## SIEMENS

## Data sheet

## 3UG4615-1CR20



Digital monitoring relay 3-phase supply voltage Phase sequence can be activated Phase failure 3 x 160 to 690 V 50 to 60 Hz AC Undervoltage and overvoltage 160-690 V Hysteresis 1-20 V 0-20 s each for Umin and Umax 1 CO for Umin 1 CO for Umax screw terminal Successor product for 3UG3041-1BP50

Figure	similar

product brand name	SIRIUS
product designation	Network monitoring relay with digital setting
design of the product	5 functions
product type designation	3UG4
General technical data	
product function	Phase monitoring relay
display version LED	No
design of the display	LCD
insulation voltage for overvoltage category III according to IEC 60664	
<ul> <li>with degree of pollution 3 rated value</li> </ul>	690 V
degree of pollution	3
type of voltage	
<ul> <li>for monitoring</li> </ul>	AC
<ul> <li>of the control supply voltage</li> </ul>	AC
surge voltage resistance rated value	6 kV
protection class IP	IP20
shock resistance acc. to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
vibration resistance acc. to IEC 60068-2-6	1 6 Hz: 15 mm, 6 500 Hz: 2g
mechanical service life (switching cycles) typical	10 000 000
electrical endurance (switching cycles) at AC-15 at 230 V typical	100 000
thermal current of the switching element with contacts maximum	5 A
reference code acc. to IEC 81346-2	К
relative repeat accuracy	1 %
Substance Prohibitance (Date)	01.05.2012
Product Function	
product function	
<ul> <li>undervoltage detection</li> </ul>	Yes
<ul> <li>overvoltage detection</li> </ul>	Yes
<ul> <li>phase sequence recognition</li> </ul>	Yes
<ul> <li>phase failure detection</li> </ul>	Yes
<ul> <li>asymmetry detection</li> </ul>	Yes; not adjustable, indirectly by monitoring the voltage limit values
<ul> <li>overvoltage detection 3 phase</li> </ul>	Yes
<ul> <li>undervoltage detection 3 phases</li> </ul>	Yes
<ul> <li>voltage window recognition 3 phase</li> </ul>	Yes
<ul> <li>adjustable open/closed-circuit current principle</li> </ul>	Yes
auto-RESET	Yes

control supply voltage at AC     180 690 V       • et 60 Hz made value     180 690 V       Operating range factor control supply voltage rated values At AL 60 Hz made value     1       • Inflact value     1 </th <th>Control circuit/ Control</th> <th></th>	Control circuit/ Control	
• at 00 Fr. rated value     100 600 V       • at 00 Fr. rated value     100 600 V       • operating range factor control supply voltage rated     10       • initial value     1       • othic over ontrof in upply voltage rated     1       • initial value     1       • othic over ontrof in upply voltage rated     1       • initial value     1       • othic over ontrof in upply voltage rated     1       • othic over ontrof in upply voltage rated     1       • othic over ontrof in upply voltage rated     1       • othic over ontrof in upply voltage rated     1       • othic over ontrof in upply voltage rated     1       • othic over ontrof in upply voltage rated     1       • othic over ontrof in upply voltage rated     1       • othic over ontrof in upply voltage rated     0       • othic over ontrof in upply voltage rated     0       • othic over ontope finit voltain     0 <td>control supply voltage at AC</td> <td></td>	control supply voltage at AC	
• at 60 hz rated value     160 690 V       value at AC at 50 hz     1       • initial value     1       • full-scale value     1       • full-scale value     1       • initial value     0       • initial value     0       • initial value     0       • initial value     1       • initial value     1		160 690 V
value at AC at 50 Hz • initial value 1 • initial		
• All scale value     1       operating range factor control supply voltage rated values at A at 60 Hz     1       • Initial value     1       • Initial value     1       • Missale value     0       • Missale value		
operating range factor control supply voltage rated vise at & 6 B bt         1           initial value         1           initial value         1           initial value         1           diustable response dalay time         1           evith lower or upper limit violation         0.120 s           accurrey of digital display         +/:1 digit           Precision         5 %           Auxilary circuit         0           number of No contacts delayed switching         0           number of No contacts delayed switching         0           number of No contacts delayed switching         2           oparating frequency with 3RT2 contactor maximum         5 000 1/h           Main circuit         3           ampacity of the output relay at AC-15         3 A           eit 24 V         3 A           eit 24 V         0.2 A           eit 25 V         0.2 A           eit 25 V         0.1 A           operational current dir DI AEEE fuse link of the output relay at DC-13           eit 25 V         0.1 A           output relay         1           continuous current of the DIAZED fuse link of the output relay at DC 6 1000-4.5           elux to southact accis lice 6 1000-4.5         2 kV	initial value	1
