SIEMENS

Data sheet 3UG4512-1BR20



 $\rm !!!$ product phase-out $\rm !!!$ The preferred successor type is 3UG5512-1BR20 phase failure and sequence 3x160-690 V analog monitoring relay phase failure and sequence 3 x 160...690 V 50...60 Hz AC 2 changeover contacts screw terminal

product function display version LED Yes	product brand name	SIRIUS
product type designation 30164 301671 technical data Phase monitoring relay Yes insulation voltage for overvoltage category ill according to lie£ 68664 • with degree of pollution 3 rated value degree of pollution 10	product designation	Line monitoring relay
product function Phase monitoring relay display version LED insulation voltage for overvoltage category ill according to IEC 6064 • with degree of pollution 3 rated value 690 V degree of pollution 3 rated value 690 V degree of voltage • for monitoring 600 AC • of the control supply voltage AC surge voltage resistance rated value 600 KV shock resistance according to IEC 60068-2-27 sinusoidal half-wave 15g / 11 ms vibration resistance according to IEC 60068-2-26 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 reference code according to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 5 A Substance Prohibitance (Date) 60009 SVHC substance name	design of the product	2 functions
product function display version LED Yes	product type designation	3UG4
display version LED insulation voltage for overvoltage category Ill according to liEC 60664 • with degree of pollution 3 rated value 690 V degree of pollution 3 rother voltage 600 V degree of pollution 600 V **Of the control supply voltage 600 V **Of the control supply voltage 600 V **Surge voltage resistance rated value 60 V **Surge voltage resistance according to IEC 60068-2-7 Sinusoidal half-wave 15g / 11 ms vibration resistance according to IEC 60068-2-8 1 6 Hz: 15 mm, 6 500 Hz: 2g mechanical service life (operating cycles) typical 10 000 000 **Lectrical endurance (operating cycles) typical 100 000 000 **Lectrical endurance (operating cycles) at AC-15 at 230 V typical 600 V typical 70 V typ	General technical data	
Insulation voltage for overvoltage category Ill according to IEC 60664 • with degree of pollution 3 rated value 690 V degree of pollution 1	product function	Phase monitoring relay
### IBC 6664 • with degree of pollution 3 rated value • with degree of pollution type of voltage • for monitoring • of the control supply voltage • of the control supply voltage • for the control supply v	display version LED	Yes
degree of pollution 3 type of voltage For monitoring AC • of the control supply voltage AC surge voltage resistance rated value 6 kV 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 5 A reference code according to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Weight 0.143 kg Product Function • undervoltage detection No • overvoltage detection No • phase sequence recognition Yes • phase sequence recognition Yes • augustate of detection 3 phase No • voltage window recognition 3 phase No • voltage be detection 3 phase No		
type of voltage	with degree of pollution 3 rated value	690 V
of the control supply voltage of the control supply voltage surge voltage resistance rated value shock resistance according to IEC 60068-2-27 sinusoidal half-wave 15g / 11 ms vibration resistance according to IEC 60068-2-6 mechanical service life (operating cycles) typical delectrical 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 Full terrand current of the switching element with contacts maximum Full terrand current of the switching element with contacts maximum Full terrand current of the switching element with contacts maximum Full terrand current of the switching element with contacts maximum Full terrand current of the switching element with contacts maximum Full terrand current of the switching element with contacts maximum Full terrand current of the switching element with contacts maximum Full terrand current of the switching element with contacts maximum Full terrand current of the switching element with contacts maximum Full terrand current of the switching element with contacts Full terrand current of the switching element with contacts Full terrand current of the switching element with contacts Full terrand current of the switching element with contacts Full terrand current of the switching element with contacts Full terrand current of the switching element with contacts Full terrand current of the switching element with contacts Full terrand current of the switching element with contacts Full terrand current of the switching element with contacts Full terrand current of the switching element with contacts Full terrand current of the switching element with contacts Full terrand current of the switching element with contacts Full terrand current Full terra	degree of pollution	3
of the control supply voltage surge voltage resistance rated value shock resistance according to IEC 60068-2-77 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 electrical endurance (operating cycles) at AC-15 at 230 V 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	type of voltage	
surge voltage resistance rated value shock resistance according to IEC 60068-2-27 sinusoidal half-wave 15g / 11 ms vibration resistance according to IEC 60068-2-6 mechanical service life (operating cycles) typical electrical endurance (operating cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) SVHC substance name Lead -7439-92-1 Lead -7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Weight Product Function product function o undervoltage detection o undervoltage detection o phase sequence recognition phase saliure detection saymmetry detection o vervoltage detection 3 phase undervoltage detection 3 phases o voltage window recognition 3 phase o voltage window recognition 3 phase adjustable open/closed-circuit current principle auto-RESET Yes	• for monitoring	AC
shock resistance according to IEC 60068-2-27 vibration resistance according to IEC 60068-2-6 mechanical service life (operating cycles) typical electrical endurance (operating cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 K relative repeat accuracy 1	of the control supply voltage	AC
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 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) 05/28/2009 SVHC substance name Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Product Function Product Function No overvoltage detection No o overvoltage detection No o phase sequence recognition Yes o phase failure detection Yes o asymmetry detection No o overvoltage detection 3 phase No o undervoltage detection 3 phases No o undervoltage detection 3 phases No o undervoltage detection 3 phase No o undervoltage detection 3 phase No o undervoltage window recognition 3 phase No o voltage window recognition 3 phase	surge voltage resistance rated value	6 kV
