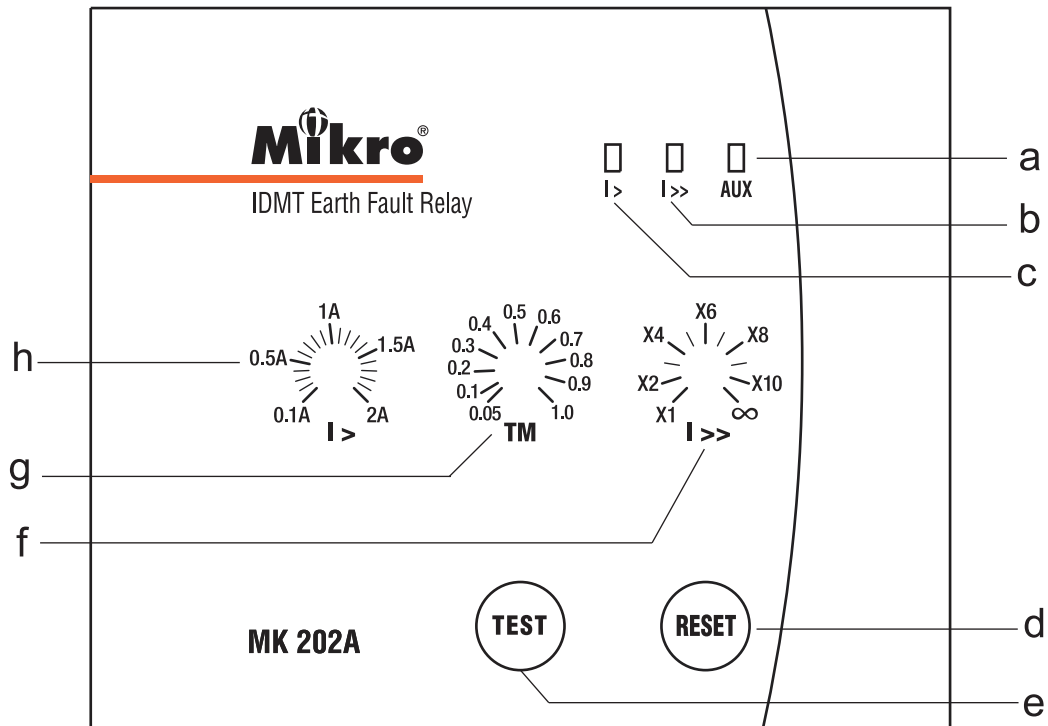


# MK202A IDMT Earth Fault Relay User's Guide

## A BRIEF OVERVIEW



- a - Auxiliary power supply indicator
- b - High-set start/trip status indicator
- c - Low-set start/trip status indicator
- d - Trip reset button
- e - Test button
- f - Earth fault high-set adjustment
- g - Time multiplier adjustment
- h - Earth fault low-set adjustment

# TECHNICAL DATA

## 1. Current and Time Adjustments

### Earth-fault Low-set Current ( $I_{>}$ ) Adjustment

- This adjustment is for setting the minimum earth-fault for tripping with time delay.
- The setting range is from 0.1A to 2A.

### Earth-fault High-set Current ( $I_{>>}$ ) Adjustment

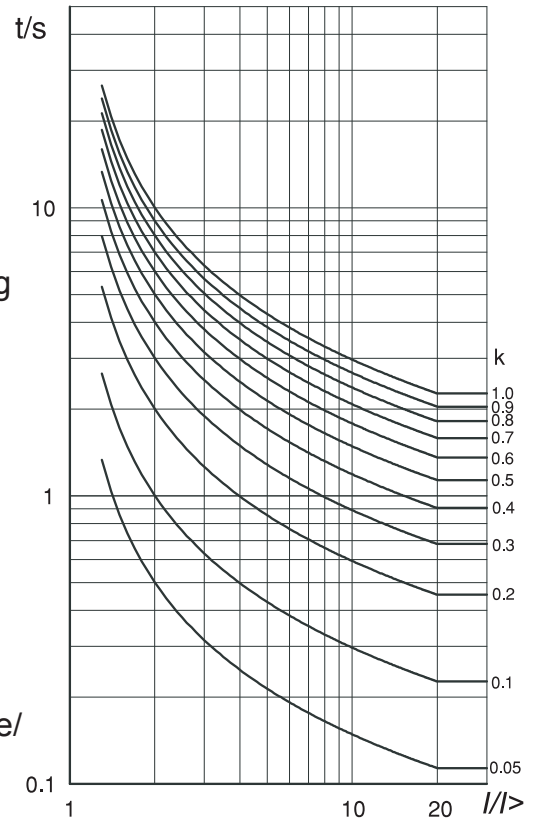
- This adjustment is for setting the instantaneous tripping current due to an earth-fault.
- The setting range is from 1x to 10x of the earth-fault low-set setting value.

$$I_{>>} = a \times I_{>}, \quad a = 1 \text{ to } 10$$

- This high-set feature can be disabled by setting the tripping current to infinity (∞)

### Time Multiplier (TM) Adjustment

- The time multiplier is for setting the normal inverse time/current characteristic (IDMT) as according to BS142.
- The setting range is from 0.05 to 1.0.



