electrical endurance (operating cycles) typical         5 A           contacts maximum         5 A           reference code according to IEC 81346-2         K           Substance Prohibitance (Date)         500/1/2012           Product function         No           • phase failure detection         No           • phase failure detection         No           • overvoltage detection 3 phase         No           • overvoltage detection 3	product designation	Network monitoring relay with analog setting		
General technical data     Phase monitoring relay       product function     Phase monitoring relay       display version LED     Yes       insulation voltage for overvoltage category III     600 V       according to IEC 60664     600 V       • with degree of pollution 3 rated value     690 V       degree of pollution 5 rated value     690 V       • of the control supply voltage     AC       • of the control supply voltage     AC       • of the control supply voltage     AC       surge voltage resistance rated value     6 kV       protection class IP     IP20       shock resistance according to IEC 60068-2-87     sinusoidal half-wave 15g / 11 ms       runchanical service Iif (operating cycles) paical     10 0000       electrical endurance (operating cycles) at AC-15 at     100 000       230 V typical     5 A       thermal current of the switching element with     5 A       contacts maximum     reference code according to IEC 81346-2     K       Substance Prohibitance (Date)     05/01/2012       Product function     No       • phase sequence recognition     Yes       • phase failure detection     No       • overvoltage detection 3 phase     No       • undervoltage detection 3 phase     No       • ovalage window recognition 3 phase     No <th>design of the product</th> <th colspan="3"></th>	design of the product			
product function         Phase monitoring relay           display version LED         Yes           insulation voltage for overvoltage category III according to IEC 60664         900 V           • with degree of pollution         3           type of voltage         AC           • for monitoring         AC           • of the control supply voltage         AC           surge voltage resistance rated value         6 kV           protection class IP         Inusoidal half-wave 15g / 11 ms           vibration resistance according to IEC 60068-2-27         sinusoidal half-wave 15g / 11 ms           vibration resistance according to IEC 60068-2-6         Inusoidal half-wave 15g / 11 ms           vibration resistance according to IEC 60068-2-7         100 000           electrical endurance (operating cycles) at AC-15 at         200 V typical           thermal current of the switching element with contacts maximum         5 A           reference code according to IEC 81346-2         K           Substance Prohibitance (Date)         05/01/2012           Product function         No           • phase sequence recognition         Yes           • phase sequence recognition         Yes           • phase failure detection         No           • overvoltage detection 3 phase         No	product type designation	3UG4		
display version LED       Yes         insulation voltage for overvoltage category III       according to IEC 60664         • with degree of pollution       3         type of voltage       600 V         • of monitoring       AC         • of the control supply voltage       AC         surge voltage resistance rated value       6 kV         protection class IP       IP20         shock 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) at AC-15 at 230 V typical       100 000         electrical endurance (operating cycles) at AC-15 at 230 V typical       5 A         reference code according to IEC 81346-2       K         Substance Prohlbitance (Date)       05/01/2012         Product Function       vervoltage detection         • overvoltage detection       No         • overvoltage detection 3 phase       No         • overvoltage detection 3 phase       No         • overvoltage detection 3 phase       No         • overvoltage detection 3 ph	General technical data			
insulation voltage for overvoltage category III       according to IEC 60664         • with degree of pollution 3 rated value       690 V         degree of pollution       3         type of voltage       AC         • for monitoring       AC         • of the control supply voltage       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 (operating cycles) ptical       10 0000         electrical endurance (operating cycles) at AC-15 at       20 0000         230 V typical       5 A         thermal current of the switching element with contacts maximum       5 A         vervoltage detection       No         • undervoltage detection       No         • undervoltage detection       No         • phase failure detection       No         • overvoltage detection       No         • overvoltage detection 3 phase       No         • undervoltage detection 3 phase       No         • overvoltage detection 3 phase       No         • overevoltage detection 3 phase       No<	product function	Phase monitoring relay		