value at AC at 60 Hz       1         • initial value       1         • (ull-scale value       0         • (ull-scale value       5 %         Auxiliary circuit       0         • number of No contacts delayed switching       2         • at 250 V at 5000 Hz       3 A         • at 260 V at 5000 Hz       3 A         • at 24 V       1 A         • at 25 V       02 A         • due to bust ac: to IEC 6 1000-44       2 kV         • due to bust ac: to IEC 6 1000-45       2 kV         • due to conductor-conductor surge ac: to IEC	full-scale value	1
• full-scale value     1       Massuring circuit     adjustable response delay time     0.120 s       • with lower or upper limit violation     0.120 s       • accuracy of digital display     +/-1 digit       Procision     5%       Auxiliary circuit     0       number of NC contacts delayed switching     0       number of oples for main current circuit     3       ampacity of the output relay at AC-15     3 A       • at 250 V at 5000 Hz     3 A       • at 250 V at 5000 Hz     3 A       • at 250 V     0.1 A       operational current at 17 V minimum     5 mA       continuous current of the DIAZED fuse link of the output relay at DC-13     1 A       • at 250 V     0.1 A       operational current at 17 V minimum     5 mA       conducted interference     2 kV       • due to conductor-earth supe aco. to IEC 61000-4-4     2 kV       • due to conductor-earth supe aco. to IEC 61000-4-5     1 kV       electromagnetic compatibility     Conducted interference       • due to conductor-earth supe aco. to IEC 61000-4-5     1 kV       electrosate discharge acc. to IEC 61000-4-5     1 kV <t< td=""><td>value at AC at 60 Hz</td><td></td></t<>	value at AC at 60 Hz	
Measuring circuit       adjustable response delay time            evilt lover or upper limit violation        0.1 20 s          accuracy of digital display        ++1 digit          Precision        5 %          Auxiliary circuit        0.1 20 s          number of NC contacts delayed switching        0          number of NC contacts delayed switching        0          operating frequency with 3R12 contactor maximum        3          mamber of NC contacts delayed switching        0          operating frequency with 3R12 contactor maximum        3          mamper of SO contacts delayed switching        0          operating frequency with 3R12 contactor maximum        3          ampacity of the output relay at AC-15        a A          at 250 V 3000 Hz        3 A          at 250 V        01 A          operational current at 17 V minimum        5 mA          continuous current of the DIAZED fuse link of the        4 A          output relay        2 kV          eld to conductor-conductor surge acc. to IEC 61000-4-4        4 A          output relay        2 kV		
adjustable response delay time       0.120 s         • with lower or upper limit violation       0.120 s         accuracy of digital display       ++1 digit         Precision       5 %         Auxiliary circuit       0         number of NC contacts delayed switching       0         number of CO contacts delayed switching       0         number of Doorates delayed switching       2         operating frequency with 3RT2 contactor maximum       5 000 1/h         Main circuit       3         number of Doles for main current circuit       3         ampacity of the output relay at AC-15       3 A         • at 250 V at 5060 Hz       3 A         • at 250 V at 5060 Hz       3 A         • at 250 V       0.1 A         • at 260 V       16 Modular         • at 260 V       16 Modular         • at 27 V       0.1 A         • at 28 V       14 Modular         • at 28 V       16 Modular         • at 24 V <td< td=""><td></td><td>1</td></td<>		1
• with lower or upper limit violation     0.120 s       accuracy of digital display     +r-1 digit       Precision     *       relative matering precision     5 %       Auxiliary circuit     0       number of NC contacts delayed switching     0       number of NC contacts delayed switching     0       operating frequency with 3RT2 contactor maximum     5 000 1/h       Main circuit     3       number of VO contacts delayed switching     2       operating frequency with 3RT2 contactor maximum     5 000 1/h       Main circuit     3       ampacity of the output relay at AC-15     3 A       • at 250 V at 5000 Hz     3 A       • at 24 V     1 A       • at 25 V     0.2 A       • at 25 V     0.4 A       output at 20 V bit 300.4.2     2 kV   <		
accuracy of digital display     +/1 digit       Predision     Freative metering precision     5 %       Auxilary circuit     0		
Precision       5 %         Avxillary circuit       0         number of NC contacts delayed switching       0         number of NC contacts delayed switching       2         operating frequency with 3RT2 contactor maximum       5 000 1/h         Main circuit       3         ampacity of the output relay at AC-15       3 A         • at 260 V at 50/60 Hz       3 A         ampacity of the output relay at DC-13       3 A         • at 250 V       0.1 A         operatinal current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       0 A         output relay       0.1 A         operatinal current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       1 A         eit 250 V       0.1 A         operatinal current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       1 KV         Electromagnetic compatibility       1 KV         conducted interference       2 kV         • due to conductor-conductor surge ac. to IEC 6 1000-4.5       1 kV         field-based interference       2 kV         • due to conductor-conductor surge ac. to IEC 6 1000-4.5       1 kV		
