

Specifications



Eaton 184765

Eaton Moeller® series EMR6 Phase monitoring relays, Multi-functional, 350 - 580 V AC, 50/60 Hz

General specifications

PRODUCT NAME	Eaton Moeller® series EMR6 Phase monitoring relay
CATALOG NUMBER	184765
MODEL CODE	EMR6-AWM580-H-1
EAN	4015081788019
PRODUCT LENGTH/DEPTH	107 mm
PRODUCT HEIGHT	85.6 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.16 kg
CERTIFICATIONS	CSA UL GL IEC CCC

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MAX	60 °C
AMBIENT STORAGE TEMPERATURE - MAX	85 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30

Features & functions

ELECTRIC CONNECTION TYPE	Screw connection
FEATURES	Automatic phase sequence correction (can be disabled) Imbalance threshold values adjustable 2 - 25 % of mean value of phase voltages
FUNCTIONS	Multi-functional Phase failure detection Under voltage detection Over voltage detection
MONITORING FUNCTION	Overvoltage Phase imbalance monitoring Phase sequence monitoring Phase sequence Undervoltage Phase failure Imbalance Phase sequence (can be deactivated)
VOLTAGE MEASUREMENT - MAX	580 V
VOLTAGE MEASUREMENT - MIN	350 V

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

General information

DEGREE OF PROTECTION	Terminals: IP20 Enclosure: IP50
LED INDICATOR	Status indication of Overvoltage: Red LED (F1 on) Status indication of Supply voltage: Green, solid light Status indication of Undervoltage: Red LED (F2 on) Status indication of Undervoltage: F2 red, solid light Status indication of Imbalance: Red, solid light (F1 and F2) Status indication of energized output relay: Green flashing (R) Status indication of Phase sequence fault: Red, flashing light (F1 and F2 alternating) Status indication of Phase sequence error: Red LEDs (F1 and F2 flashing) Status indication of Overvoltage: F1 red, solid light Status indication of Relay energized: Yellow, solid light Status indication of Phase failure: F1 red, solid light and F2 red, flashing light Status indication of Supply voltage: Green LED (R on)

Measuring circuits	
HYSTERESIS	0 - 5 %
MEASURING CYCLE	100 ms
MONITORING VOLTAGE	350 - 580 V AC, 50/60 Hz (per phase)
TEMPERATURE ERROR	0.06 %/°C, Measuring circuits

Power supply	
DUTY FACTOR	100 %, Power supply
POWER CONSUMPTION	41 VA
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	580 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	350 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	580 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	350 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	0 V
RATED FREQUENCY - MAX	60 Hz
RATED FREQUENCY - MIN	50 Hz
SUPPLY VOLTAGE	350 - 580 V AC, 50/60 Hz
VOLTAGE TOLERANCE	0.85 x Uc 1.1 x Uc

	Status indication of Phase failure: Red LEDs (F1 on, F2 flashes) Status indication of Delay time running: Yellow, flashing light
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
SUITABLE FOR	Three-phase networks
TYPE	Phase monitoring relay
VOLTAGE TYPE	AC

Relay output contacts

LIFESPAN, ELECTRICAL	100,000 Operation (at 230 V, AC-12, 4 A)
NUMBER OF CONTACTS (CHANGE-OVER CONTACTS)	2
NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)	0
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

Timing cycle

DELAY TIME	Start-up delay fixed Ts = 250 ms Adjustable tripping delay Tv = 0 - 30 s
TIMING CYCLE	0.5 %, Time error within supply voltage 0.5 % Error within supply voltage (Measuring circuits) 0.06 %/°C, Time error within temperature range

Terminal capacities

CONNECTION TYPE	Snap fixing, top-hat rail IEC/EN 60715
SCREWDRIVER SIZE	5.5 x 0.8 mm, Terminal screw
TERMINAL CAPACITY	2 x (0.5-1.5) mm², (2 x (18-16) AWG), flexible with ferrule 1 x (0.5-2.5) mm², (1 x (18-14) AWG), solid
TIGHTENING TORQUE	Min. 0.6 Nm, Screw terminals 0.8 Nm, Screw terminals

Resources

APPLICATION NOTES	easyE4 and EMR6 - the perfect match for safe motor control
BROCHURES	EMR6 - EMT6 - ETR4 brochure
CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-phase-monitoring-relay-declaration-of-conformity-uk251043en.pdf eaton-asymmetry-monitoring-relay-declaration-of-conformity-eu251531en.pdf
DRAWINGS	eaton-current-monitors-emr6-phase-monitoring-relay-dimensions-003.tif
ECAD MODEL	ETN.184765.edz
INSTALLATION INSTRUCTIONS	eaton-multi-function-3phase-relay-emr6-il121008zu.pdf
MCAD MODEL	DA-CS-emr6 awm eaton-phase-monitoring-relays-mcad-drawings-emr6-awm.dwg

WIRING DIAGRAMS

[eaton-phase-monitors-monitoring-wiring-diagram.eps](#)

[eaton-phase-monitors-emr6-phase-monitoring-relay-wiring-diagram.bmp](#)

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



Eaton Corporation plc Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

© 2026 Eaton. All Rights Reserved.

Follow us on social media to get the latest product and support information.

