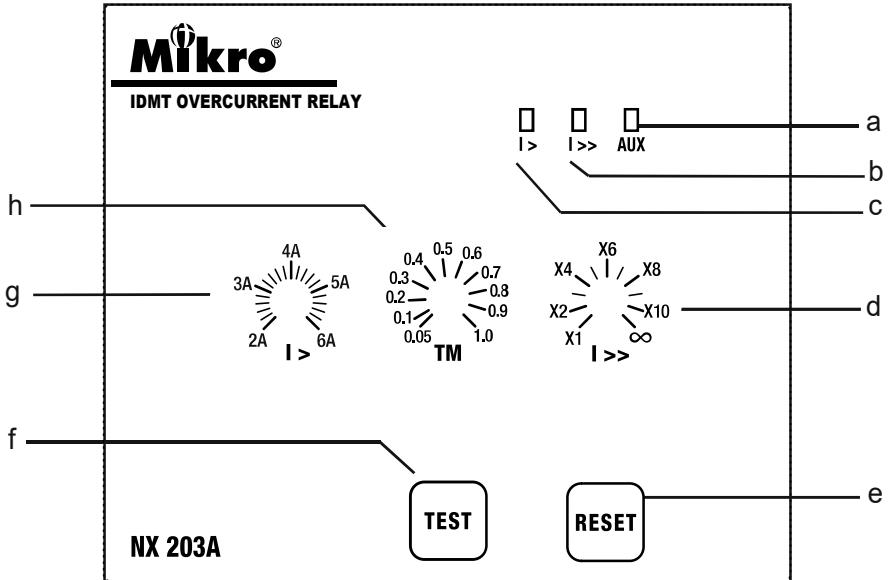


# NX203A IDMT Overcurrent Relay User's Guide

## A BRIEF OVERVIEW



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

# TECHNICAL DATA

## 1. Current and Time Adjustments

### Overcurrent Low-set Current ( $I>$ ) Adjustment

- This adjustment is for setting the minimum overcurrent for tripping with time delay.
- The setting range is from 2A to 6A.

### Overcurrent High-set Current ( $I>>$ ) Adjustment

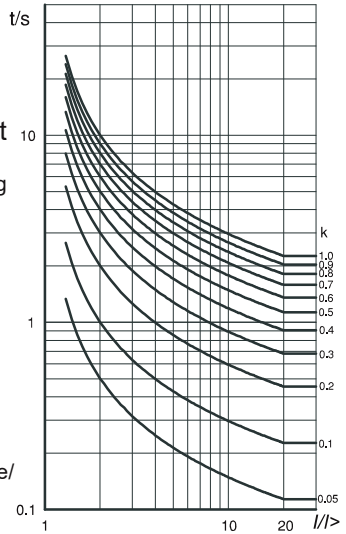
- This adjustment is for setting the instantaneous tripping current due to an overcurrent.
- The setting range is from 1x to 10x of the overcurrent low-set setting value.

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

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

### 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   | Overcurrent low-set start.       |
| On        | Blink | Off   | Overcurrent low-set tripped.     |
| On        | Off   | On    | Overcurrent high-set start.      |
| On        | Off   | Blink | Overcurrent high-set tripped.    |

### 3. Push Buttons

#### Reset Button

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

#### Test Button

- Test button is for checking the relay operation.
- Press and hold test button for 3 seconds to simulate an earth-fault low-set and high-set trip condition.
- Relay will trip and indicators I> and I>> turn ON when the test button is pressed.
- To reset, press the reset button once.

### 4. Trip Contacts

There is one set of tripping contacts namely, R1.

#### R 1 - Manual Reset Type

- This contact (R1) is activated during an overcurrent 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

|                       |              |
|-----------------------|--------------|
| NX203A-240A.....      | 198~265 VAC  |
| NX203A-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>).....              | 2.0A to 6.0A           |
|                                | 40% to 120%            |
| Time multiplier(TM.....        | 0.05 to 1.0            |
| High-set(I>>).....             | I> to 10 I> or disable |
| High-set delay time (t>>)..... | instantaneous          |

#### Indicators

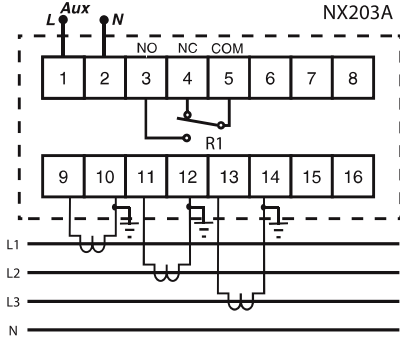
|                       |                     |
|-----------------------|---------------------|
| Auxiliary supply..... | Green LED indicator |
| Pick-up.....          | Red LED indicator   |
| Trip.....             | Red LED indicator   |

### 6. Mechanical

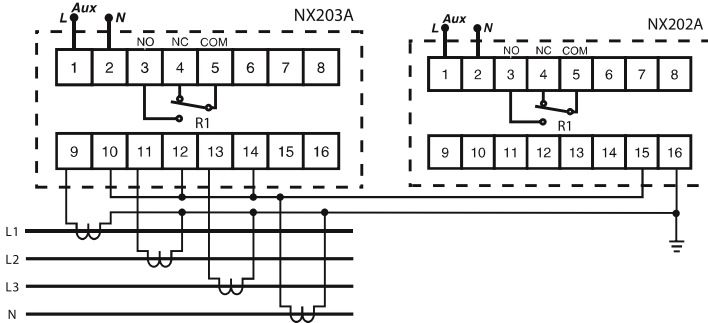
|                         |                       |
|-------------------------|-----------------------|
| Mounting.....           | Panel mounting        |
| Front panel.....        | Standard DIN 96x96 mm |
| Approximate weight..... | 0.7 kg                |

# 7. Connection Diagram

## a) Overcurrent relay



## a) Combined IDMT overcurrent and earth fault relays



# 8. Case Dimensions

