## **SIEMENS**

Data sheet 3UG5816-1AA40



digitally adjustable monitoring relay phase failure, phase sequence, asymmetry, frequency, over- and under-voltage monitoring for IO-Link  $3x\,90\text{-}690\,\text{V}$  AC, 15-70 Hz 2 changeover contacts screw terminal

product brand name	SIRIUS
product designation	Network monitoring relay with digital setting
design of the product	monitoring of phase sequence, phase failure, with/without N conductor failure, asymmetry, frequency, overvoltage/undervoltage for IO-Link
product type designation	3UG5
General technical data	
product function	line monitoring
display version LED	No
design of the display	LCD
power loss [W] maximum	1 W
insulation voltage for overvoltage category III according to IEC 60664	
<ul> <li>with degree of pollution 2 rated value</li> </ul>	690 V
with degree of pollution 3 rated value	690 V
degree of pollution	3
type of voltage	
<ul><li>for monitoring</li></ul>	AC
<ul> <li>of the operating voltage for actuation</li> </ul>	AC/DC
of the control supply voltage	DC
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation between control and auxiliary circuit	690 V
protection class IP	IP20
shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
vibration resistance according to IEC 60068-2-6	10 55 Hz: 0.35 mm
switching behavior	monostable
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) at AC-15 at 230 V typical	100 000
thermal current of the switching element with contacts maximum	5 A
adjustable OFF-delay time	0.1 30 s
reference code according to IEC 81346-2	К
relative repeat accuracy	0.4 %
Substance Prohibitance (Date)	06/01/2023
SVHC substance name	Blei - 7439-92-1 Bleimonoxid (Bleioxid) - 1317-36-8
Product Function	
product function	
<ul> <li>undervoltage detection</li> </ul>	Yes
overvoltage detection	Yes
<ul> <li>phase sequence recognition</li> </ul>	Yes