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 relative repeat accuracy 1 % Substance Prohibitance (Date) 5VHC substance name Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Weight 0.143 kg roduct Function product Function undervoltage detection overvoltage detection overvoltage detection overvoltage detection asymmetry detection asymmetry detection overvoltage detection 3 phase undervoltage detection 3 phase overvoltage window recognition 3 phase ovoltage window recognition 3 phase ovoltage window recognition 3 phase adjustable open/closed-circuit current principle auto-RESET Ves	shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
electrical endurance (operating cycles) at AC-15 at 230 V typical thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) SVHC substance name Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Weight 0.143 kg Product Function product Function • undervoltage detection • overvoltage detection • phase sequence recognition • phase failure detection • asymmetry detection • overvoltage detection 3 phase • undervoltage detection 3 phase	vibration resistance according to IEC 60068-2-6	1 6 Hz: 15 mm, 6 500 Hz: 2g
thermal current of the switching element with contacts maximum reference code according to IEC 81346-2 Krelative repeat accuracy Substance Prohibitance (Date) SVHC substance name Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Weight Outstance Frontion Product Function our undervoltage detection our phase sequence recognition our phase failure detection our phase failure detection our symmetry detection our voltage detection 3 phase our undervoltage detection 3 phase our undervoltage detection 3 phase our detervoltage detervoltage detervoltage detection 3 phase our detervoltage det	mechanical service life (operating cycles) typical	10 000 000
reference code according to IEC 81346-2 relative repeat accuracy Substance Prohibitance (Date) SVHC substance name Lead -7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Weight Product Function oundervoltage detection overvoltage detection ophase sequence recognition oundervoltage detection 3 phase oundervoltage detection 4 phase oun		100 000
relative repeat accuracy Substance Prohibitance (Date) SVHC substance name Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Weight O.143 kg Product Function product function undervoltage detection overvoltage detection ophase sequence recognition ophase failure detection ophase failure detection overvoltage detection overvoltage detection overvoltage detection ophase failure detection ophase failure detection overvoltage detection overvoltage detection overvoltage detection overvoltage detection overvoltage detection 3 phase overvoltage detection 4 phase		5 A
Substance Prohibitance (Date) SVHC substance name Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Weight 0.143 kg Product Function product function undervoltage detection overvoltage detection ophase sequence recognition ophase failure detection asymmetry detection overvoltage detection overvoltage detection No overvoltage detection 3 phase voltage detection 3 phases No overvoltage detection 3 phases No	reference code according to IEC 81346-2	K
SVHC substance name Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Weight 0.143 kg Product Function product function undervoltage detection overvoltage detection ophase sequence recognition ophase failure detection saymmetry detection overvoltage detection overvoltage detection No overvoltage detection No overvoltage detection No overvoltage detection 3 phase voltage detection 3 phases voltage window recognition 3 phase ovoltage window recognition 3 phase out-RESET Ves	relative repeat accuracy	1 %
Lead monoxide (lead oxide) - 1317-36-8 Weight Product Function product function • undervoltage detection • overvoltage detection • phase sequence recognition • phase failure detection • asymmetry detection • overvoltage detection 3 phase • undervoltage detection 3 phase • undervoltage detection 3 phases • undervoltage detection 3 phase • voltage window recognition 3 phase • adjustable open/closed-circuit current principle • auto-RESET Yes	Substance Prohibitance (Date)	05/28/2009
product function • undervoltage detection • overvoltage detection • phase sequence recognition • phase failure detection • phase failure detection • overvoltage detection • overvoltage detection • overvoltage detection • overvoltage detection 3 phase • undervoltage detection 3 phases • voltage window recognition 3 phase • voltage window recognition 3 phase • adjustable open/closed-circuit current principle • auto-RESET No	SVHC substance name	
product function • undervoltage detection No • overvoltage detection No • phase sequence recognition Yes • phase failure detection Yes • 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	Weight	0.143 kg
 undervoltage detection overvoltage detection phase sequence recognition phase failure detection asymmetry detection overvoltage detection 3 phase undervoltage detection 3 phases voltage window recognition 3 phase voltage window recognition 3 phase adjustable open/closed-circuit current principle auto-RESET No 	Product Function	
 overvoltage detection phase sequence recognition phase failure detection asymmetry detection overvoltage detection 3 phase undervoltage detection 3 phases voltage window recognition 3 phase adjustable open/closed-circuit current principle auto-RESET No Yes 	product function	
 phase sequence recognition phase failure detection asymmetry detection overvoltage detection 3 phase undervoltage detection 3 phases voltage window recognition 3 phase voltage window recognition 3 phase adjustable open/closed-circuit current principle auto-RESET 	 undervoltage detection 	No
 phase failure detection asymmetry detection overvoltage detection 3 phase undervoltage detection 3 phases voltage window recognition 3 phase adjustable open/closed-circuit current principle auto-RESET Yes No No 	overvoltage detection	No
 asymmetry detection overvoltage detection 3 phase undervoltage detection 3 phases voltage window recognition 3 phase adjustable open/closed-circuit current principle auto-RESET No Yes 	 phase sequence recognition 	Yes
 overvoltage detection 3 phase undervoltage detection 3 phases voltage window recognition 3 phase adjustable open/closed-circuit current principle auto-RESET No Yes 	 phase failure detection 	Yes
 undervoltage detection 3 phases voltage window recognition 3 phase adjustable open/closed-circuit current principle auto-RESET No Yes 	 asymmetry detection 	No
 voltage window recognition 3 phase adjustable open/closed-circuit current principle auto-RESET No Yes 	 overvoltage detection 3 phase 	No
 adjustable open/closed-circuit current principle auto-RESET No Yes 	 undervoltage detection 3 phases 	No
• auto-RESET Yes	 voltage window recognition 3 phase 	No
	 adjustable open/closed-circuit current principle 	No
Control circuit/ Control	• auto-RESET	Yes
	Control circuit/ Control	