relative metering precision       5 %         Auxiliary circuit       Image of NC contacts delayed switching       0         number of NC contacts delayed switching       0       0         number of CC contacts delayed switching       0       0         number of NC contacts delayed switching       2       0         operating frequency with 3RT2 contactor maximum       5000 1/h       10         Main circuit       3       3         number of poles for main current circuit       3         anpacity of the output relay at AC-15       3         • at 260 V at 50/60 Hz       3 A         • at 250 V       0.2 A         • at 260 V       0.1 A         operational current of the DIAZED fuse link of the output relay at DC-13       6         • due to burst acits to IEC 61000-4.4       2 kV         • due to conductor-conductor surge acc. to IEC 61000-4.5       1 kV         elderomagnetic isolation       2 kV         galvanic Isolation       10 V/m         electrostatic discharge acc. to IEC 61000-4.2       6 kV contact discharge         6 kV contact discharge acc. to IEC 61000-4.2       1 V/w         field-based interference acc. to IEC 61000-4.2       6 kV contact discharge         galvanic Isolation       2 kV       1 kV	, , , ,	+/-1 digit
Auxiliary circuit <ul> <li>number of NC contacts delayed switching</li> <li>0</li> <li>number of CO contacts delayed switching</li> <li>0</li> </ul> number of CO contacts delayed switching         0           apparting frequency with 3RT2 contactor maximum         5000 1/h           Main circuit         3           ampactly of the output relay at AC-15         3 A           • at 200 V at 50/60 Hz         3 A           anapacity of the output relay at DC-13         3 A           • at 25 V         0.2 A           • at 25 V         0.2 A           • at 25 V         0.1 A           operational current at 17 V minimum         5 mA           conducted interforence         2 kV           • due to burst acc. to IEC 61000-4-4         2 kV           • due to conductor-conductor surge acc. to IEC 61000-4-5         1 kV           fold-based interforence         1 kV           • due to conductor-conductor surge acc. to IEC 61000-4-5         1 kV           fold-based interforence acc. to IEC 61000-4-5         1 kV           electrostatic discharge acc. to IEC 61000-4-5         10 V/m           electrostatic discharge acc. to IEC 61000-4-5         10 V/m           electrostatic discharge acc. to IEC 61000-4-4         2 kV	Precision	
number of NC contacts delayed switching     0       number of CO contacts delayed switching     0       operating frequency with 3RT2 contactor maximum     5 000 1/h       Main circuit     3       ampacity of the output relay at AC-15     3 A       • at 200 V at 50/60 Hz     3 A       ampacity of the output relay at DC-13     3 A       • at 20 V at 50/60 Hz     3 A       • at 25 V     0.2 A       • at 25 V     0.2 A       • at 25 V     0.1 A       operational current at 17 V minimum     5 mA       continuous current of the DIAZED fuse link of the     3 A       outper for conductor-cantus urge acc. to IEC 61000-4-5     1 kV       • due to burst acc. to IEC 61000-4-5     1 kV       • due to conductor-conductor surge acc. to IEC 61000-4-5     1 kV       • field-based interference acc. to IEC 61000-4-3     10 V/m       • 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       • product connection     trainals       type of electrical connection     tx	relative metering precision	5 %
number of NO contacts delayed switching       0         number of CO contacts delayed switching       2         operating frequency with 3RT2 contactor maximum       5 000 1/h         Main circuit       3         number of poles for main current circuit       3         ampacity of the output relay at AC-15       3 A         • at 250 V at 50/80 Hz       3 A         • at 250 V       0.2 A         • at 250 V       0.2 A         • at 250 V       0.1 A         operational current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       0.1 A         operational current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       2 kV         e due to burst acc: to IEC 61000-4-4       2 kV         • due to conductor-centh surge acc. to IEC 61000-4-5       1 kV         field-based interference acc. to IEC 61000-4-2       10 V/m         electrostatic discharge acc. to IEC 61000-4-2       10 V/m         electrostatic discharge acc. to IEC 61000-4-2       10 V/m         electrostatic discharge acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-3       10 V/m <td>Auxiliary circuit</td> <td></td>	Auxiliary circuit	
number of CO contacts delayed switching     2       operating frequency with 3RT2 contactor maximum     5 000 1/h       Main circuit     3       number of poles for main current circuit     3       ampacity of the output relay at AC-15     at A       at 250 V at 50060 Hz     3 A       arapacity of the output relay at AC-13     at A       at 24 V     3 A       at 250 V     0.2 A       operational current at 17 V minimum     5 mA       continuous current of the DIAZED fuse link of the output relay     2 kV       output relay     2 kV       el de to test acc. to IEC 61000-4-4     2 kV       e due to conductor-canthurge acc. to IEC 61000-4-5     1 kV       effeld-based interference acc. to IEC 61000-4-3     10 V/m       electronsagnotic constructor surge acc. to IEC 61000-4-3     10 V/m       electrostatic discharge acc. to IEC 61000-4-3     10 V/m       electorostatic discharge     8 kV air discharge       Connections     Yes       obetween the outputs     Yes       obetween the outputs     Yes	number of NC contacts delayed switching	0
