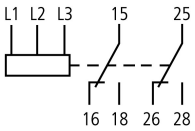
DATASHEET - EMR5-AWN500-1

Phase monitoring relay, multi-function, 2W, 300-500V50/60Hz

Part no.	**EMR5-AWN500-1**
Catalog No.	**134234**
Eaton Catalog No.	**EMR5-AWN500-1**
EL-Nummer (Norway)	**0004110393**

Powering Business Worldwide™

Delivery program

Product range			EMR Measuring and monitoring relays
Basic function			Phase monitoring relays
Function			Multi-functional
			Power supply from the measuring circuit On-delay/off-delay: none = 0 or adjustable between 0.1 - 30 s Imbalance threshold values adjustable 2 - 25 % of mean value of phase voltages
Monitoring voltage per phase	U_N	V AC	300 - 500 V AC, 50/60/400 Hz
Monitoring of			Phase sequence Phase failure Overvoltage Undervoltage Imbalance
Threshold value			U_{max} 420 - 500 V AC U_{min} 300 - 380 V AC
Adjustable threshold values			Overvoltage Undervoltage Imbalance
Contact sequence			
Supply voltage			300 - 500 V AC, 50/60/400 Hz
Width		mm	22.5

Technical data

Technical data in sheet catalogue

Other technical data (sheet catalogue)			Phase monitoring relays

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	0
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	2
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.

10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

Relays (EG000019) / Phase monitoring relay (EC001441)

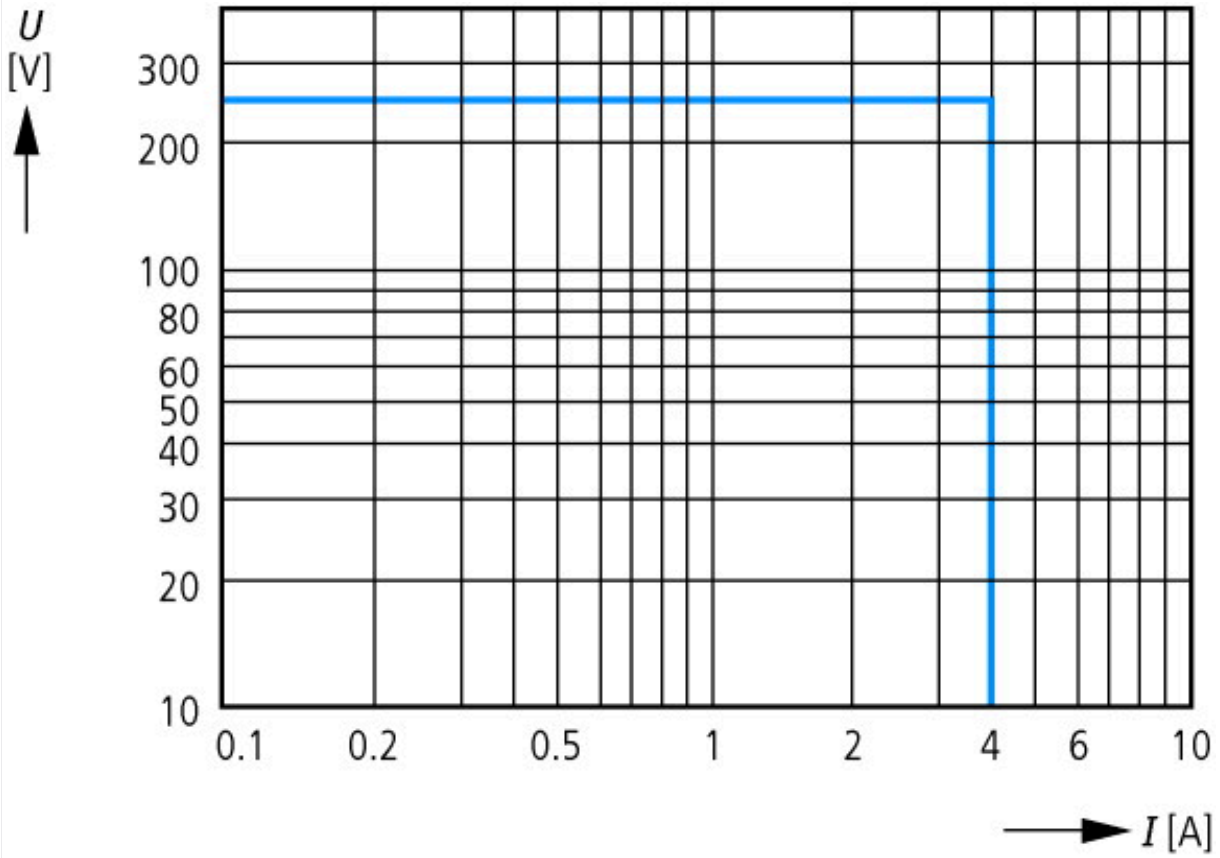
Electric engineering, automation, process control engineering / Low-voltage switch technology / Monitoring equipment (low-voltage switch technology) / Asymmetry monitoring equipment (ecl@ss10.0.1-27-37-18-03 [AKF097014])