<ul> <li>phase failure detection</li> </ul>	Yes; available but limited, detection is problematic with high levels of
	regenerative power recovery
asymmetry detection	Yes
overvoltage detection 3 phase	Yes
undervoltage detection 3 phases	Yes
<ul> <li>voltage window recognition 3 phase</li> </ul>	Yes
<ul> <li>adjustable open/closed-circuit current principle</li> </ul>	Yes
external reset	Yes
auto-RESET	Yes
suitability for use safety-related circuits	No
Control circuit/ Control	
control supply voltage at DC	
rated value	24 V
rated value	24 24 V
Measuring circuit	
measurable voltage at AC	90 690 V
adjustable operating delay time	0 s
adjustable response delay time	
when starting	0.1 30 s
with lower or upper limit violation	0.1 30 s
buffering time in the event of power failure minimum	20 ms
accuracy of digital display	+/-1 digit
relative temperature-related measurement deviation	1 %
Precision	
relative metering precision	3 %
temperature drift per °C	-0.003 %/°C
Short-circuit protection	-0.003 /0/ C
design of the fuse link	al /aCt C A or MCD turns Ct 4 A
<ul> <li>for short-circuit protection of the NO contacts of the relay outputs required</li> </ul>	gL/gG: 6 A or MCB type C: 1 A
<ul> <li>for short circuit protection of the NC contacts of the relay outputs required</li> </ul>	gL/gG: 6 A or MCB type C: 1 A
Communication/ Protocol	
protocol is supported IO-Link protocol	Yes
IO-Link transfer rate	COM2 (38,4 kBaud)
point-to-point cycle time between master and IO-Link device minimum	5 ms
type of voltage supply via input/output link master	Yes
data volume	
<ul> <li>of the address range of the inputs with cyclical transfer total</li> </ul>	4 byte
<ul><li>total</li><li>of the address range of the outputs with cyclical transfer</li></ul>	4 byte 2 byte
total  • of the address range of the outputs with cyclical transfer total	
total  • of the address range of the outputs with cyclical transfer total  Auxiliary circuit	2 byte
total  • of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts	2 byte  AgSnO2
total  • of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts number of NC contacts delayed switching	2 byte  AgSnO2 0
total  • of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts  number of NC contacts delayed switching  number of NO contacts delayed switching	2 byte  AgSnO2
total  • of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts  number of NC contacts delayed switching  number of NO contacts delayed switching  number of CO contacts	AgSnO2 0 0
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts  number of NC contacts delayed switching  number of NO contacts delayed switching  number of CO contacts  of or auxiliary contacts	2 byte  AgSnO2 0 0
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts  of or auxiliary contacts  of delayed switching	2 byte  AgSnO2 0 1 1
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts of auxiliary contacts of auxiliary contacts of delayed switching  operating frequency with 3RT2 contactor maximum	2 byte  AgSnO2 0 0 1 1 5 000 1/h
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts  of or auxiliary contacts  of delayed switching	2 byte  AgSnO2 0 1 1
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts of auxiliary contacts of auxiliary contacts of delayed switching  operating frequency with 3RT2 contactor maximum	AgSnO2 0 0 1 1 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts of rauxiliary contacts of delayed switching  operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts	AgSnO2 0 0 1 1 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts  number of NC contacts delayed switching  number of NO contacts delayed switching  number of CO contacts  of auxiliary contacts  delayed switching  operating frequency with 3RT2 contactor maximum  contact reliability of auxiliary contacts  contact rating of auxiliary contacts according to UL	AgSnO2 0 0 1 1 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts of rauxiliary contacts of auxiliary contacts operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts  contact rating of auxiliary contacts according to UL  Main circuit	AgSnO2 0 0 1 1 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts  of auxiliary contacts  of auxiliary contacts  operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts  contact rating of auxiliary contacts according to UL  Main circuit number of poles for main current circuit	AgSnO2 0 0 1 1 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts of auxiliary contacts of auxiliary contacts of auxiliary contacts contact reliability of auxiliary contacts  contact rating of auxiliary contacts according to UL  Main circuit number of poles for main current circuit ampacity of the output relay at AC-15	AgSnO2 0 0 1 1 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts  number of NC contacts delayed switching  number of NO contacts delayed switching  number of CO contacts  of auxiliary contacts  of auxiliary contacts  odelayed switching  operating frequency with 3RT2 contactor maximum  contact reliability of auxiliary contacts  contact rating of auxiliary contacts according to UL  Main circuit  number of poles for main current circuit  ampacity of the output relay at AC-15  of at 250 V at 50/60 Hz  of at 400 V at 50/60 Hz	AgSnO2 0 0 1 1 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts  number of NC contacts delayed switching  number of NO contacts delayed switching  number of CO contacts  of auxiliary contacts  of auxiliary contacts  operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts  contact rating of auxiliary contacts according to UL  Main circuit  number of poles for main current circuit  ampacity of the output relay at AC-15  of at 250 V at 50/60 Hz	AgSnO2 0 0 1 1 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300
total  of the address range of the outputs with cyclical transfer total  Auxiliary circuit  material of switching contacts  number of NC contacts delayed switching  number of NO contacts delayed switching  number of CO contacts  of rauxiliary contacts  of auxiliary contacts  operating frequency with 3RT2 contactor maximum  contact reliability of auxiliary contacts  contact rating of auxiliary contacts  contact rating of auxiliary contacts according to UL  Main circuit  number of poles for main current circuit  ampacity of the output relay at AC-15  of at 250 V at 50/60 Hz  ampacity of the output relay at DC-13	AgSnO2 0 0 1 1 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A