operating frequency with 3RT2 contactor maximum       5 000 1/h         Main circuit       3         number of poles for main current circuit       3         ampacity of the output relay at AC-15       3 A         • at 250 V at 50/60 Hz       3 A         ampacity of the output relay at DC-13       1 A         • at 250 V       0.1 A         operational current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       0.1 A         operational current at 17 V minimum       5 mA         conducted interference       4 A         • due to burst acc. to IEC 61000-4.4       2 kV         • due to conductor-conductor surge acc. to IEC 61000-4.5       1 kV         field-based interference acc. to IEC 61000-4.3       10 V/m         electrostatic discharge acc. to IEC 61000-4.3       5 kV contact discharge /8 kV air discharge         Galvanic Isolation       yes         • between the voltapt	number of NO contacts delayed switching	0
Main circuit       3         number of poles for main current circuit       3         ampacity of the output relay at AC-15       3 A         • at 250 V at 50/60 Hz       3 A         ampacity of the output relay at DC-13       3 A         • at 252 V       0.1 A         operational current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       0.1 A         operational current at 17 V minimum       5 mA         conducted interference       4 A         • due to burst acc. to IEC 61000-4-4       2 kV         • due to conductor-anth surge acc. to IEC 61000-4-3       10 V/m         electromagnetic compatibility       10 V/m         electrostatic discharge acc. to IEC 61000-4-2       6 kV contact discharge / 8 kV air discharge         Galvanic isolation       4 k         • between input and output       Yes         • between the voltage supply and other circuits       Yes         product component removable terminal for auxillary and control circuit       Yes         ype of electrical connection       tx (0.5 4 mm2), 2x (0.5 1.5 mm2)         • solid       1x (0.5 4 mm²	number of CO contacts delayed switching	2
number of poles for main current circuit         3           ampacity of the output relay at AC-15         3 A           • at 250 V at 50/60 Hz         3 A           ampacity of the output relay at DC-13         3 A           • at 24 V         1 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         5 mA           continuous current of the DIAZED fuse link of the         2 kV           e due to burst acc. to IEC 61000-4-4         2 kV           • due to conductor-conductor surge acc. to IEC 61000-4-5         10 V/m           field-based interference         0 kV contact discharge / 8 kV air discharge           of avanic isolation         6 kV contact discharge / 8 kV air discharge           of avanic isolation         Yes           • between the outputs         Yes           ornnactable conductor cross-sections         screw-type terminals           type of electrical connecti	operating frequency with 3RT2 contactor maximum	5 000 1/h
ampacity of the output relay at AC-15       3 A         • at 250 V at 50/60 Hz       3 A         ampacity of the output relay at DC-13       3 A         • at 24 V       1 A         • at 250 V       0.2 A         operational current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       4 A         Electromagnetic compatibility       6 mA         conducted interference       4 A         • due to burst acc. to IEC 61000-4-4       2 kV         • due to conductor-earth surge acc. to IEC 61000-4-5       1 kV         • field-based interference acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-2       6 kV contact discharge / 8 kV air discharge         Galvanic isolation       galvanic isolation         galvanic isolation       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	Main circuit	
• at 250 V at 50/60 Hz       3 A         • at 400 V at 50/60 Hz       3 A         ampacity of the output relay at DC-13       3 A         • at 24 V       1 A         • at 125 V       0.2 A         • at 25 V       0.1 A         operational current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       4 A         electromagnetic compatibility       conducted interference         • due to burst acc. to IEC 61000-4-4       2 kV         • due to conductor-earth surge acc. to IEC 61000-4-5       1 kV         61000-4-5       2 kV         910 vinci isolation       Yes         • between the upt and output       Yes         • between the voltage supply and other cincuits       Yes	number of poles for main current circuit	3