Type of electric connection		Screw connection
With detachable clamps		No
Rated control supply voltage Us at AC 50HZ	V	0 - 500
Rated control supply voltage Us at AC 60HZ	V	0 - 500
Rated control supply voltage Us at DC	V	0 - 0
Voltage type for actuating		AC
Phase sequence monitoring		Yes
Phase failure detection		Yes
Function under voltage detection		Yes
Function over voltage detection		Yes
Phase imbalance monitoring		Yes
Voltage measurement range	V	0 - 500
Min. adjustable delay-on energization time	s	0.1
Max. permitted delay-on energization time	s	30
Min. adjustable off-delay time	s	0.1
Max. permitted off-delay time	s	30
Number of contacts as normally closed contact		0
Number of contacts as normally open contact		0
Number of contacts as change-over contact		2
Width	mm	22.5
Height	mm	78
Depth	mm	100

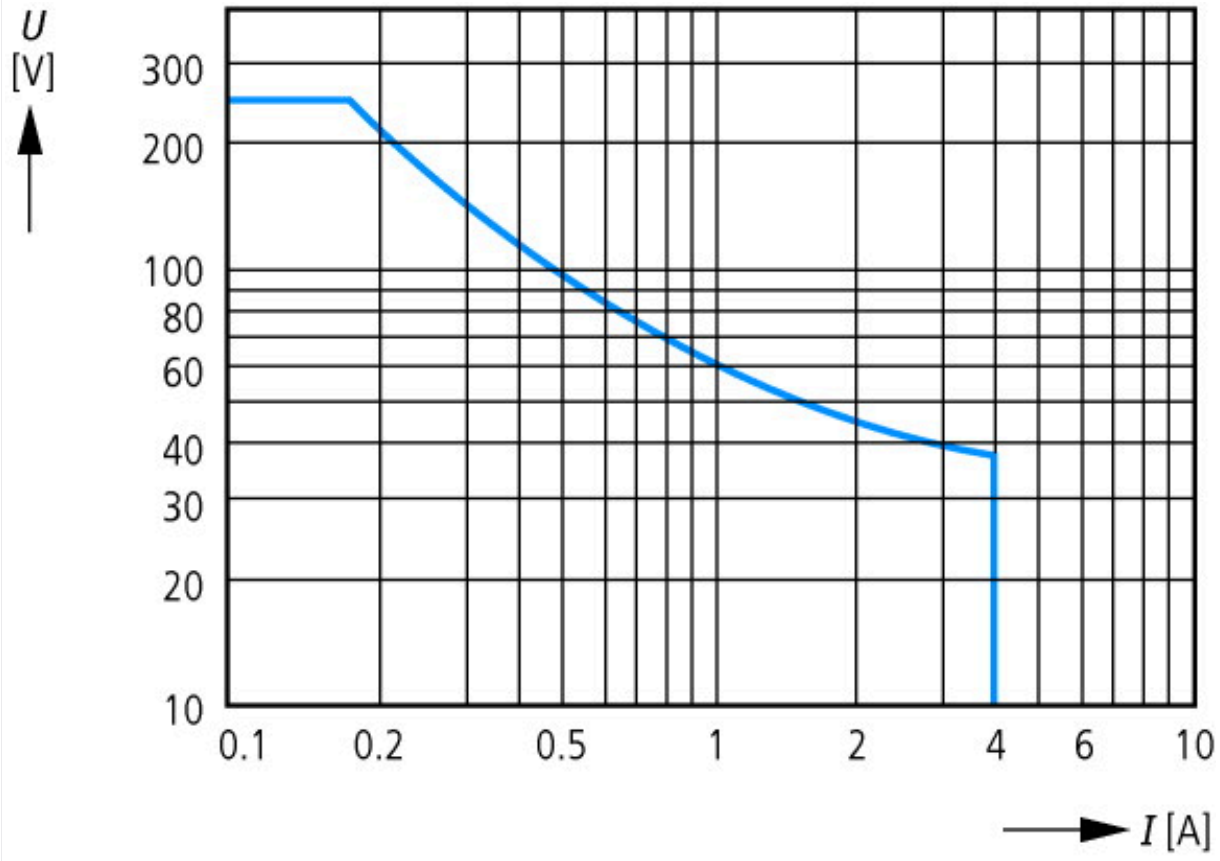
Approvals

Product Standards		IEC 255-6; UL 508; CSA-22.2 No. 14-05; CE marking
UL File No.		E29184
UL Category Control No.		NKCR, NKCR7
CSA File No.		UL report valid
CSA Class No.		3211-03
North America Certification		UL listed, certified by UL for use in Canada
Degree of Protection		IEC: IP20, UL/CSA Type: -