at 1250 V at 1250 V at 230 V at 230 V at 250 V  at 250	at 230 V     at 250 V  ampacity of the semiconductor output in SIO mode	
ampacity of the semiconductor output in SIO mode 200 mA  operational current at 17 V minimum 5 mA 6 A  continuous current of the DIAZED fuse link of the output  relay  Electromagnetic compatibility  EMC emitted interference according to IEC 60947-1 class A  conducted interference according to IEC 61000-4-5 elue to conductor-certal surge according to IEC 61000-4-5 elue to conductor-conductor surge according to IEC 61000-4-5 elue 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 61000-4-3 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 61000-4-2 field-based interference according to IEC 61000-4-3 field-based interference according to IEC 61000-4-	● at 250 V ampacity of the semiconductor output in SIO mode	1) 4 5
ampacity of the semiconductor output in SIO mode operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  Electromagnetic compatibility  Electromagnetic compatibility  Electromagnetic description in the conductor series according to IEC 60947-1 class A  conducted interference  • due to burst 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 61000-4-5  • field-based interference according to IEC 61000-4-3  electrostatic discharge according to IEC 61000-4-3  electrostatic discharge according to IEC 61000-4-2  field-based interference according to IEC 61000-4-3  electrostatic discharge according to IEC 61000-4-2  folymoil solation  design of the electrical isolation  galvanic isolation  ### Protective separation  ### Protective	ampacity of the semiconductor output in SIO mode	
operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  EMC emitted interference according to IEC 60947-1 class A conducted interference according to IEC 61000-4-3 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-earth surge according to IEC 61000-4-3 • due to conductor-earth surge according to IEC 61000-4-3 • due to conductor-earth surge according to IEC 61000-4-3 • due to conductor-earth surge according to IEC 61000-4-3 • de to conductor-earth surge according to IEC 61000-4-3 • de to conductor-earth surge according to IEC 61000-4-3 • de to conductor conductor surge according to IEC 61000-4-3 • design of the electrical isolation  design of the electrical isolation • between input and output • between input and output • between the voltage supply and other circuits  product component removable terminal for main circuit  product component removable terminal for auxiliary and control circuit  type of electrical connection  type of electrical connection  type of connectable conductor cross-sections • solid • finely stranded with core end processing • for AWG cables solid  • for AWG cables solid  • for AWG cables solid  • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • stranded  20 12  20 12  tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position  fastening method		
continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  EMC emitted interference according to IEC 60947-1 class A  conducted interference  • due to burst according to IEC 61000-4-4 2 kV (power ports), 2 kV (signal ports)  • due to conductor-conductor surge according to IEC 61000-4-5 2 kV  • due to conductor-conductor surge according to IEC 61000-4-5 1 kV  field-based interference according to IEC 61000-4-3 10 V/m  electrostatic discharge according to IEC 61000-4-2 6 kV contact discharge / 8 kV air discharge  Galvanic Isolation  design of the electrical isolation Protective separation  galvanic isolation  • between input and output Yes  • between the voltage supply and other circuit Yes  Connections/ Terminals  product component removable terminal for main circuit Yes  control circuit ypo of connectable conductor cross-sections  • solid  • inely stranded with core end processing  • for AWG cables solid  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  • stranded  • str	anarational august at 47 V minimum	
relay  Electromagnetic compatibility  EMC emitted interference according to IEC 60947-1 class 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  • floid-based interference according to IEC 61000-4-3  • floid-based interference according to IEC 61000-4-2  • floid-based interference according to IEC 61000-4-3  • loid vision of IEC 61000-4-2  • between input and output  • between input and output  • between input and output  • between the voltage supply and other circuits  Product component removable terminal for main circuit  • yes  Connections/Torminals  product component removable terminal for main circuit  • yes  Connections/Torminals  * yes  connectable connection  • solid  • finely stranded with core end processing  • for AWG cables solid  • solid  • for AWG cables solid  • for AWG cables solid  • solid  • finely stranded with core end processing  • finely stranded with core end processing  • solid  • solid  • solid  • stranded  • s	operational current at 17 v minimum	5 mA
EMC emitted interference according to IEC 60947-1  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  field-based interference according to IEC 61000-4-2  field-based interference according to IEC 61000-4-2  electrostatic discharge according to IEC 61000-4-2  design of the electrical isolation  electrostatic solation  • between input and output  • between the voltage supply and other circuits  product component removable terminal for main circuit  product component removable terminal for auxiliary and control circuit  type of electrical connection  • solid  • finely stranded with core end processing  • for AWG cables solid  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  • stranded  • finely stranded with screw-type terminals  nounting of dimensions  mounting position  • solid  • stranded  • fastening method	•	6 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  • due to conductor-conductor surge 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 6100	lectromagnetic compatibility	
• 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     • 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 voltage supply and other circuits     product component removable terminal for main circuit     product component removable terminal for auxiliary and control icruit  type of electrical connection  type of connectable conductor cross-sections     • 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     • solid     • finely stranded with core end processing     • solid     • solid     • solid     • finely stranded with core end processing     • solid     • finely stranded with core end processing     • solid     • solid     • solid     • solid     • finely stranded with core end processing     • solid     • solid     • stranded     •	EMC emitted interference according to IEC 60947-1	class A