control supply voltage at AC		
a still of liz rated value corecting rates factor control supply voltage rated value at AC at 80 ht.s. * Initial value	control supply voltage at AC	
Special prage factor control supply voltage rated value at AC at 50 Hz	at 50 Hz rated value	160 690 V
AC at 80 kz initial value 1 1 1 1 1 1 1 1 1	• at 60 Hz rated value	160 690 V
A control control supply voltage rated value at AC at 60 ftz		
A ciliscale value	initial value	1
Special prange factor control supply voltage rated value at A C at 60 ftz	• full-scale value	
• Initial value	operating range factor control supply voltage rated value at	
Massin'rig circuit	• initial value	1
messurable voltage at AC response time maximum 450 ms Auxiliary circuit commons of NC contacts delayed switching 0 0	full-scale value	1
messurable voltage at AC response time maximum 450 ms Auxiliary circuit commons of NC contacts delayed switching 0 0	Measuring circuit	
Response time maximum Auxillary circuit Tumber of NC contacts delayed switching 0 number of NC contacts delayed switching 0 number of NC contacts delayed switching 0 orange of NC contacts 1 of auxiliary contacts 2 oetalyed switching 2 operating frequency with SRT2 contactor maximum 8500 1/h Mini retreuit Tumber of poles for main current circuit 3 ampacity of the output relay at AC-15 1 at 250 V at 5060 Hz 1 at 250 V 1 at 250 V at 5060 Hz 1 at 250 V 1 at 2		160 690 V
Ausiliary circuit number of NC contacts delayed switching 0 number of NC contacts delayed switching 0 number of CO contacts • for availilary contacts • delayed switching 2 operating frequency with 3RT2 contactor maximum 8 final recruit number of poles for main current circuit 3 ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz 3 A ampacity of the output relay at DC-13 • at 24 V 4 at 125 V 5 at 250 V 6 at 250 V 7 at 50/60 Hz 6 at 250 V 7 at 50/60 Hz 7 at 250 V 7 at 250/60 Hz 7 at 25		
number of NC contacts delayed switching number of CO contacts of contacts of contacts of auxiliary of the output relay at AC-15 of auxiliary of the output relay at AC-15 of auxiliary of the output relay at DC-13 of auxiliary of the output relay at DC-13 of auxiliary of auxili		
number of NO contacts delayed switching number of CO contacts • delayed switching • delayed switching 2 operating frequency with 3RT2 contactor maximum 5 000 1/h Main circuit number of poles for main current circuit 3 ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A		٥
number of CO contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contactor maximum 5 000 1/h Main circuit number of poles for main current circuit 3 ampacity of the output relay at AC-15 • at 250 14 5000 Hz • at 400 V at 50/60 Hz 3 A ampacity of the output relay at DC-13 • at 125 V • 1 A • at 125 V • 1 A • at 125 V • 0.2 A • at 125 V • 0.1 A operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay at 10 but to bust according to IEC 61000-4-4 • due to conductor-onductor surge according to IEC 61000-4-5 • due to conductor-onductor surge according to IEC 61000-4-2 • due to conductor-onductor surge according to IEC 61000-4-3 • due to conductor-onductor surge according to IEC 61000-4-3 • due to conductor-onductor surge according to IEC 61000-4-3 • due to conductor-onductor surge according to IEC 61000-4-3 • due to conductor-onductor surge according to IEC 61000-4-3 • due to conductor-onductor surge according to IEC 61000-4-3 • due to conductor-onductor surge according to IEC 61000-4-3 • due to conductor-onductor surge according to IEC 61000-4-3 • due to conductor-onductor surge according to IEC 61000-4-3 • due to conductor-onductor surge according to IEC 61000-4-3 • between input and output • between input and output • between the voltage supply and other circuits • between the voltage supply and other circuits • yes • between the voltage supply and other circuits • yes • between the voltage supply and other circuits • yes • between the voltage supply and other circuits • yes • between the voltage supply and other circuits • yes • between the voltage supply and other circuits • yes • between the voltage supply and other circuits • yes • between the voltage supply and other circuits • yes • between the voltage supply and other circuits • yes • between the voltage supply and other circuits • yes • between the voltage supply	· · · · · · · · · · · · · · · · · · ·	
• for auxiliary contacts • delayed switching 2 operating frequency with SRT2 contactor maximum 5 000 1/h Main circuit number of poles for main current circuit 3 ampacity of the output relay at AC-15 • at 250 V at 5060 Hz • at 400 V at 5060 Hz • at 400 V at 5060 Hz • at 24 V • at 125 V • at 250		C .
oberating frequency with 3RT2 contactor maximum spool 1/h Main circuit number of poles for main current circuit amapacity of the output relay at AC-15 at 250 V at 5060 Hz alt 250 V at 125 V at 125 V at 125 V at 125 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay relay Electromagnatic compatibility Conducted interference due to bust according to IEC 61000-4-4 due to conductor-conductor surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-2 due to conductor-conductor surge according to IEC 61000-4-2 delectrostate discharge according to IEC 61000-4-2 delectrostate discharge according to IEC 61000-4-2 between input and output between the outputs between the voltage supply and other circuits Peel Centrol of Connectable conductor cross-section solid infelly stranded with core end processing infell stranded with core end processing infell stranded with core end process		2
