



# MX200A 180A 160A

## Features

- Electronic monitoring relay
- Voltage monitoring for single 3-phase system
- Phase failure monitoring
- Adjustable voltage limit
- Adjustable delay time
- Indicators for voltage fault
- Indicators for power and output ON
- ANSI Code : 27, 47, 59

## Product Description

MX160A, MX180A & MX200A are single or 3-phase monitoring relays. The relays are designed for application where it required to maintain the voltage within set limits. A built-in adjustable time delay prevents nuisance tripping.

## Technical Data

### POWER SUPPLY INPUT

#### 3-Phase System

Phase-to-phase voltage : 380 V AC  $\pm$  20%  
400 V AC  $\pm$  20%  
415 V AC  $\pm$  20%

#### Single Phase

Phase-to-neutral voltage : 220 V AC  $\pm$  20%  
230 V AC  $\pm$  20%  
240 V AC  $\pm$  20%

Frequency range : 45 to 65 Hz

Max. power consumption: 3 VA

### Input Connections

For 3-phase model : Phase L1, L2, L3 to pin 5, 6, & 7

Neutral to pin 11

For single-phase model : Phase L to pin 5, 6 & 7\*\*\*

Neutral to pin 11

### SETTING RANGES

Lower voltage limit \* : 78% - 98%  
Upper voltage limit \*\* : 102% - 122%  
Delay time, T : 0.1 - 10s

### HYSTERESIS

$\leq 1\%$  of rms - value

### OUTPUT CONTACTS

Rated voltage : 250 V AC  
Contact rating : 5 A  
Expected electrical life : 100,000 operations at rated current  
Expected mechanical life :  $5 \times 10^6$  operations

### INDICATORS

Power supply ON : Green indicator  
Output ON : Red indicator  
Under voltage limit (U<) \* : Red indicator  
Over voltage limit (U>) \*\* : Red indicator

### ENVIRONMENTAL CONDITIONS

Temperature : -5°C to +55°C  
Humidity : 56 days at 93% RH and 40°C non-condensing

### MECHANICAL

Mounting : Circular 11-pin plug-in socket  
Dimension (mm) : 35(w) x 80(h) x 72.5(d)  
Approximate weight : 0.3 kg

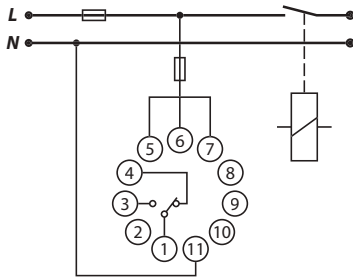
\* Applicable to MX160A and MX200A only

\*\* Applicable to MX180A and MX200A only

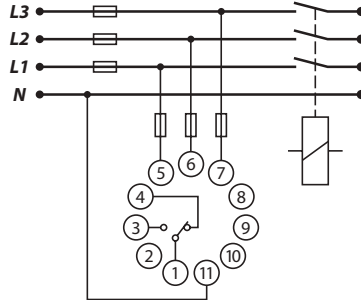
\*\*\* For single phase connection, short pin 5, 6 & 7

## Wiring Diagram

Single-Phase System

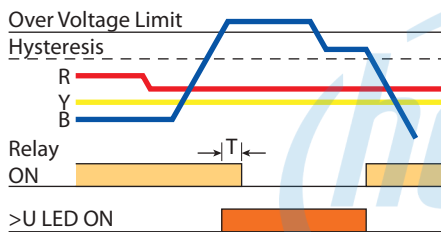


3-Phase System

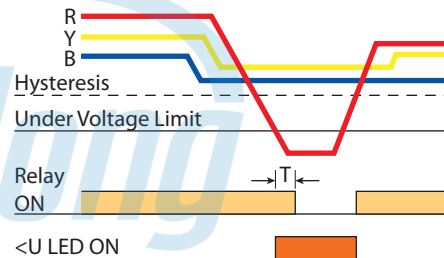


## Operations Diagram

i) Over Voltage Function\*\*



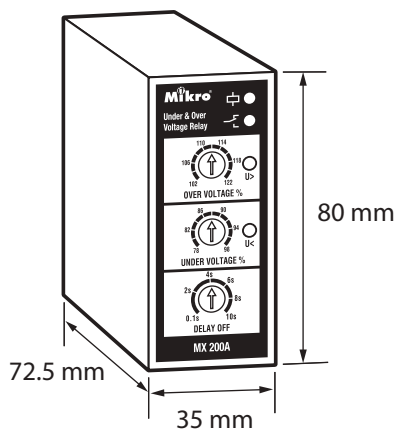
ii) Under Voltage Function\*



## 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 relay test set and injecting a reference voltage 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 relay.

## Case Dimensions



## Ordering Information

MODEL	FUNCTION		Supply Voltage VAC
	Under Voltage Monitoring	Over Voltage Monitoring	
MX160A - 380	YES	NO	380
MX160A - 400	YES	NO	400
MX160A - 415	YES	NO	415
MX180A - 380	NO	YES	380
MX180A - 400	NO	YES	400
MX180A - 415	NO	YES	415
MX200A - 380	YES	YES	380
MX200A - 400	YES	YES	400
MX200A - 415	YES	YES	415