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 61000-4-3     delectrostatic discharge according to IEC 61000-4-2     design of the electrical isolation     design of the electrical isolation     obtween input and output     ves     between input and output     ves     between the voltage supply and other circuits     product component removable terminal for main circuit     product component removable terminal for auxillary and control circuit     type of electrical conductor cross-sections     osolid     included with core end processing     if nor AWG cables solid     one table conductor cross-section     osolid     included with core end processing     infinity stranded with core end proc	conducted interference	
due to conductor-conductor surge according to IEC   filed-based interference according to IEC 61000-4-3   10 V/m	<ul> <li>due to burst according to IEC 61000-4-4</li> </ul>	2 kV (power ports), 2 kV (signal ports)
field-based interference according to IEC 61000-4-3 field-based interference according to IEC 61000-4-2 fok V contact discharge / 8 kV air discharge  Galvanic isolation  design of the electrical isolation	<ul> <li>due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	5 2 kV
electrostatic discharge according to IEC 61000-4-2  Galvanic isolation  design of the electrical isolation  • between input and output • between the voltage supply and other circuits  product component removable terminal for main circuit  product component removable terminal for auxiliary and control circuit  type of electrical connection  screw-type terminals  type of connectable conductor cross-sections • solid • finely stranded with core end processing • for AWG cables solid  connectable conductor cross-section • solid • solid • solid • finely stranded with core end processing • solid • s		1 kV
design of the electrical isolation	field-based interference according to IEC 61000-4-3	10 V/m
design of the electrical isolation  galvanic isolation  • between input and output  • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for main circuit  product component removable terminal for auxiliary and control circuit  type of electrical connection  screw-type terminals  • solid  • finely stranded with core end processing  • for AWG cables solid  connectable conductor cross-section  • solid  • finely stranded with core end processing  • for AWG cables solid  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  • solid  • solid  • solid  • finely stranded with core end processing  AWG number as coded connectable conductor cross section  • solid  • stranded  • stranded  • stranded  tightening torque with screw-type terminals  mounting position  fastening method  screw and snap-on mounting onto 35 mm DIN rail	electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
galvanic isolation  • between input and output  • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for main circuit  product component removable terminal for auxiliary and control circuit  type of electrical connection  type of electrical connection  • solid  • finely stranded with core end processing  • for AWG cables solid  connectable conductor cross-section  • solid  • finely stranded with core end processing  • finely stranded with core end processing  • solid  • finely stranded with core end processing  0.5 4 mm²  AWG number as coded connectable conductor cross section  • solid  • stranded  • str	alvanic isolation	
galvanic isolation  • between input and output  • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for main circuit  product component removable terminal for auxiliary and control circuit  type of electrical connection  type of electrical connection  screw-type terminals  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  connectable conductor cross-section  • solid  of inely stranded with core end processing  • finely stranded with core end processing  • finely stranded with core end processing  • solid  • finely stranded with core end processing  0.5 4 mm²  AWG number as coded connectable conductor cross section  • solid  • stranded	design of the electrical isolation	Protective separation
between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for main circuit  product component removable terminal for auxiliary and control circuit  type of electrical connection  type of connectable conductor cross-sections      solid		
between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for main circuit  product component removable terminal for auxiliary and control circuit  type of electrical connection  type of connectable conductor cross-sections      solid	•	Yes
product component removable terminal for main circuit product component removable terminal for auxiliary and control circuit type of electrical connection screw-type terminals type of connectable conductor cross-sections e finely stranded with core end processing for AWG cables solid sol		
product component removable terminal for main circuit 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 4.0 mm²), 2x (0.5 2.5 mm²)  finely stranded with core end processing  for AWG cables solid  1x (20 12), 2x (20 14)  connectable conductor cross-section  solid  finely stranded with core end processing  otherwise of the solid  finely stranded with core end processing  AWG number as coded connectable conductor cross section  solid  solid  solid  20 12  stranded  tightening torque with screw-type terminals  nstallation/ mounting/ dimensions  mounting position  fastening method  screw and snap-on mounting onto 35 mm DIN rail		
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 4.0 mm²), 2x (0.5 2.5 mm²)  1x (0.5 4 mm²), 2x (0.5 2.5 mm²)  1x (0.5 4 mm²), 2x (0.5 2.5 mm²)  1x (20 12), 2x (20 14)  connectable conductor cross-section  solid  finely stranded with core end processing  0.5 4 mm²  AWG number as coded connectable conductor cross section  solid  20 12  stranded  20 12  itghtening torque with screw-type terminals  no.6 0.8 N·m  Installation/ mounting/ dimensions  mounting position  fastening method  screw and snap-on mounting onto 35 mm DIN rail		Yes