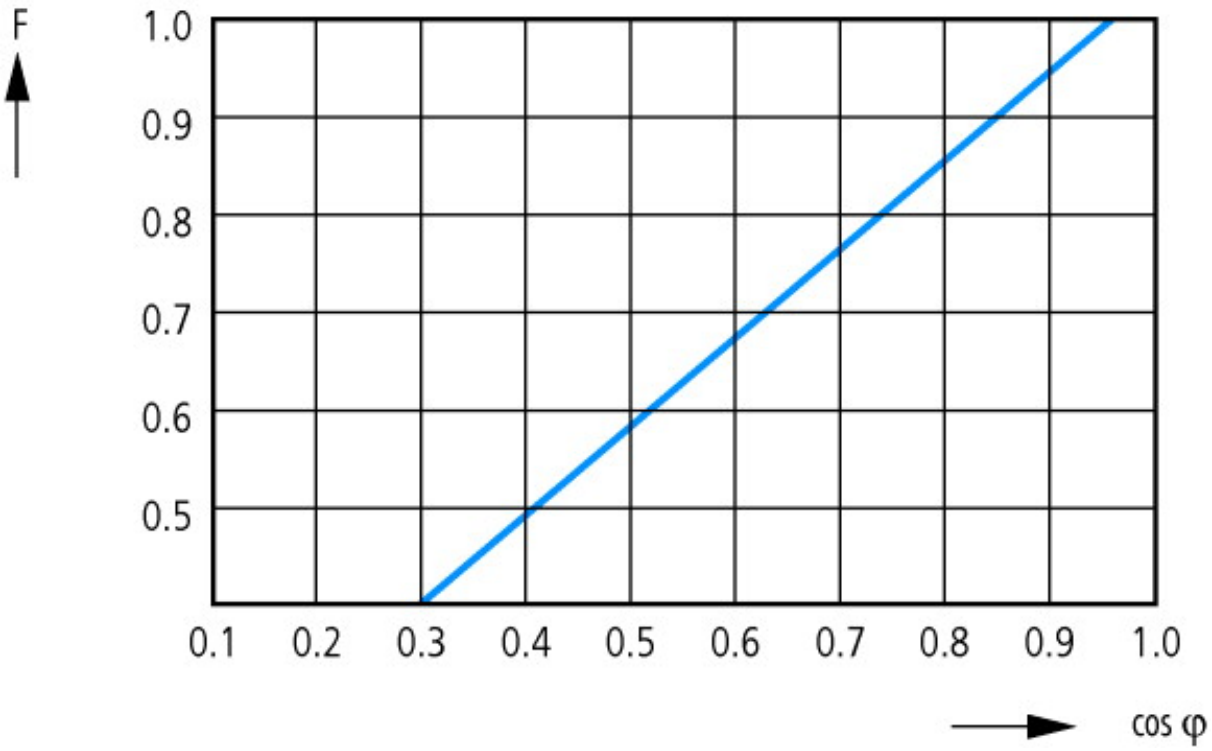
Characteristics