according to IEČ 60664       690 V         • with degree of pollution       3         type of voltage       AC         • for monitoring       AC         • of the control supply voltage       AC         • of the control supply voltage       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 60068-2-61       1 6 Hz: 15 mm, 6 500 Hz: 2g         mechanical service life (operating cycles) typical       10 000 000         electrical endurance (operating cycles) typical       100 000         thermal current of the switching element with contracts maximum       5 A         reference code according to IEC 81346-2       K         Substance Prohibitance (Date)       05/01/2012         Product Function       No         • undervoltage detection       No         • phase sequence recognition       Yes; available but limited, detection is problematic with high levels of regenerative power recovery         • asymmetry detection       No         • overvoltage detection 3 phase       No         • undervoltage detection 3 phase       No         • voltage window recognition 3 phase	display version LED	Yes		
degree of pollution     3       type of voltage     AC       • of the control supply voltage     AC       • of the control supply voltage     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 (operating cycles) typical     10 000 000       electrical endurance (operating cycles) typical     10 000 000       electrical endurance (operating cycles) typical     100 000       electrical service life (operating cycles) typical     100 000       thermal current of the switching element with contacts maximum     5 A       reference code according to IEC 81346-2     K       Substance Prohibitance (Date)     05/01/2012       Product Function     No       • undervoltage detection     No       • phase sequence recognition     Yes       • phase failure detection     No       • overvoltage detection 3 phase     No       • undervoltage detection 3 phase				
type of voltage       AC         • for monitoring       AC         • of the control supply voltage       AC         surge voltage resistance rated value       6 kV         protection class IP       IP20         shock resistance according to IEC 60068-2-27       sinusoldal half-wave 15g / 11 ms         vibration resistance according to IEC 60068-2-6       1 6 Hz: 15 mm, 6 500 Hz: 2g         mechanical service Ife (operating cycles) typical       100 000 00         electrical endurance (operating cycles) at AC-15 at       200 V1000         230 V typical       100 000 00         thermal current of the switching element with contacts maximum       5 A         reference code according to IEC 81346-2       K         Substance Prohibitance (Date)       05/01/2012         Product function       undervoltage detection         • undervoltage detection       No         • phase sequence recognition       Yes; available but limited, detection is problematic with high levels of regenerative power recovery         • asymmetry detection       No         • overvoltage detection 3 phase       No         • undervoltage detection 3 phases       No         • undervoltage detection 3 phase       No         • undervoltage detection 3 phase       No         • undervoltage det	<ul> <li>with degree of pollution 3 rated value</li> </ul>	690 V		
• for monitoring       AC         • of the control supply voltage       AC         • of the control supply voltage       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 (operating cycles) typical       10 000 000         electrical endurance (operating cycles) at AC-15 at       230 V typical         thermal current of the switching element with contacts maximum       5 A         reference code according to IEC 81346-2       K         Substance Prohibitance (Date)       05/01/2012         Product function       No         • undervoltage detection       No         • phase failure detection       Yes         • phase failure detection       Yes         • phase failure detection 3 phase       No         • overvoltage detection 3 phase       No         • voltage window recognition 3 phase       No         • voltage window recognition 3 phase       No         • voltage window recognition 3 phase       No         • voltage window recognitic on 3 phase       No <t< th=""><th>degree of pollution</th><th>3</th></t<>	degree of pollution	3		
• of the control supply voltage       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 (operating cycles) typical       10 000 000         electrical endurance (operating cycles) at AC-15 at       200 V typical         thermal current of the switching element with contacts maximum       5 A         reference code according to IEC 81346-2       K         Substance Prohibitance (Date)       05/01/2012         Product Function       0         • undervoltage detection       No         • phase sequence recognition       Yes; available but limited, detection is problematic with high levels of regenerative power recovery         • asymmetry detection 3 phase       No         • voltage detection 3 phases       No         • voltage detection 3 phase       No         • voltage detection 3 phase       No         • voltage detection 3 phase       No         • undervoltage detection 3 phase       No         • undervoltage detection 3 phase       No         • voltage window recognition 3 phase       No         <	type of voltage			
