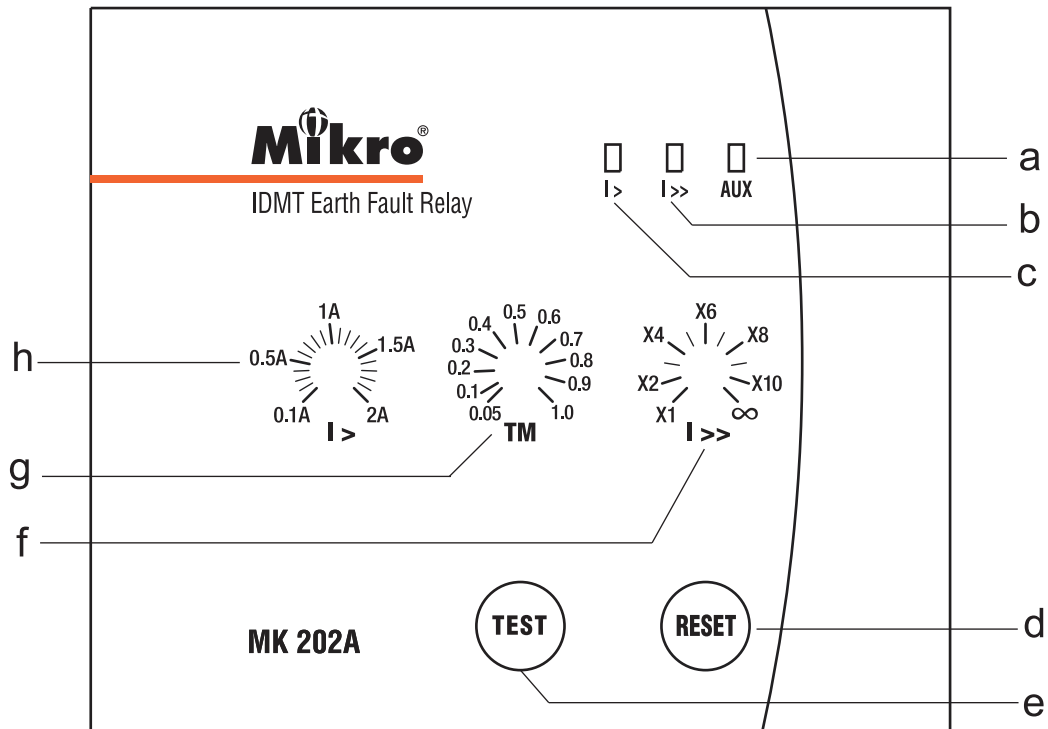


MK202A IDMT Earth Fault Relay User's Guide

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

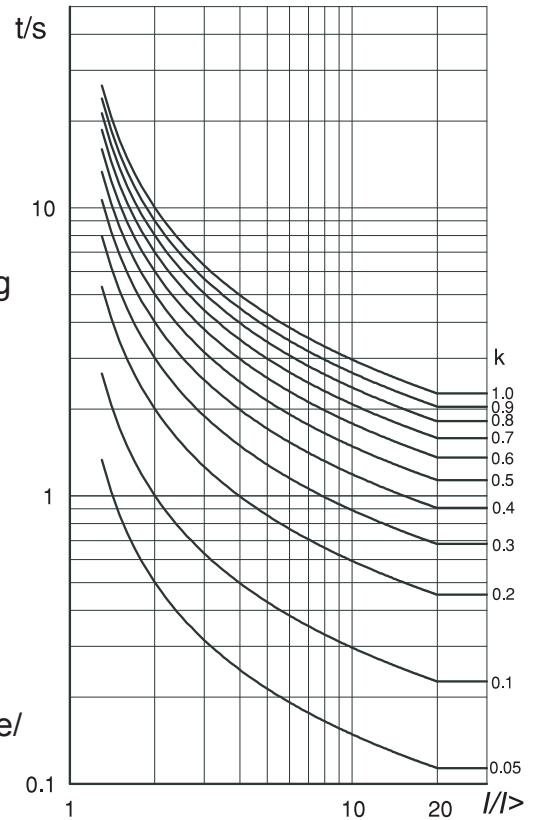
- This adjustment is for setting the instantaneous tripping current due to an earth-fault.
- The setting range is from 1x to 10x of the earth-fault low-set setting value.

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

- 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

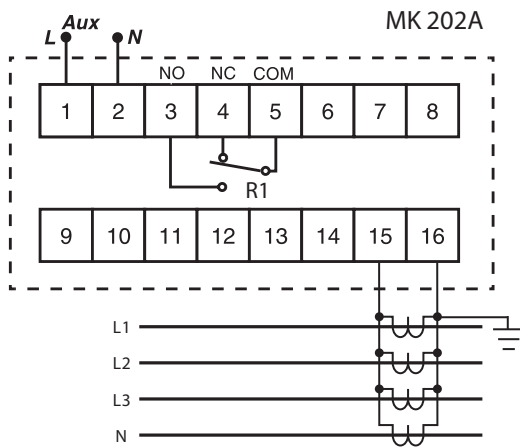
Mounting.....Panel mounting

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

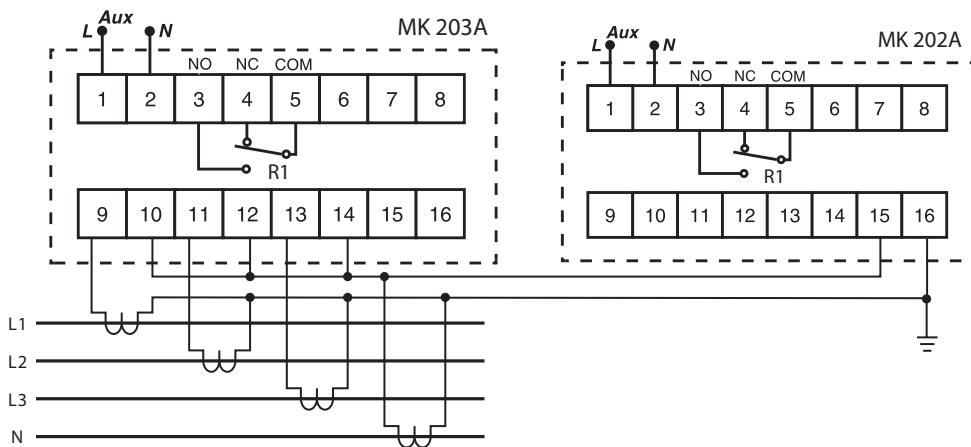
Approximate weight.....0.6 kg

7. Connection Diagram

a) Earth fault relay



a) Combined IDMT overcurrent and earth fault relays



8. Case Dimensions