operating frequency with 3RT2 contactor maximum Main circuit ampacity of the output relay at AC-15 • at 250 V at 5060 Hz • at 250 V • at 250	,	
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 400 V at 50/60 Hz • at 24 V • at 125 V • at 250 V • at		
number of poles for main current circuit ampacity of the output relay at AC-15 at 26 20 v at 50/60 Hz at 400 V at 50/60 Hz at 26 V v at 50/60 Hz at 26 V v at 26		5 UUU 1/N
ampacity of the output relay at AC-15 at 250 V at 50/60 Ptz 3 A ampacity of the output relay at DC-13 at 24 V 1 at 125 V 0.1 A oral 250 V 0.1 A operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Conducted interference due to burst according to IEC 81000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to burst according to IEC 81000-4-2 field-based interference according to IEC 61000-4-2 due to conductor-earth surge according to IEC 61000-4-3 electromagnic isolation galvanic isolation galvanic isolation between the outputs between the voltage supply and other circuits Pess between the voltage supply and other circuits between the voltage supply and other circuits yes Electrical Safety protection class IP on the front according to IEC 60529 Connections I Torninals product component removable terminal for auxiliary and control circuit for a connection control circuit supply and other circuits \$\text{sid} \tag{6.546.mm}, 2x (0.52.5.mm^2) \$\text{if or AWG cables solid} \tag{6.546.mm}, 2x (0.51.5.mm^2) \$\text{or AWG cables solid} \tag{6.52.5.mm}, 2x (0.51.5.mm^2) \$\text{or AWG cables stranded} \tag{6.54.mm} AWG number as coded connectable conductor cross-section \$\text{solid} \tag{6.54.mm} \$\text{or AWG cables stranded} \tag{6.52.5.mm} AWG number as coded connectable conductor cross-section \$\text{solid} \tag{6.52.5.mm} \$\text{or AWG cables stranded} \tag{6.52.5.mm} \$\text{or AWG cables stranded} \tag{6.52.5.mm} \$\text{or AWG cables stranded} \tag{6.52.5.mm} \$\text{or AWG cables stranded with core end processing} \tag{6.52.5.mm} \$\text{or AWG cables stranded with core end processing} \tag{6.52.5.mm} \$\text{or AWG cables stranded with core end processing} \tag{6.52.5.mm} \$\text{or AWG cables stranded with core end processing} \tag{6.52.5.mm}		
		3
ampacity of the output relay at DC-13 at 24 2 V at 25 V at 25 DV operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay 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 field-based interference according to IEC 61000-4-3 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 61000-4-3 field-based interference according to IEC 61000-4-3 field-based interference according to IEC 61000-4-3 field-based interference according to IEC 61000-4-2 field-based interference according to IEC 61000-4-2 field-based interference according to IEC 61000-4-2 field-based interference according to IEC 61000-4-3 palvanic Isolation galvanic Isolation palvanic Isolation palvanic Isolation palvanic Isolation palvanic Isolation product component removable terminal for auxiliary and control circuit yes between the voltage supply and other circuits product component removable terminal for auxiliary and control circuit type of electrical connection yes of connectable conductor cross-sections solid finely stranded with core end processing for AWG cables stranded connectable conductor cross-section solid finely stranded with core end processing for AWG cables stranded connectable conductor cross-section solid finely stranded with core end processing finely stranded with core end proc	ampacity of the output relay at AC-15	
ampacity 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 Conducted interference due to burst according to IEC 61000-4-5 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-3 due to conductor-conductor surge according to IEC 61000-4-3 field-based interference according to IEC 61000-4-3 delectrostatic discharge according to IEC 61000-4-3 field-based interference according to IEC 61000-4-2 Galvanic isolation galvanic isolation galvanic isolation galvanic lasolation protection class IP on the front according to IEC 66529 Connections/Terminals product component removable terminal for auxililary and control circuit type of electrical connection type of connectable conductor cross-sections solid for AWG cables stranded for AWG cables stranded connectable conductor cross-section solid for AWG cables stranded connectable conductor cross-section solid finely stranded with core end processing finely stran	● at 250 V at 50/60 Hz	3 A
at 25 V at 250 V 0.2 A continuous current at 17 V minimum 5 mA 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 due to conductor-conductor surge according to IEC 61000-4-3 due to conductor-conductor surge according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 delvencitoric discharge according to IEC 61000-4-2 delvencitoric isolation galvanic isolation galvanic isolation between the outputs between the outputs between the outputs between the outgage supply and other circuits Yes Electrical Safety protection class IP on the front according to IEC 60529 Connections/ Terminals product component removable terminal for auxillary and control circuit type of electrical connection type of connectable conductor cross-sections solid finely stranded with core end processing for AWG cables solid for AWG cables stranded 2x (20 14) connectable conductor cross-section solid finely stranded with core end processing for AWG number as coded connectable conductor cross AWG number as coded connectable conductor cross	• at 400 V at 50/60 Hz	3 A