surge voltage resistance rated value protection class IP IP20 shock resistance according to IEC 60068-2-7 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) 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 • undervoltage detection No • phase sequence recognition Yes • phase failure detection Yes; available but limited, detection is problematic with high levels of regenerative power recovery • asymmetry detection No • overvoltage detection 3 phase No • undervoltage detection 4 phase No • undervoltage detec	<ul> <li>for monitoring</li> </ul>	AC		
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) 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         Substance Prohibitance (Date)       05/01/2012         Product function       vervoltage detection         • undervoltage detection       No         • phase sequence recognition       Yes         • phase failure detection       No         • overvoltage detection 3 phase       No         • voltage window recognition 3 phase       Yes         Control circuit/ Control       Yes	<ul> <li>of the control supply voltage</li> </ul>	AC		
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) 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         Substance Prohibitance (Date)       05/01/2012         Product Function       No         • undervoltage detection       No         • phase sequence recognition       Yes         • phase failure detection 3 phase       No         • voltage detection 3 phase       No         • adjustable open/closed-circuit current principle       No	surge voltage resistance rated value	6 kV		
vibration resistance according to IEC 60068-2-61 6 Hz: 15 mm, 6 500 Hz: 2gmechanical service life (operating cycles) typical10 000 000electrical endurance (operating cycles) at AC-15 at 230 V typical100 000230 V typical100 000thermal current of the switching element with contacts maximum5 Areference code according to IEC 81346-2KSubstance Prohibitance (Date)05/01/2012Product Functionundervoltage detectionNo• undervoltage detectionNo• phase sequence recognitionYes• phase failure detectionNo• overvoltage detectionNo• overvoltage detectionNo• undervoltage detectionNo• overvoltage detectionNo• overvoltage detectionNo• overvoltage detectionNo• overvoltage detection 3 phaseNo• undervoltage detection 3 phaseNo• voltage window recognition 3 phaseNo• voltage window recognition 3 phaseNo• adjustable open/closed-circuit current principleNo• adjustable open/closed-circuit current principleNo• adjustable open/closed-circuit current principleNo• auto-RESETYesControl supply voltage at AC	protection class IP	IP20		
mechanical service life (operating cycles) typical10 000 000electrical endurance (operating cycles) at AC-15 at 230 V typical100 000230 V typical5 Athermal current of the switching element with contacts maximum5 Areference code according to IEC 81346-2KSubstance Prohibitance (Date)05/01/2012Product Function• undervoltage detectionNo• overvoltage detectionNo• phase sequence recognitionYes;• phase failure detectionYes; available but limited, detection is problematic with high levels of regenerative power recovery• asymmetry detection 3 phaseNo• voltage detection 3 phasesNo• voltage window recognition 3 phasesNo• voltage window recognition 3 phaseNo• voltage bener/closed-circuit current principleNo• auto-RESETYesControl supply voltage at ACYes	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       100 000         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       05/01/2012         product function       No         • undervoltage detection       No         • phase sequence recognition       Yes         • phase failure detection       Yes; available but limited, detection is problematic with high levels of regenerative power recovery         • asymmetry detection 3 phase       No         • overvoltage detection 3 phase       No         • undervoltage detection 3 phase       No         • outrage window recognition 3 phase       No         • adjustable open/closed-circuit current principle       No         • auto-RESET       Yes	vibration resistance according to IEC 60068-2-6	1 6 Hz: 15 mm, 6 500 Hz: 2g		
230 V typical     5 A       thermal current of the switching element with contacts maximum     5 A       reference code according to IEC 81346-2     K       Substance Prohibitance (Date)     05/01/2012       Product Function     05/01/2012 <ul> <li>undervoltage detection</li> <li>overvoltage detection</li> <li>phase sequence recognition</li> <li>yes</li> <li>phase failure detection</li> <li>overvoltage detection</li> <li>windervoltage detection</li> <li>voltage detection</li> <li>voltage detection</li> <li>voltage detection</li> <li>No</li> <li>overvoltage detection</li> <li>voltage failure detection</li> <li>voltage detection 3 phase</li> <li>voltage window recognition 3 phase</li> <li>voltage window recognition 3 phase</li> <li>voltage window recognition 3 phase</li> <li>voltage Name</li> <li>adjustable open/closed-circuit current principle</li> <li>No</li> <li>auto-RESET</li> <li>Yes</li> <li>Control supply voltage at AC</li> <li>Voltage at AC</li> <li>Voltage at AC</li> <li>Voltage at AC</li> <li>Voltage voltage volta</li></ul>	mechanical service life (operating cycles) typical	10 000 000		
