

ANALOG MONITORING RELAY PHASE FAILURE AND -
SEQUENCE 3X 160 TO 690V AC 50 TO 60 HZ 1
CHANGEOVER CONTACT SPRING LOADED
CONNECTION

Product function		Phase monitoring relay
-------------------------	--	------------------------

Measuring circuit:

Type of voltage / for monitoring		AC
Number of poles / for main current circuit		3
Measurable voltage		
• for AC	V	160 ... 690
Relative repeat accuracy	%	1

General technical details:

Type of display / LED		Yes
Product function		
• undervoltage recognition		No
• overvoltage recognition		No
• phase sequence recognition		Yes
• phase disturbance recognition		Yes
• asymmetry recognition		No
• overvoltage recognition of 3 phases		No
• undervoltage recognition of 3 phases		No
• tension window recognition of 3 phases		No
• self-reset		Yes
• open-circuit or closed-circuit current principle		No
Starting time / after the control supply voltage has been applied	ms	1,000
Response time / maximum	ms	450
Type of voltage / of the controlled supply voltage		AC
Control supply voltage		
• at 50 Hz / at AC		
• rated value	V	160 ... 690
• at 60 Hz / at AC		
• rated value	V	160 ... 690
Operating range factor control supply voltage rated value		
• at 50 Hz		
• for AC		1 ... 1

<ul style="list-style-type: none"> • at 60 Hz • for AC 		1 ... 1
Impulse voltage resistance / rated value	kV	6
Recorded real power	W	2
Protection class IP		IP20
Electromagnetic compatibility		IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4
Resistance against vibration / according to IEC 60068-2-6		1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
Resistance against shock / according to IEC 60068-2-27		sinusoidal half-wave 15g / 11 ms
Installation altitude / at a height over sea level / maximum	m	2,000
Conductor-bound parasitic coupling BURST / according to IEC 61000-4-4		2 kV
Conductor-bound parasitic coupling conductor-earth SURGE / according to IEC 61000-4-5		2 kV
Conductor-bound parasitic coupling conductor-conductor SURGE / according to IEC 61000-4-5		1 kV
Electrostatic discharge / according to IEC 61000-4-2		6 kV contact discharge / 8 kV air discharge
Field-bound parasitic coupling / according to IEC 61000-4-3		10 V/m
Insulation voltage / for overvoltage category III according to IEC 60664 / with degree of pollution 3 / rated value	V	690
Degree of pollution		3
Ambient temperature		
<ul style="list-style-type: none"> • during operating 	°C	-25 ... +60
<ul style="list-style-type: none"> • during storage 	°C	-40 ... +85
<ul style="list-style-type: none"> • during transport 	°C	-40 ... +85
Galvanic isolation		
<ul style="list-style-type: none"> • between entrance and outlet 		Yes
<ul style="list-style-type: none"> • between the outputs 		Yes
<ul style="list-style-type: none"> • between the voltage supply and other circuits 		Yes

Mechanical design:

Width	mm	22.5
Height	mm	84
Depth	mm	91
mounting position		any
Distance, to be maintained, to earthed part		
<ul style="list-style-type: none"> • forwards 	mm	0
<ul style="list-style-type: none"> • backwards 	mm	0
<ul style="list-style-type: none"> • sideways 	mm	0
<ul style="list-style-type: none"> • upwards 	mm	0
<ul style="list-style-type: none"> • downwards 	mm	0
Distance, to be maintained, to the ranks assembly		








• forwards	mm	0
• backwards	mm	0
• sideways	mm	0
• upwards	mm	0
• downwards	mm	0
Distance, to be maintained, conductive elements		
• forwards	mm	0
• backwards	mm	0
• sideways	mm	0
• upwards	mm	0
• downwards	mm	0
Type of mounting		snap-on mounting
Product function / removable terminal for auxiliary and control circuit		Yes
Design of the electrical connection		spring-loaded terminals
Type of the connectable conductor cross-section		
• solid		2x (0.25 ... 1.5 mm ²)
• finely stranded		
• with wire end processing		2 x (0.25 ... 1.5 mm ²)
• without wire end processing		2x (0.25 ... 1.5 mm ²)
• for AWG conductors		
• solid		2x (24 ... 16)
• stranded		2x (24 ... 16)

Outputs:

Number of NO contacts / delayed switching		0
Number of NC contacts / delayed switching		0
Number of change-over switches / delayed switching		1
Current carrying capacity / of output relay		
• at AC-15		
• at 250 V / at 50/60 Hz	A	3
• at 400 V / at 50/60 Hz	A	3
• at DC-13		
• at 24 V	A	1
• at 125 V	A	0.2
• at 250 V	A	0.1
Thermal current / of the contact-affected switching element / maximum	A	5
Operating current / at 17 V / minimum	mA	5
Continuous current / of the DIAZED fuse link of the output relay	A	4
Mechanical operating cycles as operating time / typical		10,000,000

Electrical operating cycles as operating time / at AC-15 / at 230 V / typical		100,000
Operating cycles / with 3RT2 contactor / maximum	1/h	5,000

Certificates/approvals:

General Product Approval			EMC	Test Certificates
 CCC	 GOST	 UL	 C-TICK	Special Test Certificate
Shipping Approval			other	
 DNV	 GL	 LRS	Declaration of Conformity	other

Further information:

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<http://www.siemens.com/industrial-controls/mall>

Cax online generator:

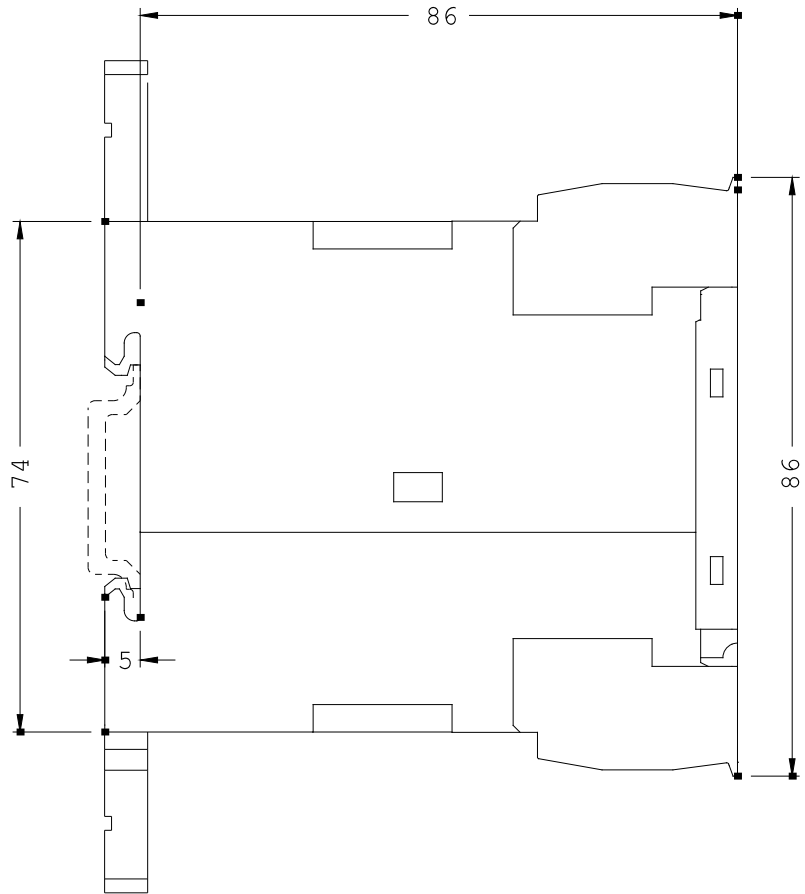
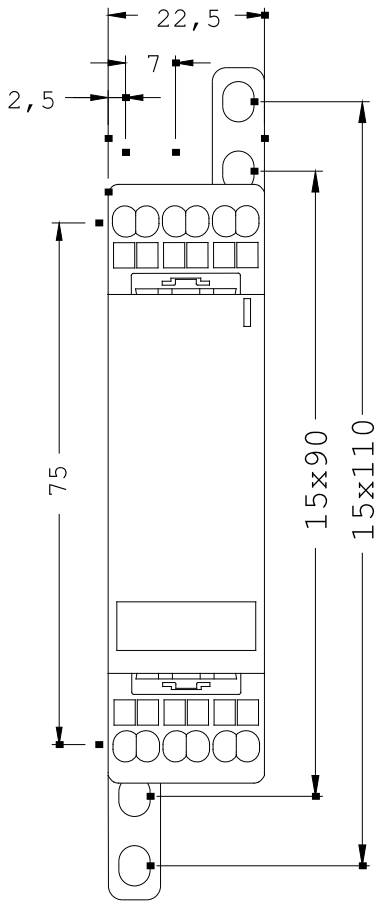
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3UG4512-2AR20/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3UG4512-2AR20



last change:

Feb 18, 2013