e at 125 V e at 250 V 0.1 A operational current at 17 V minimum 5 mA continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference e due to burst according to IEC 61000-4-5 e due to conductor-earth surge according to IEC 61000-4-5 e due to conductor-conductor surge according to IEC 61000-4-5 e due to conductor-conductor surge according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 electrostatic discharge according to IEC 61000-4-3 electrostatic discharge / 8 kV air discharge 8 kV contact discharge / 8 kV air discharge 8 kV contact discharge / 8 kV air discharge 8 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 10 kV contact discharge / 8 kV air discharge 9 kV contact discharge / 8 kV air discharge 9	ampacity of the output relay at DC-13	
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-cendructor 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 6 kV contact discharge according to IEC 61000-4-2 6 kV contact discharge / 8 kV air discharge galvanic isolation galvanic isolation • between the outputs • between the voltage supply and other circuits Electrical Safety protection class IP on the front according to IEC 6529 Connections/ Terminals reproduct component removable terminal for auxiliary and control circuit type of connectable conductor cross-sections • solid • for AWG cables stranded • finely stranded with core end processing AWG number as coded connectable conductor cross 9.5 4 mm² 9.5 2.5 mm² AWG number as coded connectable conductor cross	• at 24 V	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 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-3 • lelectrostatic discharge according to IEC 61000-4-2 felid-based interference according to IEC 61000-4-3 felid-based interference according to IEC 61000-4-3 foliounal isolation • between the outputs • between the outputs • between the outputs • between the voltage supply and other circuits Yes Flectrical Safety protection class IP on the front according to IEC 60529 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection type of electrical connection \$\text{solid}\$ • finely stranded with core end processing • for AWG cables solid • for AWG cables stranded 2x (20 14) • finely stranded with core end processing	● at 125 V	0.2 A
continuous current of the DIAZED fuse link of the output relay 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 • due to conductor-conductor surge according to IEC 61000-4-3 • field-based interference according to IEC 61000-4-3 • lectrostatic discharge according to IEC 61000-4-2 Galvanic isolation galvanic isolation • between input and output Yes • between the voltage supply and other circuits Yes • between the voltage supply and other circuits Yes Electrical Safety protection class IP on the front according to IEC 60529 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • solid • finely stranded with core end processing • for AWG cables stranded • 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	● at 250 V	0.1 A
Felectromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-5 • due to conductor-cearth 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 field-based interference according to IEC 61000-4-2 field-based interference according to IEC 61000-4-2 Galvanic isolation galvanic isolation • between input and output Yes • between the outputs Yes • between the voltage supply and other circuits Yes • between the voltage supply and other circuits Yes • between the voltage supply and other circuits Yes • between the orbitage supply and other circuits Yes • between the orbitage supply and other circuits Yes • between the orbitage supply and other circuits Yes • between the orbitage supply and other circuits Yes • between the orbitage supply and other circuits Yes connections/Terminals product component removable terminal for auxiliary and control circuit type of electrical connection screw terminal type of connectable conductor cross-sections • solid • finely stranded with core end processing • for AWG cables solid • for AWG cables stranded • finely stranded with core end processing • solid • finely stranded with core end processing	operational current at 17 V minimum	5 mA
Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 field-based interference according to IEC 61000-4-3 field-based interference according to IEC 61000-4-3 field-based interference according to IEC 61000-4-2 field-based interference according to IEC 61000-4-3 field-based interference according to IEC 6100-4-3 field-based interference according	•	4 A
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 61000-4-2 electrostatic discharge according to IEC 61000-4-2 field-based interference according to IEC 61000-4-3 field-based interference according to IEC 61000-4-2 field-based interference according to IEC 61000-4-3 field-based interference according to IEC		
• 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 feld-based interference according to IEC 61000-4-3 feld-based interference according to IEC 61000-4-2 feld-based interference according to IEC 61000-4-3 feld-based interference according to IEC 61000-4-2 feld-based interference according to IEC 61000-4-3 feld-based interference according to IEC 61000-4-4 feld-based interference according to IEC 6		