contacts maximum       K         reference code according to IEC 81346-2       K         Substance Prohibitance (Date)       05/01/2012         Product Function          • undervoltage detection       No         • overvoltage detection       No         • phase sequence recognition       Yes; available but limited, detection is problematic with high levels of regenerative power recovery         • asymmetry detection       No         • overvoltage detection 3 phase       No         • undervoltage detection       No         • phase failure detection       No         • phase failure detection       No         • asymmetry detection       No         • overvoltage detection 3 phase       No         • undervoltage detection 3 phases       No         • undervoltage detection 3 phase       No         • voltage window recognition 3 phase       No         • adjustable open/closed-circuit current principle       No         • auto-RESET       Yes         Control circuit/ Control       Yes		100 000		
Substance Prohibitance (Date)       05/01/2012         Product Function             undervoltage detection         overvoltage detection         other         other         other detection         other de		5 A		
Product Function         • undervoltage detection       No         • overvoltage detection       No         • overvoltage detection       No         • phase sequence recognition       Yes         • phase failure detection       Yes; available but limited, detection is problematic with high levels of regenerative power recovery         • asymmetry 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       Yes	reference code according to IEC 81346-2	K		
product function       No         • undervoltage detection       No         • overvoltage detection       No         • phase sequence recognition       Yes;         • phase failure detection       Yes; available but limited, detection is problematic with high levels of regenerative power recovery         • asymmetry 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	Substance Prohibitance (Date)	05/01/2012		
• undervoltage detectionNo• overvoltage detectionNo• phase sequence recognitionYes• phase failure detectionYes; available but limited, detection is problematic with high levels of regenerative power recovery• asymmetry detectionNo• overvoltage detection 3 phaseNo• undervoltage detection 3 phasesNo• voltage window recognition 3 phaseNo• ovltage window recognition 3 phaseNo• adjustable open/closed-circuit current principleNo• auto-RESETYesControl circuit/ ControlYes	Product Function			
• overvoltage detection       No         • phase sequence recognition       Yes         • phase failure detection       Yes; available but limited, detection is problematic with high levels of regenerative power recovery         • asymmetry 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	product function			
• phase sequence recognition       Yes         • phase failure detection       Yes; available but limited, detection is problematic with high levels of regenerative power recovery         • asymmetry 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	<ul> <li>undervoltage detection</li> </ul>	No		
Phase failure detection     Phase failure detection     Phase failure detection     Yes; available but limited, detection is problematic with high levels of     regenerative power recovery     No     overvoltage detection 3 phase     No     undervoltage detection 3 phases     No     voltage window recognition 3 phase     voltage window recognition 3 phase     voltage open/closed-circuit current principle     No     auto-RESET     Yes  Control circuit/ Control  Control supply voltage at AC	<ul> <li>overvoltage detection</li> </ul>	No		
easymmetry 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	<ul> <li>phase sequence recognition</li> </ul>	Yes		
overvoltage detection 3 phase     oundervoltage detection 3 phases     oundervoltage detection 3 phases     voltage window recognition 3 phase     voltage window recognition 3 phase     adjustable open/closed-circuit current principle     voltage auto-RESET     Ves  Control circuit/ Control  Control supply voltage at AC	phase failure detection			
undervoltage detection 3 phases     voltage window recognition 3 phase     voltage window recognition 3 phase     voltage window recognition 3 phase     voltage open/closed-circuit current principle     voltage at open/closed-circuit current principle     voltage at AC	<ul> <li>asymmetry detection</li> </ul>	No		
voltage window recognition 3 phase No     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		
	<ul> <li>undervoltage detection 3 phases</li> </ul>	No		
	<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		

