## **SIEMENS**

Data sheet 3UG4617-1CR20



Digital monitoring relay 3-phase supply voltage Autom. phase sequence correction Phase failure 3 x 160 to 690 V 50 to 60 Hz AC Undervoltage and overvoltage 160-690 V Hysteresis 1-20 V OFF delay 0-20 s Asymmetry 0-20% 1 CO for phase correction 1 CO for line supply faults screw terminal

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
of the control supply voltage	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	K
relative repeat accuracy	1 %
Substance Prohibitance (Date)	01.05.2012 00:00:00
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
<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>	No
• auto-RESET	Yes
Control circuit/ Control	
control supply voltage at AC	
at 50 Hz rated value	160 690 V
at 60 Hz rated value	160 690 V
operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	1
	1
• full-scale value	1
operating range factor control supply voltage rated value at AC at 60 Hz	
initial value	1
full-scale value	1
Measuring circuit	
adjustable response delay time	
<ul> <li>with lower or upper limit violation</li> </ul>	0.1 20 s
accuracy of digital display	+/-1 digit
Precision	
relative metering precision	5 %
Auxiliary circuit	
number of NC contacts delayed switching	0
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	3 000 III
	2
number of poles for main current circuit	3
Outputs	
ampacity of the output relay at AC-15	
• 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	
• at 24 V	1 A
• at 125 V	0.2 A
• at 250 V	0.1 A
operational current at 17 V minimum	5 mA
continuous current of the DIAZED fuse link of the output relay	4 A
Electromagnetic compatibility	
conducted interference	
<ul> <li>due to burst acc. to IEC 61000-4-4</li> </ul>	2 kV
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
<ul> <li>due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	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	
galvanic isolation	
between input and output	
between input and output	Yes
between the outputs	Yes Yes
<ul><li>between the outputs</li><li>between the voltage supply and other circuits</li></ul>	Yes
<ul> <li>between the outputs</li> <li>between the voltage supply and other circuits</li> <li>Connections/ Terminals</li> <li>product component removable terminal for auxiliary</li> </ul>	Yes
between the outputs     between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit	Yes Yes
between the outputs     between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection	Yes Yes
between the outputs     between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  type of connectable conductor cross-sections	Yes Yes  Yes  screw-type terminals
between the outputs     between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection	Yes Yes