 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-3 • field-based interference according to IEC 61000-4-2 • kV contact discharge / 8 kV air discharge Galvanic isolation • between input and output • between the outputs • between the voltage supply and other circuits Electrical Safety protection class IP on the front according to IEC 60529 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection type of electrical connection i k (0.5 4.0 mm²), 2x (0.5 2.5 mm²) • finely stranded with core end processing • for AWG cables stranded connectable conductor cross-section • solid • for AWG cables stranded connectable conductor cross-section • solid • for AWG cables stranded • solid • for AWG cables stranded with core end processing • solid • for AWG cables onductor cross-section • solid • finely stranded with core end processing • 5 4 mm² • finely stranded with core end processing • 5 4 mm² • 5 2.5 mm² AWG number as coded connectable conductor cross		0.114
due to conductor-conductor surge according to IEC 61000-4-3 field-based interference according to IEC 61000-4-2 dectrostatic discharge according to IEC 61000-4-2 delectrostatic discharge / 8 kV air discharge Galvanic isolation		
field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 for Alvanic Isolation galvanic Isolation • between input and output • between the outputs • between the voltage supply and other circuits Field-based Interference according to IEC 61000-4-2 • between the voltage supply and other circuits Field-circuit Safety protection class IP on the front according to IEC 60529 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection screw terminal type of connectable conductor cross-sections • solid finely stranded with core end processing for AWG cables solid of rot AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • solid • for 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		
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 • between input and output • between the outputs • between the voltage supply and other circuits Electrical Safety protection class IP on the front according to IEC 60529 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections • solid for AWG cables solid for AWG cables stranded for AWG cables stranded finely stranded with core end processing • solid of for AWG cables stranded finely stranded with core end processing • solid of finely stranded with core end processing • solid of for AWG cables stranded of finely stranded with core end processing of inely stranded with core end processing of for AWG cables stranded of finely stranded with core end processing of the WG cables stranded of finely stranded with core end processing of the WG cables stranded of finely stranded with core end processing of the WG cables stranded of finely stranded with core end processing of the WG cables stranded of finely stranded with core end processing of the WG cables stranded of the WG cabl		1 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 Electrical Safety protection class IP on the front according to IEC 60529 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 • for AWG cables solid • for AWG cables stranded • solid • for AWG sumber as coded connectable conductor cross AWG number as coded connectable conductor cross AWG number as coded connectable conductor cross		10 V/m
Galvanic isolation galvanic isolation • between input and output Yes • between the outputs Yes • between the voltage supply and other circuits Yes Electrical Safety protection class IP on the front according to IEC 60529 IP20 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection screw terminal type of connectable conductor cross-sections • solid 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) • finely stranded with core end processing 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) • for AWG cables stranded 2x (20 14) connectable conductor cross-section • solid 0.5 4 mm² • finely stranded with core end processing 0.5 2.5 mm² AWG number as coded connectable conductor cross		
galvanic isolation • between input and output • between the outputs • between the voltage supply and other circuits Pes Electrical Safety protection class IP on the front according to IEC 60529 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 • for AWG cables stranded connectable conductor cross-section • solid • solid • for AWG cables stranded connectable conductor cross-section • solid • for inely stranded with core end processing • for inely stranded with core end processing • for inely stranded with core end processing • solid • for inely stranded with core end processing • solid • solid • for inely stranded with core end processing • solid • finely stranded with core end processing • finely stranded with core end processing AWG number as coded connectable conductor cross		O KV Contact discharge / O KV all discharge
between input and output between the outputs between the voltage supply and other circuits Yes between the voltage supply and other circuits Yes Electrical Safety protection class IP on the front according to IEC 60529 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 4.0 mm²), 2x (0.5 2.5 mm²) finely stranded with core end processing for AWG cables solid for AWG cables stranded connectable conductor cross-section solid for AWG cables stranded connectable conductor cross-section solid finely stranded with core end processing solid connectable conductor cross-section solid finely stranded with core end processing solid connectable conductor cross-section solid finely stranded with core end processing solid connectable conductor cross-section solid solid connectable conductor cross-section		