type of electrical connection  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • for AWG cables solid  • solid  • finely stranded with core end processing  • solid  • solid  • finely stranded with core end processing  • solid  • solid  • finely stranded with core end processing  • solid  • finely stranded with core end processing  • solid  • soli	· · · · · · · · · · · · · · · · · · ·	
type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • for AWG cables solid  connectable conductor cross-section  • solid  • finely stranded with core end processing  1x (20 12), 2x (20 14)  connectable conductor cross-section  • solid  • finely stranded with core end processing  AWG number as coded connectable conductor cross section  • solid  • solid  • stranded  • stranded  1x (20 12), 2x (20 14)  20 4 mm²  20 4 mm²  20 12  tightening torque with screw-type terminals  1x (20 12  20 12  1x (20 12  20 12  1x (20 12  20 12  1x (20 .		160
<ul> <li>solid</li> <li>finely stranded with core end processing</li> <li>for AWG cables solid</li> <li>tx (0.5 4 mm²), 2x (0.5 2.5 mm²)</li> <li>for AWG cables solid</li> <li>tx (20 12), 2x (20 14)</li> </ul> connectable conductor cross-section <ul> <li>solid</li> <li>finely stranded with core end processing</li> </ul> AWG number as coded connectable conductor cross section <ul> <li>solid</li> <li>solid</li> <li>20 12</li> </ul> stranded <ul> <li>stranded</li> <li>tightening torque with screw-type terminals</li> <li>0.6 0.8 N·m</li> </ul> Installation/ mounting/ dimensions mounting position <ul> <li>any</li> <li>fastening method</li> </ul> screw and snap-on mounting onto 35 mm DIN rail	type of electrical connection	screw-type terminals
<ul> <li>solid</li> <li>finely stranded with core end processing</li> <li>for AWG cables solid</li> <li>tx (0.5 4 mm²), 2x (0.5 2.5 mm²)</li> <li>for AWG cables solid</li> <li>tx (20 12), 2x (20 14)</li> </ul> connectable conductor cross-section <ul> <li>solid</li> <li>finely stranded with core end processing</li> </ul> AWG number as coded connectable conductor cross section <ul> <li>solid</li> <li>solid</li> <li>20 12</li> </ul> stranded <ul> <li>stranded</li> <li>tightening torque with screw-type terminals</li> <li>0.6 0.8 N·m</li> </ul> Installation/ mounting/ dimensions mounting position <ul> <li>any</li> <li>fastening method</li> </ul> screw and snap-on mounting onto 35 mm DIN rail	•	
<ul> <li>finely stranded with core end processing</li> <li>for AWG cables solid</li> <li>1x (20 12), 2x (20 14)</li> <li>connectable conductor cross-section</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>4 mm²</li> <li>finely stranded with core end processing</li> <li>AWG number as coded connectable conductor cross section</li> <li>solid</li> <li>stranded</li> <li>stranded</li> <li>tightening torque with screw-type terminals</li> <li>0.6 0.8 N·m</li> <li>Installation/ mounting/ dimensions</li> <li>mounting position</li> <li>any</li> <li>fastening method</li> <li>screw and snap-on mounting onto 35 mm DIN rail</li> </ul>	• solid	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
<ul> <li>for AWG cables solid</li> <li>1x (20 12), 2x (20 14)</li> <li>connectable conductor cross-section</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>AWG number as coded connectable conductor cross section</li> <li>solid</li> <li>stranded</li> <li>stranded</li> <li>tightening torque with screw-type terminals</li> <li>lnstallation/ mounting/ dimensions</li> <li>mounting position</li> <li>fastening method</li> <li>1x (20 12), 2x (20 14)</li> <li>0.5 4 mm²</li> <li>0.5 4 mm²</li> <li>0.5 4 mm²</li> <li>0.6 12</li> <li>o.7 12</li> <li>o.8 N·m</li> </ul>	<ul> <li>finely stranded with core end processing</li> </ul>	
connectable conductor cross-section  • solid  • finely stranded with core end processing  AWG number as coded connectable conductor cross section  • solid  • stranded  • stranded  • stranded  ightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position  fastening method  0.5 4 mm²  20 12  20 12  20 12  any  fastening method		
solid     finely stranded with core end processing     O.5 4 mm²  AWG number as coded connectable conductor cross section     solid     solid     stranded     stranded     stranded     tightening torque with screw-type terminals     Installation/ mounting/ dimensions     mounting position     fastening method     screw and snap-on mounting onto 35 mm DIN rail		
finely stranded with core end processing  AWG number as coded connectable conductor cross section      solid     stranded     stranded     ightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position     any fastening method      solid     20 12     0.6 0.8 N·m  Installation/ mounting/ dimensions  mounting position     screw and snap-on mounting onto 35 mm DIN rail		0.5 4 mm <sup>2</sup>
AWG number as coded connectable conductor cross section  • solid • stranded • stranded 20 12  tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position any fastening method screw and snap-on mounting onto 35 mm DIN rail		
● stranded 20 12  tightening torque with screw-type terminals 0.6 0.8 N·m  Installation/ mounting/ dimensions  mounting position any fastening method screw and snap-on mounting onto 35 mm DIN rail	AWG number as coded connectable conductor cross	
● stranded 20 12  tightening torque with screw-type terminals 0.6 0.8 N·m  Installation/ mounting/ dimensions  mounting position any fastening method screw and snap-on mounting onto 35 mm DIN rail	• solid	20 12
tightening torque with screw-type terminals  Installation/ mounting/ dimensions  mounting position  fastening method  0.6 0.8 N·m  any  screw and snap-on mounting onto 35 mm DIN rail		
Installation/ mounting/ dimensions  mounting position any fastening method screw and snap-on mounting onto 35 mm DIN rail		
mounting position     any       fastening method     screw and snap-on mounting onto 35 mm DIN rail	<u> </u>	
fastening method screw and snap-on mounting onto 35 mm DIN rail		any
noight 100 mm	<u> </u>	
width 22.5 mm	<u> </u>	
depth 90 mm		
required spacing	·	oo milli
with side-by-side mounting  forwards  O mm	, c	0.mm
— forwards 0 mm		
— backwards 0 mm		
— upwards 0 mm	•	
— downwards 0 mm		
— at the side 0 mm		0 mm
• for grounded 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		0 mm
• for live parts		
— forwards 0 mm	— downwards	0 mm
— backwards 0 mm	<ul><li>— downwards</li><li>• for live parts</li></ul>	O THIT
— upwards 0 mm	<ul><li>— downwards</li><li>• for live parts</li><li>— forwards</li></ul>	
	<ul><li>— downwards</li><li>• for live parts</li><li>— forwards</li><li>— backwards</li></ul>	0 mm

