DATASHEET - EMR6-W500-D-1

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

Powering Business Worldwide

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

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	IEC GL UL CCC CSA
Product Tradename	EMR6
Product Type	Phase monitoring relay
Product Sub Type	None
Catalog Notes	Measurement range: 50/60 Hz (± 10 %) Frequency Power supply from the measuring circuit

Features & Functions

Electric connection type	Screw connection
Features	Imbalance threshold values adjustable 2 - 25 % of mean value of phase voltages
Functions	Phase failure detection On- and Off-delayed Under voltage detection Over voltage detection
Monitoring function	Overvoltage Phase sequence monitoring Phase failure Undervoltage Phase sequence (can be deactivated)
Voltage measurement - min	300 V
Voltage measurement - max	500 V

General information

Degree of protection	Enclosure: IP50 Terminals: IP20
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 Phase failure: F1 red, solid light and F2 red, flashing light Status indication of Undervoltage: Red LED (F2 on) Status indication of Supply voltage: Yellow, solid light Status indication of Phase sequence fault: Red, flashing light (F1 and F2 alternating) Status indication of Relay energized: Yellow, solid light (R/T) Status indication of Overvoltage: F1 red, solid light Status indication of Undervoltage: F2 red, solid light Status indication of Delay time running: Yellow, flashing light (R/T) Status indication of Supply voltage: Yellow LED Status indication of Overvoltage: Red LED (F1 on)
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	1 x (0.5-2.5) mm^2, (1 x (18-14) AWG), solid 2 x (0.5-1.5) mm^2, (2 x (18-16) AWG), flexible with ferrule
Screwdriver size	5.5 x 0.8 mm, Terminal screw
Tightening torque	0.8 Nm, Screw terminals Min. 0.6 Nm, Screw terminals
Timing cycle	
Delay time	On-delay/off-delay: none = 0 or adjustable between 0.1 - 30 s 0.2 s, Response delay time
Timing cycle	0.06 %/°C, Time error within temperature range 0.5 % Error within supply voltage (Measuring circuits) Adjustable from 0.1 – 30 s, Reset delay/Off-delay time 0.5 %, Time error within supply voltage
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	1.1 x Uc 0.85 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)	2 A at DC-13, 24 V 4 A at AC-12, 230 V 4 A at DC-12, 24 V 3 A at AC-15, 230 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 (ecl@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