<ul> <li>at 60 Hz rated value</li> </ul>	320 500 V
operating range factor control supply voltage rated	
value at AC at 50 Hz	
<ul> <li>initial value</li> </ul>	1
<ul> <li>full-scale value</li> </ul>	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	
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
Main circuit	
	2
number of poles for main current circuit	3
ampacity of the output relay at AC-15	2.4
• at 250 V at 50/60 Hz	3 A 2 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	
<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</li> </ul>	2 kV
61000-4-5	4117
<ul> <li>due to conductor-conductor surge according to IEC</li> </ul>	1 kV
61000-4-5	10 V/m
61000-4-5 field-based interference according to IEC 61000-4-3	10 V/m 6 kV contact discharge / 8 kV air discharge
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2	10 V/m 6 kV contact discharge / 8 kV air discharge
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation	
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation galvanic isolation	6 kV contact discharge / 8 kV air discharge
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation e between input and output	6 kV contact discharge / 8 kV air discharge Yes
61000-4-5 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	6 kV contact discharge / 8 kV air discharge Yes Yes
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation e between input and output between the outputs between the voltage supply and other circuits	6 kV contact discharge / 8 kV air discharge Yes
61000-4-5 field-based interference according to IEC 61000-4-3 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	6 kV contact discharge / 8 kV air discharge Yes Yes Yes
61000-4-5 field-based interference according to IEC 61000-4-3 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	6 kV contact discharge / 8 kV air discharge Yes Yes
61000-4-5 field-based interference according to IEC 61000-4-3 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	6 kV contact discharge / 8 kV air discharge Yes Yes Yes
61000-4-5 field-based interference according to IEC 61000-4-3 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	6 kV contact discharge / 8 kV air discharge Yes Yes Yes
61000-4-5 field-based interference according to IEC 61000-4-3 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	6 kV contact discharge / 8 kV air discharge Yes Yes Yes Screw-type terminals
61000-4-5 field-based interference according to IEC 61000-4-3 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	6 kV contact discharge / 8 kV air discharge Yes Yes Yes Screw-type terminals 1x (0.5 4 mm2), 2x (0.5 2.5 mm2)
61000-4-5 field-based interference according to IEC 61000-4-3 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 • finely stranded with core end processing	6 kV contact discharge / 8 kV air discharge Yes Yes 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)
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation e 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 e solid finely stranded with core end processing at AWG cables solid	6 kV contact discharge / 8 kV air discharge         Yes         Yes         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)
61000-4-5 field-based interference according to IEC 61000-4-3 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 • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded	6 kV contact discharge / 8 kV air discharge Yes Yes 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)
61000-4-5 field-based interference according to IEC 61000-4-3 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 • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded connectable conductor cross-section	6 kV contact discharge / 8 kV air discharge         Yes         Yes         Yes         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)
61000-4-5 field-based interference according to IEC 61000-4-3 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 • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid	6 kV contact discharge / 8 kV air discharge Yes Yes 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) 0.5 4 mm <sup>2</sup>
61000-4-5 field-based interference according to IEC 61000-4-3 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 • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid • at AWG cables stranded • solid • finely stranded with core end processing	6 kV contact discharge / 8 kV air discharge         Yes         Yes         Yes         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)
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation all 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 AWG number as coded connectable conductor cross	6 kV contact discharge / 8 kV air discharge Yes Yes 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) 0.5 4 mm <sup>2</sup>
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation all solution 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 AWG number as coded connectable conductor cross section	6 kV contact discharge / 8 kV air discharge         Yes         Yes         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)         0.5 4 mm²         0.5 2.5 mm²