• at 400 V at 50/60 Hz     3 A       ampacity of the output relay at DC-13     1       • at 24 V     0.2 A       • at 125 V     0.2 A       • at 250 V     0.1 A       operational current at 17 V minimum     5 mA       continuous current of the DIAZED fuse link of the output relay     4 A       Electromagnetic compatibility     4 A       conducted interference     6 due to burst acc. to IEC 61000-4-4       • due to conductor-earth surge acc. to IEC 61000-4-5     2 kV       field-based interference acc. to IEC 61000-4-3     10 V/m       electrostatic discharge acc. to IEC 61000-4-3     6 kV contact discharge / 8 kV air discharge       Galvanic Isolation     6 kV contact discharge / 8 kV air discharge       Galvanic Isolation     Yes       • between the outputs     Screw-type terminals       type of electrical connection     1x (0.5 4 mm2), 2x (0.5 1.5 mm2)       • at WG cables stranded     2x (20 14)       • at WG cables stranded     2x (20 14)	ampacity of the output relay at AC-15	
ampacity of the output relay at DC-13       1A         • at 24 V       1A         • at 25 V       0.2 A         • at 25 0 V       0.1 A         operational current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       4 A         Electromagnetic compatibility       2 kV         conducted interference       4 A         • due to conductor-candulors urge acc. to IEC 61000-4-4       2 kV         • due to conductor-conductor surge acc. to IEC 61000-4-5       4 KV         • due to conductor-conductor surge acc. to IEC 61000-4-5       4 KV         • due to conductor-conductor surge acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-2       6 kV contact discharge / 8 kV air discharge         Galvanic isolation       9 ketween input and output       Yes         • between the voltage supply and other circuits       Yes         • between the voltage supply and other circuits       Yes         product compenent removable terminal for auxiliary and co	• at 250 V at 50/60 Hz	3 A
• at 24 V       1 A         • at 25 V       0.2 A         • at 250 V       0.1 A         operational current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       4 A         Electromagnetic compatibility       4 A         conducted interference       2 kV         • due to burst acc. to IEC 61000-4-4       2 kV         • due to conductor-conductor surge acc. to IEC 61000-4-5       2 kV         • due to conductor-conductor surge acc. to IEC 61000-4-5       2 kV         • field-based interference acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-2       6 kV contact discharge / 8 kV air discharge         Galvanic isolation       9 between input and output       Yes         • between the outputs       Yes         • between the voltage supply and other circuits       Yes         Connections/ Terminals       Yes         product component removable terminal for auxiliary and control circuit       Yes         • between the voltage supply and other circuits       Yes         • betweet the voltage supply and other circuits       Yes         • between the voltage supply and other circuits       Yes         • b	• at 400 V at 50/60 Hz	3 A
• at 255 V       0.2 A         • at 250 V       0.1 A         operational current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       4 A         Electromagnetic compatibility       4 A         conducted interference       4 A         • due to burst acc. to IEC 61000-4-4       2 kV         • due to conductor-earth surge acc. to IEC 61000-4-5       2 kV         • due to conductor-conductor surge acc. to IEC 61000-4-5       1 kV         feld-based interference acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-2       6 kV contact discharge / 8 kV air discharge         Galvanic Isolation       9         • between input and output       Yes         • between the outputs       Yes         • between the voltage supply and other circuits       Yes         product component removable terminal for auxiliary and control circuit       Yes         • solid       1x (0.5 4 mm2), 2x (0.5 2.5 mm2)         • inely stranded with core end processing       1x (0.5 4 mm2, 2x (0.5 1.5 mm2)         • at AWG cables solid       2x (20 14)         • connectable conductor cross-section       • solid         • solid       0.5 4 mm²	ampacity of the output relay at DC-13	
• at 250 V       0.1 A         operational current at 17 V minimum       5 mA         continuous current of the DIAZED fuse link of the output relay       4 A         Electromagnetic compatibility       4 A         conducted interference       2 kV         • due to burst acc. to IEC 61000-4-4       2 kV         • due to conductor-earth surge acc. to IEC 61000-4-5       2 kV         • due to conductor-conductor surge acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-2       6 kV contact discharge / 8 kV air discharge         Galvanic Isolation       •         galvanic Isolation       Yes         • between the outputs       Yes         • between the outputs       Yes         • between the voltage supply and other circuits       Yes         product component removable terminal for auxiliary and control circuit       Yes         • solid       1x (0.5 4 mm2), 2x (0.5 2.5 mm2)         • solid       1x (0.5 4 mm2), 2x (0.5 1.5 mm2)         • at AWG cables solid       2x (20 14)         • at AWG cables solid       2x (20 14)         • at AWG cables solid       2x (20 14)         • solid       0.5 4 mm²	• at 24 V	1 A