between the outputs between the voltage supply and other circuits Electrical Safety protection class IP on the front according to IEC 60529 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 4.0 mm²), 2x (0.5 2.5 mm²) finely stranded with core end processing for AWG cables solid for AWG cables stranded connectable conductor cross-section solid for AWG cables stranded connectable conductor cross-section solid finely stranded with core end processing solid for AWG cables stranded connectable conductor cross-section solid finely stranded with core end processing AWG number as coded connectable conductor cross	-	Voc
between the voltage supply and other circuits Flectrical Safety protection class IP on the front according to IEC 60529 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections • solid • solid • finely stranded with core end processing • for AWG cables solid • for AWG cables stranded • solid • solid • for AWG cables stranded • solid • for AWG cables stranded • solid • solid • solid • solid • finely stranded with core end processing • solid		
Electrical Safety protection class IP on the front according to IEC 60529 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 • for AWG cables solid • for AWG cables stranded • finely stranded with core end processing • solid • for AWG cables stranded • for AWG cables stranded • 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	·	
protections IP on the front according to IEC 60529 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection screw terminal type of connectable conductor cross-sections solid 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) finely stranded with core end processing for AWG cables solid for AWG cables stranded connectable conductor cross-section solid finely stranded with core end processing for AWG cables stranded connectable conductor cross-section solid finely stranded with core end processing 0.5 4 mm² 0.5 2.5 mm² AWG number as coded connectable conductor cross		165
product component removable terminal for auxiliary and control circuit type of electrical connection screw terminal type of connectable conductor cross-sections solid 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) finely stranded with core end processing for AWG cables solid for AWG cables stranded 2x (20 14) connectable conductor cross-section solid finely stranded with core end processing other auxiliary and 2x (20 14) connectable conductor cross-section solid finely stranded with core end processing 0.5 4 mm² of inely stranded with core end processing AWG number as coded connectable conductor cross		IDOO
product component removable terminal for auxiliary and control circuit type of electrical connection screw terminal type of connectable conductor cross-sections • solid 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) • finely stranded with core end processing • for AWG cables solid • for AWG cables stranded 2x (20 14) connectable conductor cross-section • solid • finely stranded with core end processing 0.5 4 mm² • finely stranded with core end processing AWG number as coded connectable conductor cross		IP2U
type of electrical connection type of connectable conductor cross-sections • solid • finely stranded with core end processing • for AWG cables stranded • for AWG cables stranded • solid • for AWG cables stranded • for higher than 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 • finely stranded with core end processing AWG number as coded connectable conductor cross		
type of connectable conductor cross-sections • solid 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) • finely stranded with core end processing 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) • for AWG cables solid 2x (20 14) • for AWG cables stranded 2x (20 14) connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross		Yes
 solid finely stranded with core end processing for AWG cables solid for AWG cables stranded for AWG cables stranded 2x (20 14) connectable conductor cross-section solid finely stranded with core end processing finely stranded with core end processing AWG number as coded connectable conductor cross 	type of electrical connection	screw terminal
 finely stranded with core end processing for AWG cables solid for AWG cables stranded for AWG cables stranded 2x (20 14) connectable conductor cross-section solid finely stranded with core end processing finely stranded with connectable conductor cross AWG number as coded connectable conductor cross	type of connectable conductor cross-sections	
 for AWG cables solid for AWG cables stranded 2x (20 14) connectable conductor cross-section solid finely stranded with core end processing AWG number as coded connectable conductor cross 	• solid	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
 for AWG cables stranded connectable conductor cross-section solid finely stranded with core end processing AWG number as coded connectable conductor cross 2x (20 14) 0.5 4 mm² 0.5 2.5 mm²	 finely stranded with core end processing 	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross	 for AWG cables solid 	2x (20 14)
 solid finely stranded with core end processing AWG number as coded connectable conductor cross 0.5 4 mm² 0.5 2.5 mm²	for AWG cables stranded	2x (20 14)
• finely stranded with core end processing 0.5 2.5 mm² AWG number as coded connectable conductor cross	connectable conductor cross-section	
AWG number as coded connectable conductor cross	• solid	0.5 4 mm²
	 finely stranded with core end processing 	0.5 2.5 mm²
section		
	section	

