



Digital monitoring relay 3-phase supply voltage for IO-Link 50...60 Hz AC 3 x 160 to 690 V Phase sequence, Phase failure Phase asymmetry Undervoltage and overvoltage Hysteresis 1-20 V Line stabilization delay Tripping delay time 1 change-over contact, screw terminal

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	
• with degree of pollution 2 rated value	690 V
degree of pollution	2
type of voltage	
• for monitoring	AC
• of the control supply voltage	DC
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

Product Function

product function	
• undervoltage detection	Yes
• overvoltage detection	Yes
• phase sequence recognition	Yes
• phase failure detection	Yes
• asymmetry detection	Yes
• overvoltage detection 3 phase	Yes
• undervoltage detection 3 phases	Yes
• voltage window recognition 3 phase	Yes
• adjustable open/closed-circuit current principle	Yes
• external reset	Yes
• auto-RESET	Yes

Control circuit/ Control	
control supply voltage at AC	
• at 50 Hz rated value	0 ... 0 V
• at 60 Hz rated value	0 ... 0 V
control supply voltage at DC	
• rated value	24 ... 24 V
operating range factor control supply voltage rated value at DC	
• initial value	1
• full-scale value	1
Measuring circuit	
measurable voltage at AC	690 ... 160 V
adjustable response delay time	
• when starting	0 ... 999.9 s
• with lower or upper limit violation	0 ... 999.9 s
accuracy of digital display	+/-1 digit
Precision	
relative metering precision	5 %
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	10 ms
type of voltage supply via input/output link master	Yes
data volume	
• of the address range of the inputs with cyclical transfer total	4 byte
• of the address range of the outputs with cyclical transfer total	2 byte
Auxiliary circuit	
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
number of CO contacts delayed switching	1
operating frequency with 3RT2 contactor maximum	5 000 1/h
Main circuit	
number of poles for main current circuit	3
ampacity of the output relay at AC-15	
• at 250 V at 50/60 Hz	3 A
• 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
ampacity of the semiconductor output in SIO mode	200 mA
operational current at 17 V minimum	20 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	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 61000-4-2	6 kV contact discharge / 8 kV air discharge
Galvanic isolation	
galvanic isolation	
• between input and output	Yes
• between the voltage supply and other circuits	Yes
Connections/ Terminals	

product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	screw-type terminals
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded 	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) 2x (20 ... 14) 2x (20 ... 14)
connectable conductor cross-section	
<ul style="list-style-type: none"> • solid • finely stranded with core end processing 	0.5 ... 4 mm ² 0.5 ... 2.5 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> • solid • stranded 	20 ... 14 20 ... 14
tightening torque with screw-type terminals	0.8 ... 1.2 N·m

Installation/ mounting/ dimensions

mounting position	any
fastening method	snap-on mounting
height	102 mm
width	22.5 mm
depth	91 mm
required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side 	0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm

Ambient conditions

installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	-25 ... +60 °C -40 ... +85 °C -40 ... +85 °C

Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
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[Manufacturer Declaration](#)



Test Certificates	Marine / Shipping	other	Railway
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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=3UG4815-1AA40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4815-1AA40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4815-1AA40>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4815-1AA40&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4815-1AA40/manual>