IDMT Normal Inverse Curve

## 2. Light Indicators

The light indicators display the status of the system.

Indicator			Status
AUX	$I_{>}$	$I_{>>}$	
Off	Off	Off	No auxiliary power supply.
On	Off	Off	System normal mode. No tripping.
On	On	Off	Earth-fault low-set start.
On	Blink	Off	Earth-fault low-set tripped.
On	Off	On	Earth-fault high-set start.
On	Off	Blink	Earth-fault high-set tripped.

## 3. Push Buttons

### Reset Button

- The reset button is for resetting the light indicators ( $I>$  or  $I>>$ ) after an earth-fault tripping has occurred.
- To reset, press the reset button once.

### Test Button

- Test button is for checking the relay operation.
- Push on the test button to simulate an earth-fault low-set and high-set trip condition.

## 4. Trip Contacts

There is one set of tripping contacts namely, R1.

### R1 - Manual Reset Type

- This contact (R1) is activated during an earth-fault trip. the contacts remain activated regardless of the removal of fault current. This relay can only be reset by pressing the “RESET” button.

## 5. Electrical Specification

### Auxiliary Supply

MK202A-240A.....198~265 VAC

MK202A-110A.....94~127 VAC

Supply frequency.....50Hz

VA rating.....3 VA typical

### Trip Contact

Rated Voltage.....250 VAC

Continuous carry.....5A ( $\cos \phi = 1.0$ )

Expected electrical life.....100,000 operations

Expected mechanical life.....5 million operations

### Setting Ranges

Low-set ( $I>$ ).....0.1A to 2.0A

2% to 40%

Time multiplier (TM).....0.05 to 1.0

High-set ( $I>>$ )..... $I>$  to 10  $I>$  or disable

High-set delay time ( $t>>$ ).....instantaneous

### Indicators

Auxiliary supply.....Green LED indicator

Pick-up.....Red LED indicator

Trip.....Red LED indicator

## 6. Mechanical

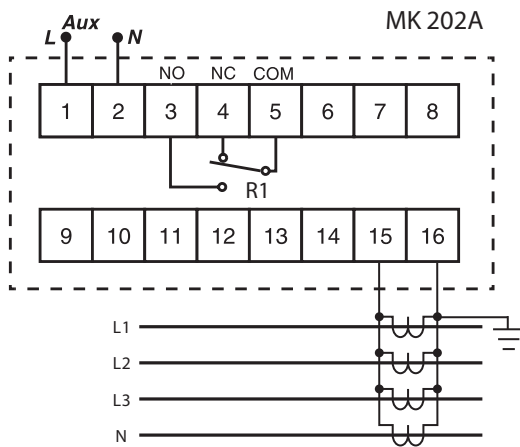
Mounting.....Panel mounting

Front panel.....Standard DIN 96x96 mm

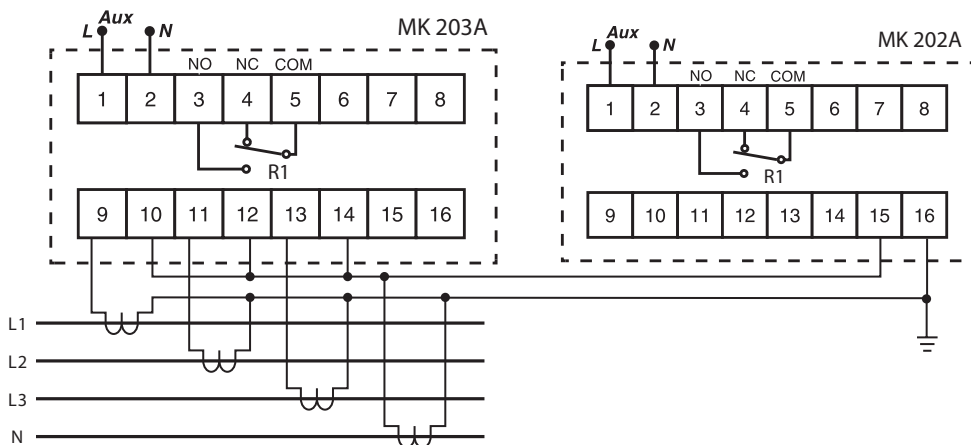
Approximate weight.....0.6 kg

## 7. Connection Diagram

### a) Earth fault relay



### a) Combined IDMT overcurrent and earth fault relays



## 8. Case Dimensions