• solid	20 14
stranded	20 14
tightening torque with screw-type terminals	0.8 1.2 N·m
Installation/ mounting/ dimensions	0.0 1.2 (4.11)
mounting position	any
fastening method	snap-on mounting
height	92 mm
width	22.5 mm
depth	91 mm
required spacing	
with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
 for grounded parts 	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— at the side	0 mm
— downwards	0 mm
for live parts	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C
during storage	-40 +85 °C
during transport	-40 +85 °C
Approvals Certificates	
Concret Breduct Approval	

General Product Approval







Confirmation





EMV Test Certificates Marine / Shipping



<u>KC</u>

Special Test Certificate

Type Test Certificates/Test Report





other Railway Environment

<u>Confirmation</u> <u>Special Test Certificate</u>



Environmental Confirmations

Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UG4512-1BR20

Cax online generator

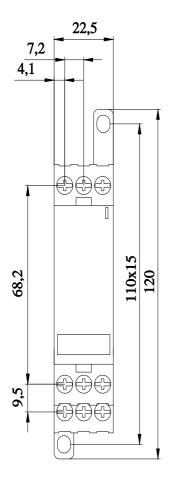
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4512-1BR20

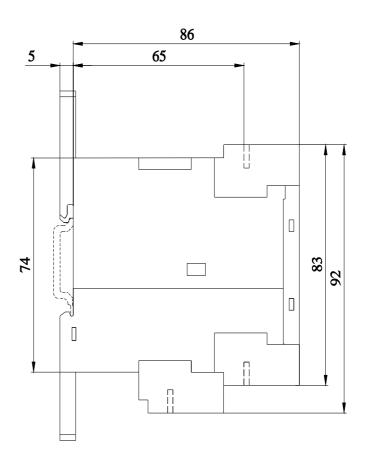
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3UG4512-1BR20

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4512-1BR20&lang=en

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3UG4512-1BR20/manual





last modified: 4/8/2024