operational current at 17 V minimum         5 mA           continuous current of the DIAZED fuse link of the output relay         4 A           Electromagnetic compatibility         4 A           conducted interference         • due to burst acc. to IEC 61000-4-4         2 kV           • due to conductor-earth surge acc. to IEC 61000-4-5         2 kV           • due to conductor-conductor surge acc. to IEC 61000-4-3         10 V/m           field-based interference acc. to IEC 61000-4-3         10 V/m           electrostatic discharge acc. to IEC 61000-4-2         6 kV contact discharge / 8 kV air discharge           Galvanic isolation         • between input and output         Yes           • between the outputs         Yes           • between the outputs         Yes           • between the voltage supply and other circuits         Yes           product component removable terminal for auxiliary and control circuit         Yes           • solid         1x (0.5 4 mm2), 2x (0.5 2.5 mm2)           • at AWG cables solid         2x (20 14)           • at AWG cables stranded         2x (20 14)           • solid         0.5 4 mm²	• at 125 V	0.2 A
continuous current of the DIAZED fuse link of the output relay       4 A         Electromagnetic compatibility       Electromagnetic compatibility         conducted interference       2 kV         e due to burst acc. to IEC 61000-4-4       2 kV         e due to conductor-conductor surge acc. to IEC 61000-4-5       2 kV         field-based interference acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-2       6 kV contact discharge / 8 kV air discharge         Galvanic isolation       6 kV contact discharge / 8 kV air discharge         galvanic isolation       Yes         • between input and output       Yes         • between the outputs       Yes         vigot electrical connection       screw-type terminals         type of electrical connectable conductor cross-sections       screw-type terminals         • solid       1x (0.5 4 mm2), 2x (0.5 2.5 mm2)         • at AWG cables solid       2x (20 14)         • at AWG cables solid       2x (20 14)         • solid       0.5 4 mm²	• at 250 V	0.1 A
output relay           Electromagnetic compatibility           conducted interference           • due to burst acc. to IEC 61000-4-4           • due to conductor-earth surge acc. to IEC 61000-4-5           • due to conductor-conductor surge acc. to IEC           61000-4-5           field-based interference acc. to IEC 61000-4-3           10 V/m           electrostatic discharge acc. to IEC 61000-4-2           6 kV contact discharge / 8 kV air discharge           Galvanic isolation           galvanic isolation           • between input and output           • between the outputs           • between the voltage supply and other circuits           Yes           • between tremovable terminal for auxiliary and control circuit           type of electrical connection           sciid           1x (0.5 4 mm2), 2x (0.5 2.5 mm2)           • at AWG cables solid           2x (20 14)           • at AWG cables stranded           2x (20 14)           • solid           • solid	operational current at 17 V minimum	5 mA
conducted interference2 kV• due to burst acc. to IEC 61000-4-42 kV• due to conductor-earth surge acc. to IEC 61000-4-52 kV• due to conductor-conductor surge acc. to IEC 61000-4-51 kVfield-based interference acc. to IEC 61000-4-310 V/melectrostatic discharge acc. to IEC 61000-4-26 kV contact discharge / 8 kV air dischargeGalvanic isolation5• between input and outputYes• between the outputsYes• between the voltage supply and other circuitsYesproduct component removable terminal for auxiliary and control circuitYes• solid1 x (0.5 4 mm2), 2x (0.5 2.5 mm2)• solid1 x (0.5 2.5 mm2), 2x (0.5 1.5 mm2)• at AWG cables solid2x (20 14)connectable conductor cross-section • solid2x (20 14)	output relay	4 A
<ul> <li>due to burst acc. to IEC 61000-4-4</li> <li>due to conductor-earth surge acc. to IEC 61000-4-5</li> <li>due to conductor-conductor surge acc. to IEC</li> <li>field-based interference acc. to IEC 61000-4-3</li> <li>field-based interference acc. to IEC 61000-4-2</li> <li>dv V/m</li> <li>electrostatic discharge acc. to IEC 61000-4-2</li> <li>dv Vom</li> <li>electrostatic discharge acc. to IEC 61000-4-2</li> <li>kV contact discharge / 8 kV air discharge</li> <li>Galvanic isolation         <ul> <li>between input and output</li> <li>Yes</li> <li>between the outputs</li> <li>Yes</li> </ul> </li> <li>connections/ Terminals</li> <li>type of electrical connection</li> <li>solid</li> <li>tx (0.5 4 mm2), 2x (0.5 2.5 mm2)</li> <li>tx (0.5 4 mm2), 2x (0.5 1.5 mm2)</li> <li>x (20 14)</li> <li>connectable conductor cross-section</li> <li>solid</li> <li>ot AWG cables stranded</li> <li>2x (20 14)</li> </ul>	Electromagnetic compatibility	
e due to conductor-earth surge acc. to IEC 61000-4-5       2 kV         é due to conductor-conductor surge acc. to IEC       1 kV         field-based interference acc. to IEC 61000-4-3       10 V/m         electrostatic discharge acc. to IEC 61000-4-2       6 kV contact discharge / 8 kV air discharge         Galvanic isolation       6 kV contact discharge / 8 kV air discharge         galvanic isolation       Yes         • between input and output       Yes         • between the outputs       Yes         • dometable conductor cross-sections       screw-type terminals	conducted interference	