connectable conductor cross-section  • solid  • finely stranded with core end processing  AWG number as coded connectable conductor cross section  • solid  • stranded  • stranded  • stranded tightening torque with screw-type terminals  mounting position  fastening method  height  width  22.5 mm  depth  required spacing  • with side-by-side mounting  — forwards  — backwards  — upwards  — downwards  — at the side  • for grounded parts  — to grow and so o mm  — at the side  • o mm  — downwards  — upwards  — upwards  — backwards  — upwards  — backwards  — upwards  — to mm  — at the side  • o mm  — downwards  • or live parts  — forwards  — downwards  • of live parts  — forwards  — downwards  — downwards  • on mm  — at the side  — downwards  — on mm  — at the side  — downwards  — on mm  — downwards  — on mm  — at the side  — downwards  — on mm  — downwards  — on mm  — at the side  — on mm  — downwards  — on mm  — at the side  — on mm  — downwards  — on mm  — at the side  — on mm  — downwards  — on mm  — at the side  — on mm  — and bient conditions  installation alittude at height above sea level maximum  ambient temperature  • during transport  — during transport  — during transport  — during transport  — depth								
• solid     • finely stranded with core end processing     AWG number as coded connectable conductor cross section     • solid     • stranded     • strandeded     • stranded     • stranded     • strandededed     • strandedededededededededededededededededede		2x (2	20 14)					
• finely stranded with core end processing     AWG number as coded connectable conductor cross section     • solid	connectable conductor cross-section							
AWG number as coded connectable conductor cross section  solid stranded stranded stightening torque with screw-type terminals Installation/mounting/dimensions  mounting position fastening method snap-on mounting height 92 mm width 22.5 mm depth 91 mm  required spacing with side-by-side mounting - forwards - backwards - upwards - downwards - of mm - at the side of grounded parts - forwards - backwards - upwards - backwards - upwards - omm - at the side - onm - omm - at the side - onm - omm - om	• solid	0.5 .	4 mm²					
section  • solid  • stranded  • standed  • s	finely stranded with core end processing	0.5	2.5 mm²					
solid stranded stranded 20 14 stranded 20 14 tightening torque with screw-type terminals Installation/ mounting/ dimensions  mounting position fastening method height square width 22.5 mm  depth square squared spacing with side-by-side mounting - forwards - backwards - upwards - downwards - at the side of grounded parts - forwards - at the side - at the side - downwards - to mm -								
stranded  tightening lorque with screw-type terminals  mounting position  fastening method height  side by-side mounting  forwards  downwards  at the side  at the side  downwards  onm  for live parts  for live parts  for live parts  at the side  downwards  onm  abackwards  onm  onm  for live parts  at the side  downwards  onm  onm  abackwards  onm  onm  abackwards  onm  aba		00	4.4					
tightening torque with screw-type terminals Installation/ mounting/ dimensions  mounting position fastening method height 92 mm width 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — at the side — for grounded parts — or grounded parts — at the side — downwards — onm — at the side — downwards — onm — at the side — downwards — onm — at the side — onm — at the side — onm — onm — backwards — onm — at the side — onm — onm — ownwards — at the side — onm — ownwards — at the side — onm — ownwards — onm — ownwards — ownward								
mounting position fastening method height width 22.5 mm  depth 91 mm  required spacing  • with side-by-side mounting — forwards — backwards — downwards — at the side — for grounded parts — forwards — upwards — backwards — o mm  • for grounded parts — for grounded parts — forwards — backwards — o mm  • for grounded parts — forwards — o mm  • for grounded parts — forwards — upwards — o mm  • for grounded parts — at the side — o mm  - at the side — o mm  - at the side — o mm  • for live parts — forwards — o mm  • for live parts — forwards — o mm  • for live parts — forwards — o mm  • for live parts — forwards — o mm  • for live parts — forwards — o mm  - at the side — downwards — o mm  - backwards — o mm  - at the side — downwards — o mm  - at the side — downwards — o mm  - at the side — downwards — o mm  - at the side — downwards — downwards — downwards — o mm  - at the side — downwards — downwards — downwards — downwards — downwards — downwards — at the side — downwards — downwards — downwards — downwards — o mm  - at the side — downwards — downwa		_						
mounting position fastening method height width 92 mm width 22.5 mm depth required spacing  • with side-by-side mounting — forwards — backwards — upwards — at the side — of or grounded parts — forwards — backwards — upwards — o mm  • for grounded parts — orwards — upwards — o mm — at the side — downwards — upwards — o mm — at the side — downwards — o mm — at the side — downwards — o mm — at the side — downwards — o mm — at the side — downwards — o mm — at the side — downwards — o mm — at the side — backwards — o mm — backwards — downwards — o mm — backwards — downwards — o mm — at the side — downwards — downwards — o mm — at the side — downwards — downwards — o mm — at the side — downwards — downwards — o mm — at the side — downwards — downwards — o mm — at the side — downwards — downwards — o mm — downwards — downwards — o mm — downwards — downwards — o mm — downwards — downwards — do		0.8	1.2 N·m					
fastening method height yidth 22.5 mm depth 122.5 mm depth 122.5 mm  depth 123.5 mm  depth 124.5 mm  depth 125.5 mm  depth 126.5 mm  depth 126	-							
height width 22.5 mm  depth 91 mm  required spacing  • with side-by-side mounting  — forwards 0 mm — backwards 0 mm — downwards 0 mm — at the side 0 mm  • for grounded parts — forwards 0 mm — backwards 0 mm — backwards 0 mm — at the side 0 mm  • for grounded parts — forwards 0 mm — backwards 0 mm — backwards 0 mm — at the side 0 mm — at the side 0 mm — downwards 0 mm — at the side 0 mm — downwards 0 mm — at the side 0 mm  • for live parts — forwards 0 mm — backwards 0 mm — downwards 0 mm — downwards 0 mm — downwards 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 transport 25 +85 °C  Certificates/ approvals								
width depth 91 mm  required spacing  with side-by-side mounting — forwards — backwards — upwards — downwards — at the side  for grounded parts — forwards — backwards — backwards — o mm — backwards — upwards — o mm — o m	-							
depth  required spacing  with side-by-side mounting  — forwards — backwards — upwards — downwards — at the side  for grounded parts — forwards — backwards — o mm — backwards — o mm — obackwards — o mm — obackwards — o mm — obackwards — upwards — upwards — o mm — obackwards — o mm — o mm — of live parts — for wards — for wards — o mm — of live parts — forwards — o mm — obackwards — o mm — o mm  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  o during operation — during storage — during transport  Center Broduct Approvals  FMC  Declaration of  Total Captific  Total Ca		92 m	nm					
required spacing  with side-by-side mounting — forwards — backwards — upwards — downwards — at the side  for grounded parts — forwards — backwards — upwards — o mm — backwards — o mm — upwards — o mm — o m		_						