61000-4-5 field-based interference according to IEC 61000-4-3 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 • 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 AWG number as coded connectable conductor cross section • solid	6 kV contact discharge / 8 kV air discharge         Yes         Yes         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)         0.5 4 mm²         0.5 4 mm²         20 14
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation agalvanic 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 • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • solid • solid • solid • solid • solid • solid • stranded	6 kV contact discharge / 8 kV air discharge         Yes         Yes         Yes         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)         0.5 4 mm²         0.5 4 mm²         20 14         20 14
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation all 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 solid finely stranded with core end processing Solid solid solid stranded with core end processing AWG number as coded connectable conductor cross section solid stranded tightening torque with screw-type terminals	6 kV contact discharge / 8 kV air discharge         Yes         Yes         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)         0.5 4 mm²         0.5 4 mm²         20 14
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation all solution all solution 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 solid solid solid stranded with core end processing AWG number as coded connectable conductor cross section solid stranded tightening torque with screw-type terminals Installation/ mounting/ dimensions	6 kV contact discharge / 8 kV air discharge         Yes         Yes         Yes         Yes         Screw-type terminals         1x (0.5 4 mm2), 2x (0.5 2.5 mm2)         1x (0.5 2 fmm2), 2x (0.5 1.5 mm2)         2x (20 14)         0.5 4 mm²         0.5 4 mm²         0.5 2.5 mm²         20 14         20 14         0.8 1.2 N·m
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation all solation all 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 AWG number as coded connectable conductor cross section solid stranded tightening torque with screw-type terminals Installation/ mounting/ dimensions mounting position	6 kV contact discharge / 8 kV air discharge         Yes         Yes         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)         0.5 4 mm²         any
61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation all solution all solution 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 solid solid solid stranded with core end processing AWG number as coded connectable conductor cross section solid stranded tightening torque with screw-type terminals Installation/ mounting/ dimensions	6 kV contact discharge / 8 kV air discharge         Yes         Yes         Yes         Yes         Screw-type terminals         1x (0.5 4 mm2), 2x (0.5 2.5 mm2)         1x (0.5 2 fmm2), 2x (0.5 1.5 mm2)         2x (20 14)         0.5 4 mm²         0.5 4 mm²         0.5 2.5 mm²         20 14         20 14         0.8 1.2 N·m

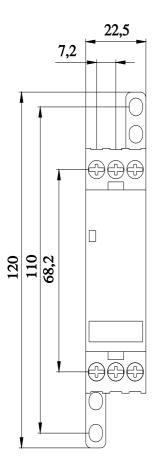
width			22.5	mm		
depth			91 m	m		
required spacing						
<ul> <li>with side-by-side</li> </ul>	de mounting					
— forwards			0 mn	ı		
- backward	ls		0 mn	า		
— upwards			0 mn	า		
- downward	ds		0 mn	า		
— at the side	e		0 mn	ı		
<ul> <li>for grounded p</li> </ul>	oarts					
— forwards			0 mn	ı		
- backward	ls		0 mn	ı		
— upwards			0 mn	ı		
— at the side	е		0 mn	ı		
— downward			0 mn	ı		
<ul> <li>for live parts</li> </ul>						
— forwards			0 mn	1		
— backward	s		0 mn			
— upwards			0 mn			
— downward	ds		0 mn			
— at the side			0 mn			
Ambient conditions	6		0 mm	,		
			0.00	, ,		
	t height above sea leve	maximum	2 00	Jm		
ambient temperatu						
<ul> <li>during operation</li> </ul>				. +60 °C		
<ul> <li>during storage</li> </ul>				. +85 °C		
<ul> <li>during transpo</li> </ul>			-40.	. +85 °C		
Certificates/ approva	ls					
General Product A	pproval				EMC	Declaration of Conformity
(m)	<b>Confirmation</b>	ŝ		r M F	A	UK
$(\mathbf{m})$		(VL)		FHI	<u>/</u> ()	
		$\sim$		LIIL	RCM	
		02				
Declaration of	Test Certificates			Marine / Shipping		other
Conformity	rest certificates			manne / Snipping		other
~ ~	Type Test Certific-	Special Test Ce	<u>rtific-</u>	Lloude	A PARTICIPAL MARCH	<b>Confirmation</b>
CE	ates/Test Report	ate		Register		
EG-Konf.				LRS	Divolcom	
				202		
Railway						

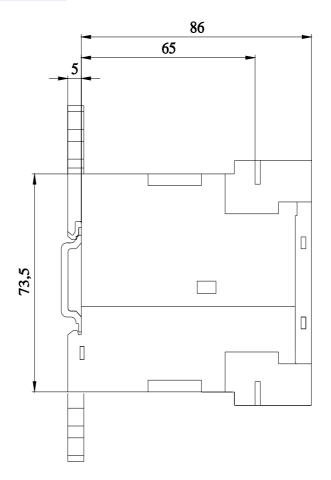
Vibration and Shock

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=3UG4511-1AP20
Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4511-1AP20
Service&Support (Manuals, Certificates, Characteristics, FAQs,) https://support.industry.siemens.com/cs/ww/en/ps/3UG4511-1AP20
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,)

12/10/2022

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UG4511-1AP20&lang=en Characteristic: Derating https://support.industry.siemens.com/cs/ww/en/ps/3UG4511-1AP20/manual





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