

Specifications



Eaton 184780

Eaton Moeller® series EMR6 Current monitoring relay, Current measuring range: 3 - 30 mA, 10 - 100 mA, 0.1 - 1 A, Supply voltage: 24 - 240 V AC, 50/60 Hz, 24 - 240 V DC

General specifications

PRODUCT NAME	Eaton Moeller® series EMR6 Current monitoring relay
CATALOG NUMBER	184780
MODEL CODE	EMR6-IM1-A-1
EAN	4015081788163
PRODUCT LENGTH/DEPTH	103.7 mm
PRODUCT HEIGHT	85.6 mm
PRODUCT WIDTH	22.5 mm
PRODUCT WEIGHT	0.153 kg
CERTIFICATIONS	EAC CSA-C22.2 No. 14 UL 508 RMRS CCC GL
CATALOG NOTES	Extension of the measurement range possible with current transformers



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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

CURRENT MEASUREMENT - MAX	1 A
CURRENT MEASUREMENT - MIN	0.01 A
ELECTRIC CONNECTION TYPE	Screw connection
FUNCTIONS	Monitoring of single-phase DC and AC networks DC-voltage under current Single-phase under current possible DC-voltage over current Single-phase over current possible
MONITORING FUNCTION	Overcurrent Undercurrent
VOLTAGE MEASUREMENT - MAX	240 V
VOLTAGE MEASUREMENT - MIN	24 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	Enclosure: IP50 Terminals: IP20
LED INDICATOR	Status indication of energized output relay: Yellow LED Other states depending on fault (see IL): Measured value Status indication of Supply voltage: Green LED Status indication of measured value: Red LED Status indication of Supply voltage: Green, solid 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
TYPE	Current monitoring relay
VOLTAGE TYPE	AC/DC

Measuring circuits

HYSTERESIS	3 - 30 %
INPUT CURRENT	Input B3-C: 0.1 - 1 A Input B1-C: 0.003 - 0.03 A Input B2-C: 0.01 - 0.1 A
MEASURING CYCLE	80 ms
TEMPERATURE ERROR	0.06 %/°C, Measuring circuits

Power supply

DUTY FACTOR	100 %, Power supply
POWER CONSUMPTION	2.6 VA
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	240 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	240 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	240 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	24 V
RATED FREQUENCY - MAX	60 Hz
RATED FREQUENCY - MIN	50 Hz
SUPPLY VOLTAGE	24 - 240 V AC, 50/60 Hz 24 - 240 V DC
VOLTAGE TOLERANCE	0.85 x U _c 1.1 x U _c

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)	4 A at DC-12, 24 V 4 A at AC-12, 230 V
RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V	3 A
RATED OPERATIONAL CURRENT (IE) AT DC-13, 24 V	2 A
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	Adjustable from 0.1 - 30 s, Response delay time Switch-on delay: none = 0 or adjustable from 0.1 to 30 s
ON-DELAY	0.1 - 30 ms
TIMING CYCLE	0.06 %/°C, Time error within temperature range 0.5 %, Time error within supply voltage 0.5 % Error within supply voltage (Measuring circuits) 30 s, Reset delay/Off-delay time

Terminal capacities

CONNECTION TYPE	Snap fixing, top-hat rail IEC/EN 60715
SCREWDRIVER SIZE	4 x 0.8 mm, Terminal screw
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE AWG)	2 x 18-16
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x 0.5-1.5 mm ²
TERMINAL CAPACITY (SOLID AWG)	18 - 14
TERMINAL CAPACITY (SOLID)	1 x 0.5-2.5 mm ²
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-window-current-monitoring-relay-declaration-of-conformity-eu251532en.pdf eaton-window-current-monitoring-relay-declaration-of-conformity-uk251042en.pdf
DRAWINGS	eaton-current-monitors-emr6-phase-monitoring-relay-dimensions.tif
INSTALLATION INSTRUCTIONS	IL121011ZU
MCAD MODEL	eaton-cam-switches-mcad-drawings-emr6-r-t-v-i.dwg

	DA-CS-emr6_r_t_v_i
WIRING DIAGRAMS	eaton-current-monitors-emr6-wiring-diagram.bmp eaton-monitoring-wiring-diagram.eps

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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

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