with side-by-side mounting     — forwards     — backwards     — upwards     — downwards     — at the side     • for grounded parts     — forwards     — backwards     — o mm     • for grounded parts     — forwards     — backwards     — upwards     — upwards     — at the side     — o mm     — at the side     — o mm     — downwards     — o mm     — downwards     — forwards     — forwards     — forwards     — o mm     — downwards     — upwards     — downwards     — o mm     — at the side     — o mm     — downwards     — o mm     — at the side     — o mm     — at the side     — o mm     — at the side     — downwards     — o mm     — at the side     — o mm		91 m	nm					
forwards	required spacing							
- backwards - upwards - upwards - downwards - at the side o mm of or grounded parts - forwards - backwards - backwards - upwards - upwards - at the side - downwards o mm of or live parts - forwards - backwards - backwards - o mm of one mm - upwards - upwards - upwards - upwards - upwards - upwards - downwards - downwards - at the side - downwards - dow	<ul><li>with side-by-side mounting</li></ul>							
- 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 - downwards 0 mm • for live parts - forwards 0 mm - backwards 0 mm - backwards 0 mm - at the side 0 mm - downwards 0 mm - backwards 0 mm - backwards 0 mm - backwards 0 mm - at the side 0 mm - downwards 0 mm - downwards 0 mm - at the side 0 mm - at the sid	— forwards	0 mn	n					
- downwards - at the side • for grounded parts - forwards - backwards - upwards - downwards - downwards - for live parts - forwards - backwards - o mm - downwards - for live parts - forwards - backwards - backwards - upwards - backwards - upwards - upwards - upwards - upwards - downwards - downwards - downwards - downwards - at the side - downwards - downwards - downwards - downwards - downwards - downwards - at the side - downwards -	— backwards	0 mn	n					
- at the side  • for grounded parts  - forwards  - backwards  0 mm  - upwards  - at the side  0 mm  - downwards  • for live parts  - forwards  0 mm  • for live parts  - forwards  0 mm  - backwards  0 mm  - backwards  0 mm  - backwards  0 mm  - upwards  0 mm  - at the side  - 40 mm  - 40	— upwards	0 mn	n					
for grounded parts         — forwards         — backwards         — upwards         — at the side         — downwards         — forwards         — forwards         — forwards         — forwards         — forwards         — forwards         — backwards         — backwards         — upwards         — upwards         — downwards         — at the side         — o mm         — at the side         — o mm  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature         — during operation         — during storage         — during storage         — during transport  Certificates/ approvals  EMC  Declaration of  Tack Certificates/  Declaration of  Tack Certificates/  Declaration of  Tack Certificates/	— downwards	0 mr	n					
- 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 - backwards 0 mm - upwards 0 mm - upwards 0 mm - at the side 0 mm - at the side 0 mm - downwards 0 mm - at the side 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  Certificates/ approvals	— at the side	0 mr	n					
— backwards — upwards — at the side — downwards — for live parts — forwards — backwards — upwards — upwards — upwards — o mm — at the side — o mm — at the side — o mm — are the side — o mm  Ambient conditions  installation altitude at height above sea level maximum ambient temperature — o during operation — o during storage — o during storage — o during transport	<ul> <li>for grounded parts</li> </ul>							
— upwards — at the side — downwards • for live parts — forwards — backwards — upwards — upwards — downwards — at the side — downwards — at the side  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature • during operation • during storage • during transport  Certificates/ approvals  Ceneral Product Approval  Ceneral Product Approval  Ceneral Product Approval  Declaration of Text Certificates  Text Certificates  Declaration of Text Certificates  Text Certificates  Ceneral Product Approval  Ceneral Product Approval  Text Certificates  Declaration of Text Certificates  Text Certificates  Declaration of Text Certificates	— forwards	0 mn	n					
— at the side — downwards	— backwards	0 mn	n					
- downwards  • for live parts  - forwards  - backwards  0 mm  - upwards  0 mm  - downwards  0 mm  - at the side  0 mm  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  -25 +60 °C  • during transport  -40 +85 °C  Certificates/ approvals	— upwards	0 mn	n					
for live parts         — forwards         — backwards         — upwards         — upwards         — downwards         — at the side         — at the side  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature         • during operation         • during storage         • during transport  Certificates/ approvals  FMC  Declaration of  Test Certificates	— at the side	0 mn	n					
- forwards - backwards - upwards - upwards - downwards - at the side  Ambient conditions installation altitude at height above sea level maximum  ambient temperature  during operation -25 +60 °C during storage during transport  Certificates/ approvals  Convert Product Approval	— downwards	0 mn	n					
- backwards - upwards - downwards - at the side  Ambient conditions installation altitude at height above sea level maximum ambient temperature  • during operation -25 +60 °C • during storage -40 +85 °C  • during transport  Certificates/ approvals  FMC  Declaration of  Text Certificates	for live parts							
- upwards - downwards - at the side  O mm  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  Certificates/ approvals  O mm  2 000 m  -25 +60 °C -40 +85 °C	— forwards	0 mr	n					
— downwards — at the side  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  Certificates/ approvals  Conoral Braduet Approval	— backwards	0 mr	n					
— 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  Certificates/ approvals	— upwards	0 mr	n					
installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  Certificates/ approvals  EMC  Declaration of  Toot Certificates	— downwards	0 mr	n					
installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  -40 +85 °C  Certificates/ approvals  Capacal Braduat Approval  EMC  Declaration of  Toot Cartificates	— at the side	0 mr	0 mm					
ambient temperature  • during operation  • during storage  • during transport  • during transport  -40 +85 °C  Certificates/ approvals  FMC  Declaration of  Text Contists	Ambient conditions							
<ul> <li>during operation</li> <li>during storage</li> <li>during transport</li> <li>40 +85 °C</li> <li>during transport</li> <li>Certificates/ approvals</li> </ul> General Product Approval FMC Declaration of Text Certification	installation altitude at height above sea level maximum	2 00	0 m					
<ul> <li>during operation</li> <li>during storage</li> <li>during transport</li> <li>40 +85 °C</li> <li>during transport</li> <li>Certificates/ approvals</li> </ul> General Product Approval FMC Declaration of Text Certification	<u> </u>							
during storage     during transport     during		-25 .	-25 +60 °C					
during transport     -40 +85 °C  Certificates/ approvals  Capacal Product Approval  EMC Declaration of Text Cortification o								
Certificates/ approvals  Concret Product Approval  EMC Declaration of Test Certification		-40 .	+85 °C					
General Product Approval  EMC Declaration of Text Cortific								
Conoral Broduct Approval EMC				Declaration of				
- Comorning	General Product Approval		EMC	Conformity	Test Certificates			











