



Phase monitoring relays, On- and Off-delayed, 300 - 500 V AC, 50/60 Hz

Part no. EMR6-W500-D-1
184779
EL Number 4101975
(Norway)

General specifications		
Product name		Eaton Moeller® series EMR6 Phase monitoring relay
Part no.		EMR6-W500-D-1
EAN		4015081788156
Product Length/Depth		103.7 millimetre
Product height		85.6 millimetre
Product width		22.5 millimetre
Product weight		0.16 kilogram
Certifications		CCC UL IEC GL CSA
Product Tradename		EMR6
Product Type		Phase monitoring relay
Product Sub Type		None
Features & Functions		
Electric connection type		Screw connection
Features		Imbalance threshold values adjustable 2 - 25 % of mean value of phase voltages
Functions		Over voltage detection Under voltage detection On- and Off-delayed Phase failure detection
Monitoring function		Phase sequence (can be deactivated) Undervoltage Phase failure Phase sequence monitoring Overvoltage
Voltage measurement - min		300 V
Voltage measurement - max		500 V
General information		
Degree of protection		Terminals: IP20 Enclosure: IP50
Lifespan, mechanical		30,000,000 Operations
Mounting position		As required
Overvoltage category		III
Pollution degree		3
Product category		EMR Measuring and monitoring relays
Rated impulse withstand voltage (Uimp)		4000 V AC
Shock resistance		Class 2
LED indicator		Status indication of Overvoltage: Red LED (F1 on) Status indication of Supply voltage: Yellow LED Status indication of Delay time running: Yellow, flashing light (R/T) Status indication of Undervoltage: F2 red, solid light Status indication of Overvoltage: F1 red, solid light Status indication of Relay energized: Yellow, solid light (R/T) Status indication of Phase sequence fault: Red, flashing light (F1 and F2 alternating) Status indication of Supply voltage: Yellow, solid light Status indication of Undervoltage: Red LED (F2 on) Status indication of Phase failure: F1 red, solid light and F2 red, flashing light
Suitable for		Three-phase networks
Type		Phase monitoring relay
Voltage type		AC
Climatic environmental conditions		
Ambient operating temperature - min		-25 °C
Ambient operating temperature - max		60 °C

Ambient storage temperature - min		40 °C
Ambient storage temperature - max		85 °C
Climatic proofing		Damp heat, cyclic, to IEC 60068-2-30
Electro magnetic compatibility		
Air discharge		Air/contact discharge, according to IEC/EN 61000-4-2, level 3
Burst impulse		According to IEC/EN 61000-4-4, level 3
Electromagnetic compatibility		According to IEC/EN 60947-6-2
Immunity to line-conducted interference		Level 3 (according to IEC/EN 61000-4-6)
Immunity to radiation		Level 3 (according to IEC/EN 61000-4-3)
Surge rating		According to IEC/EN 61000-4-5 Level 4
Terminal capacities		
Connection type		Snap fixing, top-hat rail IEC/EN 60715
Terminal capacity		2 x (0.5-1.5) mm ² , (2 x (18-16) AWG), flexible with ferrule 1 x (0.5-2.5) mm ² , (1 x (18-14) AWG), solid
Screwdriver size		5.5 x 0.8 mm, Terminal screw
Tightening torque		Min. 0.6 Nm, Screw terminals 0.8 Nm, Screw terminals
Timing cycle		
Delay time		0.2 s, Response delay time On-delay/off-delay: none = 0 or adjustable between 0.1 - 30 s
Timing cycle		0.5 %, Time error within supply voltage Adjustable from 0.1 – 30 s, Reset delay/Off-delay time 0.5 % Error within supply voltage (Measuring circuits) 0.06 %/°C, Time error within temperature range
Power supply		
Duty factor		100 %, Power supply
Power consumption		18 VA
Rated control supply voltage (Us) at AC, 50 Hz - min		300 V
Rated control supply voltage (Us) at AC, 50 Hz - max		500 V
Rated control supply voltage (Us) at AC, 60 Hz - min		300 V
Rated control supply voltage (Us) at AC, 60 Hz - max		500 V
Rated control supply voltage (Us) at DC - min		0 V
Rated control supply voltage (Us) at DC - max		0 V
Rated frequency - min		50 Hz
Rated frequency - max		60 Hz
Supply voltage		300 - 500 V AC, 50/60 Hz
Voltage tolerance		0.85 x Uc 1.1 x Uc
Measuring circuits		
Hysteresis		0 - 5 %
Measuring cycle		50 ms
Monitoring voltage		300 - 500 V AC, 50/60 Hz (per phase)
Temperature error		0.06 %/°C, Measuring circuits
Relay output contacts		
Number of contacts (change-over contacts)		2
Number of contacts (normally closed contacts)		0
Number of contacts (normally open contacts)		0
Lifespan, electrical		100,000 Operation (at 230 V, AC-12, 4 A)
Rated operational current (Ie)		3 A at AC-15, 230 V 4 A at DC-12, 24 V 4 A at AC-12, 230 V 2 A at DC-13, 24 V
Rated operational voltage (Ue) at AC - max		250 V
Short-circuit protection rating		Max. 10 A Fast/gL, Fuse, Relay output contacts

Technical data ETIM 9.0

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 (ecI@ss13-27-37-18-03 [AKF097019])

Type of electric connection			Screw connection
With detachable clamps			No
External power supply required			No
Voltage type (supply voltage)			AC
Supply voltage AC 50 Hz		V	300 - 500
Supply voltage AC 60 Hz		V	300 - 500
Supply voltage DC		V	
Phase sequence monitoring			Yes
Phase failure detection			Yes
Function under voltage detection			Yes
Function over voltage detection			Yes
Phase imbalance monitoring			No
Voltage measuring range		V	300 - 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
Voltage type (operating voltage)			AC
Operating voltage AC 50 Hz		V	300 - 500
Operating voltage AC 60 Hz		V	300 - 500
Operating voltage DC		V	
Rated switch current		A	4
Width		mm	22.5
Height		mm	85.6
Depth		mm	103.7