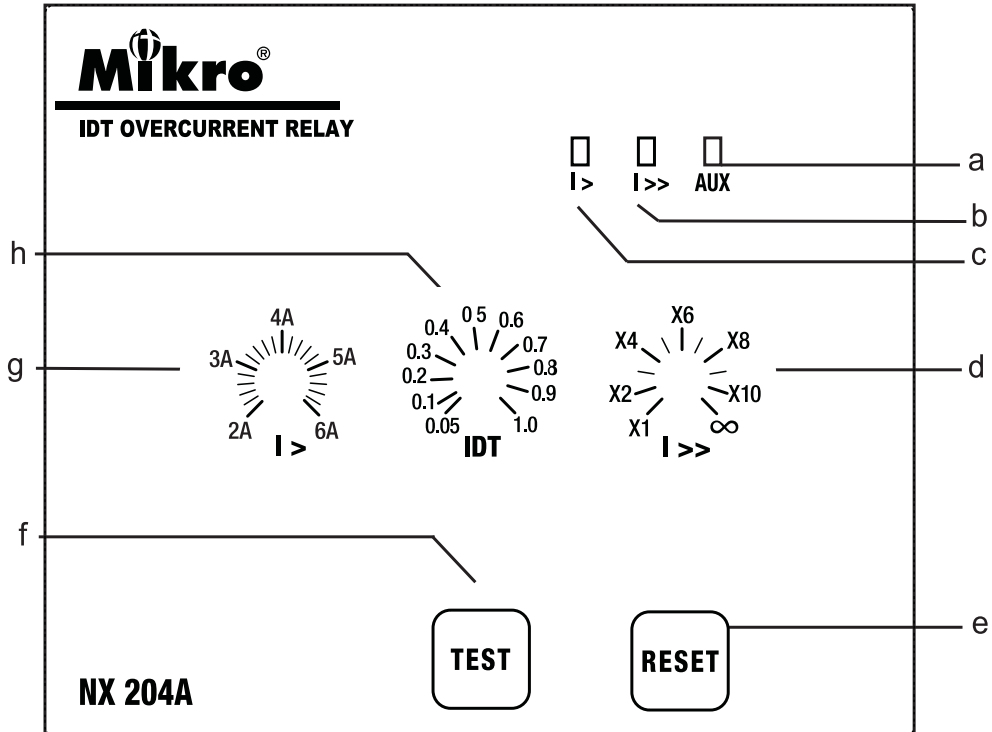


# NX204A IDT Overcurrent Relay User's Guide

## 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 (IDT) Adjustment

- The delay timing adjustment is for selecting different delay curve as shown in figure 1.
- The setting range is from 0.05 to 1.0.

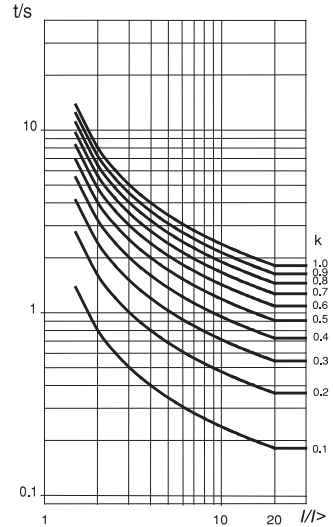


Figure 1: IDT Inverse

## 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.

### IMPORTANT

The setting for this relay is a potentiometer knob or analogue/mechanical in nature. User will need to confirm the accuracy of the settings by using a calibrated current injector and injecting a reference current and check the pick up value and the tripping timing during commissioning. To have a precise setting model, user can consider to switch to digital setting type protective relay.

### 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

NX204A-240A.....198~265 VAC  
NX204A-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>).....Green LED indicator  
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

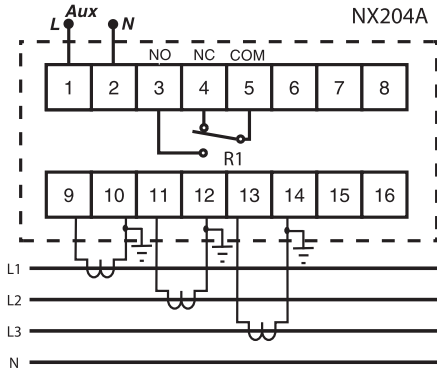
Auxiliary supply.....Green LED indicator  
Pick-up.....Red LED indicator  
Trip.....Red LED indicator

### 6. Mechanical

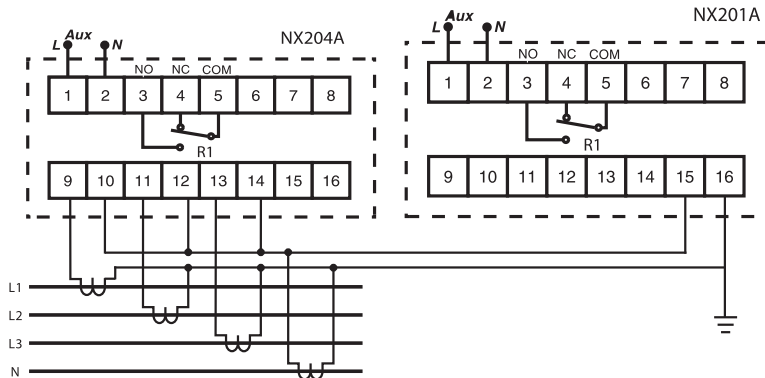
Mounting.....Panel mounting  
Front panel.....Standard DIN 96x96 mm  
Approximate weight.....0.7 kg

# 7. Connection Diagram

## a) Overcurrent relay



## a) Combined overcurrent and earth fault relays



# 8. Case Dimensions