• due to conductor-conductor surge acc. to IEC       1 kV         61000-4-5       10 V/m         electrostatic discharge acc. to IEC 61000-4-2       6 kV contact discharge / 8 kV air discharge         Galvanic isolation       6 kV contact discharge / 8 kV air discharge         galvanic isolation       9         • between input and output       Yes         • between the outputs       Yes         • between the voltage supply and other circuits       Yes         Connections/ Terminals       Yes         product component removable terminal for auxiliary and control circuit       Yes         type of electrical connection       screw-type terminals         type of connectable conductor cross-sections       1 x (0.5 4 mm2), 2x (0.5 2.5 mm2)         • at AWG cables solid       2x (20 14)         • at AWG cables stranded       2x (20 14)         • solid       0.5 4 mm <sup>2</sup>	<ul> <li>due to burst acc. to IEC 61000-4-4</li> </ul>	2 kV
61000-4-5         field-based interference acc. to IEC 61000-4-3         electrostatic discharge acc. to IEC 61000-4-2         6 kV contact discharge / 8 kV air discharge         Galvanic isolation         galvanic isolation         • between input and output         • between the outputs         • between the outputs         • between the voltage supply and other circuits         Yes         Connections/ Terminals         product component removable terminal for auxiliary and control circuit         type of connectable conductor cross-sections         • solid       1x (0.5 4 mm2), 2x (0.5 2.5 mm2)         • at AWG cables solid       2x (20 14)         • at AWG cables stranded       2x (20 14)         • solid       0.5 4 mm <sup>2</sup>	-	2 kV
electrostatic discharge acc. to IEC 61000-4-2       6 kV contact discharge / 8 kV air discharge         Galvanic isolation       galvanic isolation         • between input and output       Yes         • between the outputs       Yes         • between the voltage supply and other circuits       Yes         Connections/Terminals       Yes         product component removable terminal for auxiliary and control circuit       Yes         type of electrical connection       screw-type terminals         type of connectable conductor cross-sections       1x (0.5 4 mm2), 2x (0.5 2.5 mm2)         • finely stranded with core end processing       1x (0.5 4 mm2), 2x (0.5 1.5 mm2)         • at AWG cables solid       2x (20 14)         • at AWG cables stranded       2x (20 14)         • solid       0.5 4 mm²	61000-4-5	
Galvanic isolation         galvanic isolation         • between input and output         • between the outputs         • between the voltage supply and other circuits         Yes         • between the voltage supply and other circuits         Yes         Connections/ Terminals         product component removable terminal for auxiliary and control circuit         type of electrical connection         screw-type terminals         type of connectable conductor cross-sections         • solid       1x (0.5 4 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)         • at AWG cables solid       2x (20 14)         • at AWG cables stranded       2x (20 14)         connectable conductor cross-section       0.5 4 mm <sup>2</sup>		
galvanic isolationYes• between input and outputYes• between the outputsYes• between the voltage supply and other circuitsYesConnections/ TerminalsYesproduct component removable terminal for auxiliary and control circuitYestype of electrical connectionscrew-type terminalstype of connectable conductor cross-sectionsscrew-type terminals• solid1x (0.5 4 mm2), 2x (0.5 2.5 mm2)• finely stranded with core end processing1x (0.5 2 mm2), 2x (0.5 1.5 mm2)• at AWG cables solid2x (20 14)• at AWG cables stranded2x (20 14)connectable conductor cross-section0.5 4 mm2	_	6 kV contact discharge / 8 kV air discharge
• between input and outputYes• between the outputsYes• between the voltage supply and other circuitsYesConnections/ TerminalsYesproduct component removable terminal for auxiliary and control circuitYestype of electrical connectionscrew-type terminalstype of connectable conductor cross-sectionsscrew-type terminals• solid1x (0.5 4 mm2), 2x (0.5 2.5 mm2)• finely stranded with core end processing1x (0.5 2.5 mm2), 2x (0.5 1.5 mm2)• at AWG cables solid2x (20 14)• at AWG cables stranded2x (20 14)• solid0.5 4 mm²		
• between the outputsYes• between the voltage supply and other circuitsYesConnections/ TerminalsYesproduct component removable terminal for auxiliary and control circuitYestype of electrical connectionscrew-type terminalstype of connectable conductor cross-sectionsscrew-type terminals• solid1x (0.5 4 mm2), 2x (0.5 2.5 mm2)• finely stranded with core end processing1x (0.5 2.5 mm2), 2x (0.5 1.5 mm2)• at AWG cables solid2x (20 14)• at AWG cables stranded2x (20 14)• solid0.5 4 mm²	•	
• between the voltage supply and other circuitsYesConnections/ TerminalsYesproduct component removable terminal for auxiliary and control circuitYestype of electrical connectionscrew-type terminalstype of connectable conductor cross-sectionsIx (0.5 4 mm2), 2x (0.5 2.5 mm2)• solid1x (0.5 4 mm2), 2x (0.5 1.5 mm2)• at AWG cables solid2x (20 14)• at AWG cables stranded2x (20 14)• solid0.5 4 mm²		