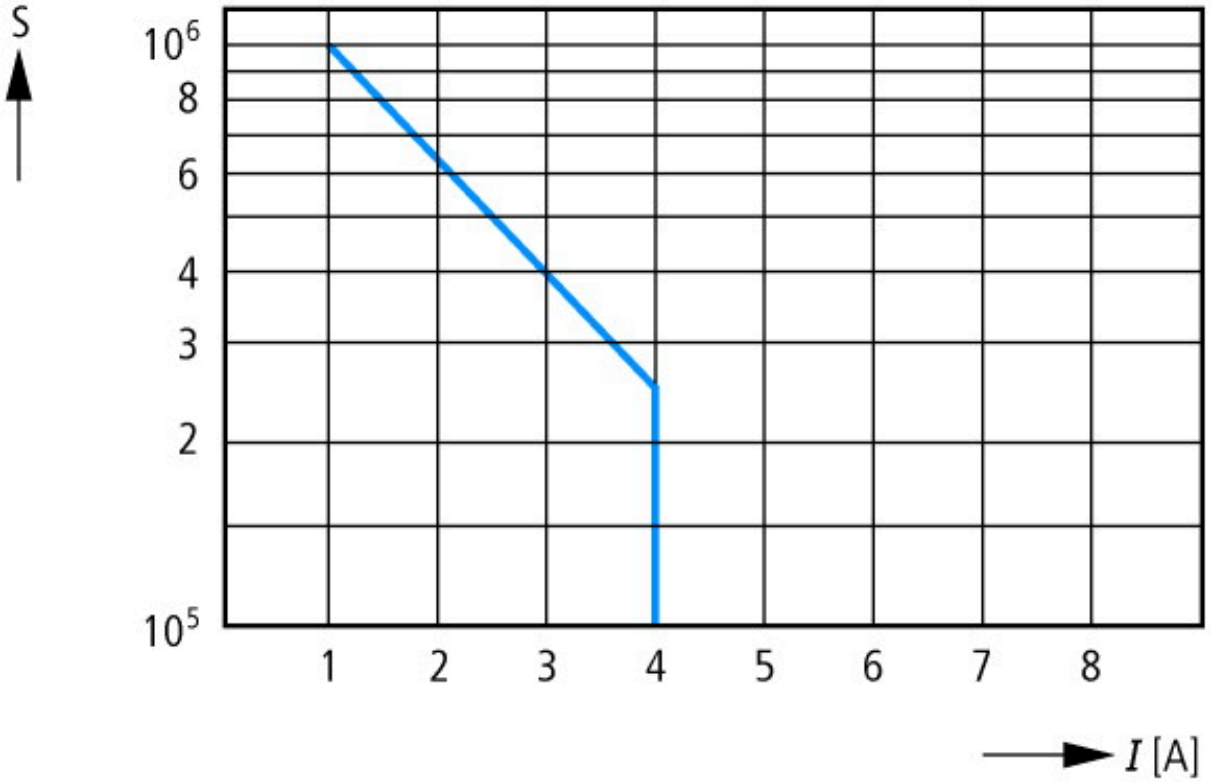
AC load (resistive)



DC load (resistive)