Special Test Certificate

Test Certificates Marine / Shipping

other

Railway

Type Test Certificates/Test Report





Confirmation

Vibration and Shock

## Further information

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UG4617-1CR20

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4617-1CR20

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

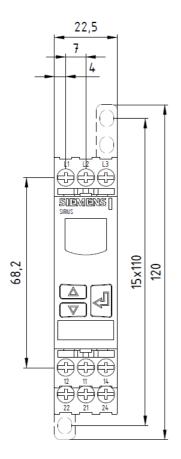
https://support.industry.siemens.com/cs/ww/en/ps/3UG4617-1CR20

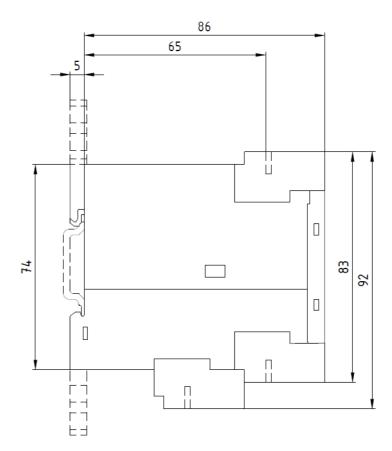
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UG4617-1CR20&lang=en

**Characteristic: Derating** 

https://support.industry.siemens.com/cs/ww/en/ps/3UG4617-1CR20/manual





last modified:

12/21/2020