— at the side	0 mm	
Ambient conditions		
installation altitude at height above sea level maximum	2 000 m	
ambient temperature		
<ul> <li>during operation</li> </ul>	-25 +60 °C	
during storage	-40 +85 °C	
during transport	-40 +85 °C	
relative humidity during operation	70 %	
Certificates/ approvals		

Certificates/ approvals

General Product Approval Declaration of Conformity other

Confirmation









Confirmation

## Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3UG5816-1AA40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5816-1AA40

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

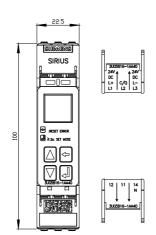
https://support.industry.siemens.com/cs/ww/en/ps/3UG5816-1AA40

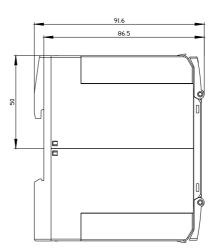
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

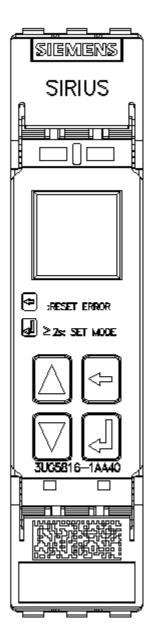
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UG5816-1AA40&lang=en

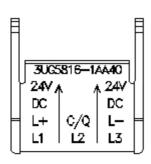
**Characteristic: Derating** 

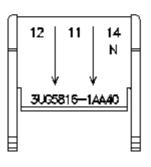
https://support.industry.siemens.com/cs/ww/en/ps/3UG5816-1AA40/manual

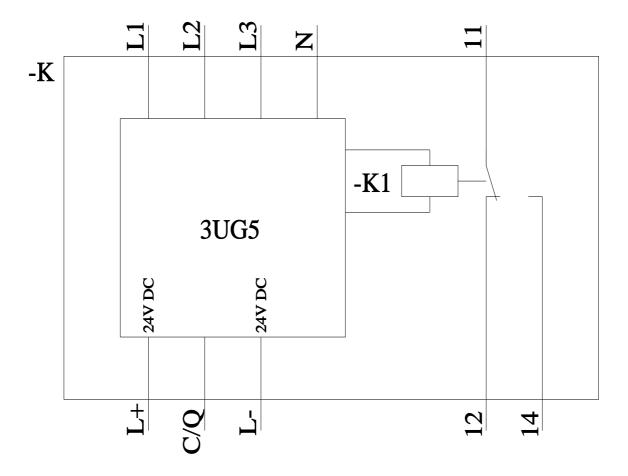












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