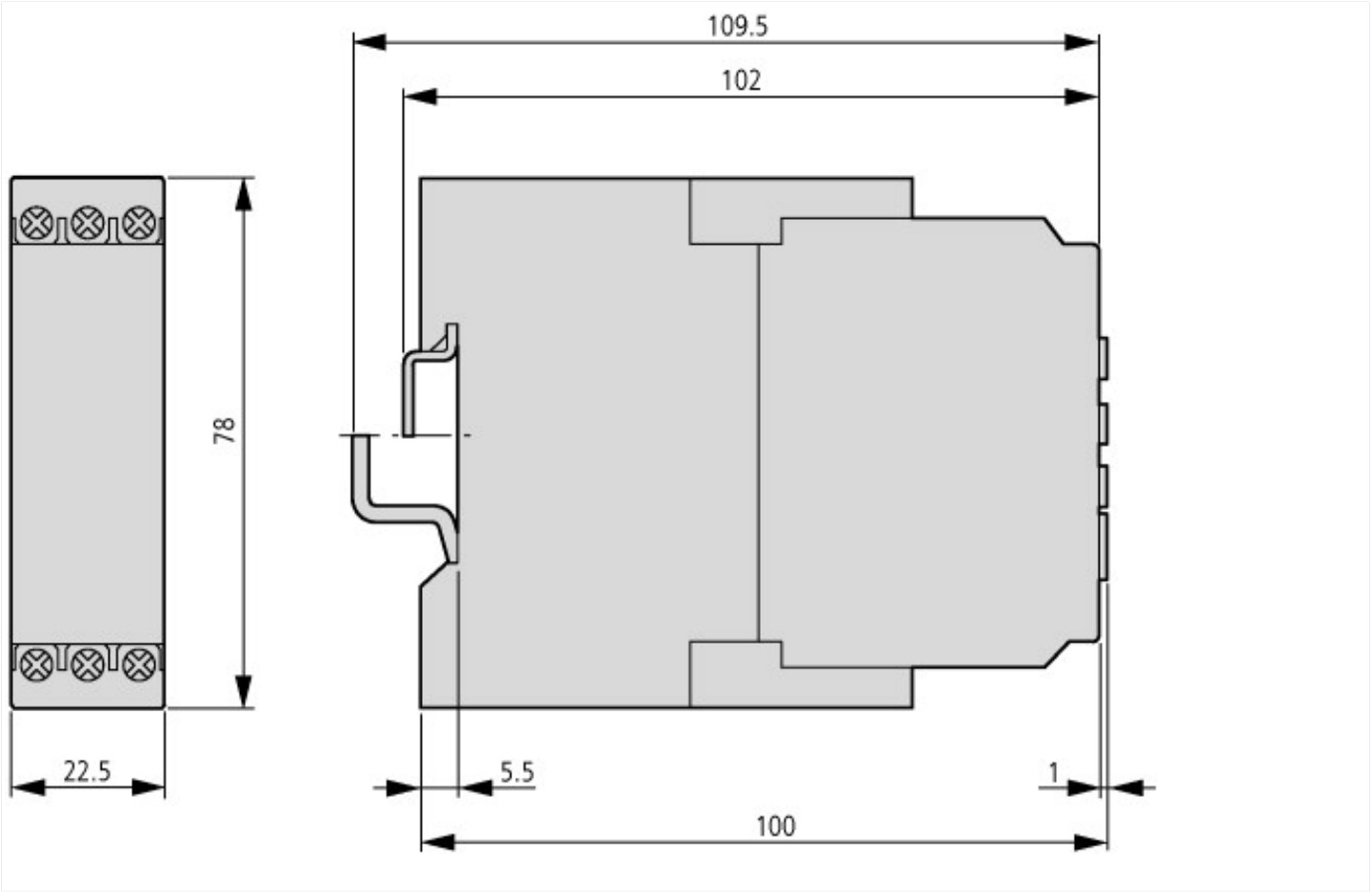


Derating factor F with inductive AC load



Contact life
S operations
220 V 50 Hz AC-1
360 operations/h

Dimensions



Additional product information (links)

Phase monitoring relays	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=11.37