Connections/ Terminals       Yes         product component removable terminal for auxiliary and control circuit       Yes         type of electrical connection       screw-type terminals         type of connectable conductor cross-sections       screw-type terminals         • solid       1x (0.5 4 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)         • at AWG cables solid       2x (20 14)         • at AWG cables stranded       2x (20 14)         connectable conductor cross-section       0.5 4 mm²		Yes
product component removable terminal for auxiliary and control circuitYestype of electrical connectionscrew-type terminalstype of connectable conductor cross-sectionsscrew-type terminals• solid1x (0.5 4 mm2), 2x (0.5 2.5 mm2)• finely stranded with core end processing1x (0.5 2.5 mm2), 2x (0.5 1.5 mm2)• at AWG cables solid2x (20 14)• at AWG cables stranded2x (20 14)connectable conductor cross-section0.5 4 mm²	between the voltage supply and other circuits	Yes
and control circuittype of electrical connectionscrew-type terminalstype of connectable conductor cross-sections• solid1x (0.5 4 mm2), 2x (0.5 2.5 mm2)• finely stranded with core end processing1x (0.5 2.5 mm2), 2x (0.5 1.5 mm2)• at AWG cables solid2x (20 14)• at AWG cables stranded2x (20 14)connectable conductor cross-section0.5 4 mm²	Connections/ Terminals	
type of connectable conductor cross-sections• solid1x (0.5 4 mm2), 2x (0.5 2.5 mm2)• finely stranded with core end processing1x (0.5 4 mm2), 2x (0.5 1.5 mm2)• at AWG cables solid2x (20 14)• at AWG cables stranded2x (20 14)connectable conductor cross-section0.5 4 mm²		Yes
• solid       1x (0.5 4 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)         • at AWG cables solid       2x (20 14)         • at AWG cables stranded       2x (20 14)         connectable conductor cross-section       0.5 4 mm²	type of electrical connection	screw-type terminals
<ul> <li>finely stranded with core end processing</li> <li>at AWG cables solid</li> <li>at AWG cables stranded</li> <li>2x (20 14)</li> <li>2x (20 14)</li> <li>connectable conductor cross-section</li> <li>solid</li> <li>0.5 4 mm<sup>2</sup></li> </ul>	type of connectable conductor cross-sections	
• at AWG cables solid       2x (20 14)         • at AWG cables stranded       2x (20 14)         connectable conductor cross-section       0.5 4 mm²	• solid	1x (0.5 4 mm2), 2x (0.5 2.5 mm2)
• at AWG cables stranded     2x (20 14)       connectable conductor cross-section     0.5 4 mm²	<ul> <li>finely stranded with core end processing</li> </ul>	1x (0.5 2.5 mm2), 2x (0.5 1.5 mm2)
connectable conductor cross-section       • solid       0.5 4 mm <sup>2</sup>	<ul> <li>at AWG cables solid</li> </ul>	2x (20 14)
• solid 0.5 4 mm <sup>2</sup>	<ul> <li>at AWG cables stranded</li> </ul>	2x (20 14)
	connectable conductor cross-section	
• finely stranded with core end processing 0.5 2.5 mm <sup>2</sup>		
	<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm <sup>2</sup>

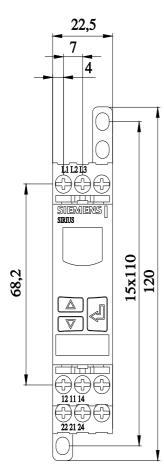
AWG number as cod	led connectable cond	uctor cross				
section						
<ul> <li>solid</li> </ul>			20 14			
<ul> <li>stranded</li> </ul>			20 14			
tightening torque with			0.8 1.2 N·m			
Installation/ mounting	/ dimensions					
mounting position			any			
fastening method			snap-on mounting			
height			92 mm			
width			22.5 mm			
depth			91 mm			
required spacing						
<ul> <li>with side-by-side</li> </ul>	e mounting					
— forwards			0 mm			
— backwards			0 mm			
— upwards			0 mm			
— downwards			0 mm			
— at the side			0 mm			
<ul> <li>for grounded pa</li> </ul>	irts		0			
— forwards			0 mm			
— backwards			0 mm			
— upwards			0 mm			
— at the side			0 mm			
— downwards	5		0 mm			
<ul> <li>for live parts</li> </ul>			0			
— forwards — backwards			0 mm 0 mm			
— upwards			0 mm			
— downwards	-		0 mm			
— at the side	5		0 mm			
Ambient conditions			UIIIII			
			2.000 m	_	_	
	height above sea level	maximum	2 000 m			
<ul> <li>ambient temperature</li> <li>during operation</li> </ul>			25 +60 °C			
<ul> <li>during operation</li> <li>during storage</li> </ul>	I		-40 +85 °C	-25 +60 °C		
during storage     during transport		-40 +85 °C -40 +85 °C				
Certificates/ approvals			-40 105 C			
Certificates/ approvais	5	_				
General Product Ap	proval		EMC	Declaration of Conformity	Test Certificates	
	$\sim$		~		Special Test Certific-	
$(\mathbf{m})$	(Uı)	FAL	<i>ا</i> لاکک	( (	ate	
	<u> </u>	LUT	يى	EG-Konf.		
CCC	UL		RGM	EG-KONT.		
Test Certificates	Marine / Shipping		other	Railway		
Type Test Certific-	Loude	AL PROPERTY OF A PARTY OF	<b>Confirmation</b>	Vibration and Shock		
ates/Test Report	Register					
	LRS	DINULCOMA				
Further information						
Information- and Downloadcenter (Catalogs, Brochures,)						
https://www.siemens.com/ic10						
Industry Mall (Online	e ordering system)					
https://mall.industry.si	emens.com/mall/en/en/	Catalog/product	?mlfb=3UG4615-1CR20			
Cax online generato	r		t.aspx?lang=en&mlfb=3UG46	15-1CR20		
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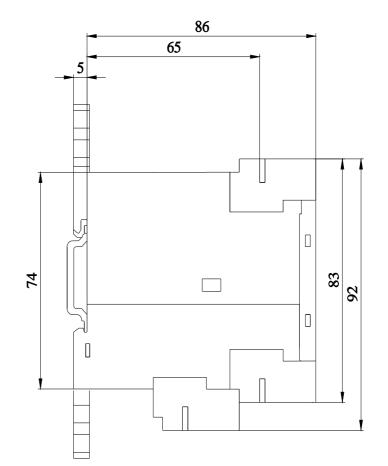
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3UG4615-1CR20

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UG4615-1CR20&lang=en

**Characteristic: Derating** 

https://support.industry.siemens.com/cs/ww/en/ps/3UG4615-1CR20/manual





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