



# MU250 150

## Product Description

MU150 and MU250 are voltage relays that combine various protections and starting delay. MU150 is used for single-phase monitoring while MU250 is used for 3-phase monitoring.

## Features

- Microprocessor based numerical relay
- Undervoltage
- Overvoltage
- Delay-on
- 2 voltage-free output contacts
- Voltage and frequency display
- ANSI Code : 27, 47, 59, 60

## Features For MU 250 only

- 3-Phase
- Unbalance
- Phase loss
- Phase sequence
- With or without neutral connection
- Phase to phase or phase to neutral monitoring

## Technical Data

### SETTING RANGES

Undervoltage	: 1% to 25%
Time delay for undervoltage	: 0.1s to 30s
Overvoltage	: 1% to 20%
Time delay for overvoltage	: 0.1s to 30s
Start time delay	: 0s to 999s

### For MU250 only:

Unbalance	: 3% to 20%
Time delay for unbalance	: 0.1s to 30s
Phase loss	: Fixed time <0.1s
Phase sequence	: Fixed time <0.1s

### POWER SUPPLY INPUT

#### Input voltage:

MU150	: 220 V(-25%) to 240 V(+20%) AC (Phase-Neutral)
MU250	: 380 V(-25%) to 415 V(+20%) AC (Phase-Phase)

Supply frequency: 45 Hz to 65 Hz

#### Maximum power consumption:

MU250	: 3VA
MU150	: 2.5VA

### OUTPUT CONTACTS

Rated voltage	: 250 V AC
Contact rating	: 5 A
Expected electrical life	: 100,000 operations at rated current
Expected mechanical life	: 5 x 10 <sup>6</sup> operations

### INDICATORS

Auxiliary supply	: Green indicator
Pickup indicator	: Red indicator
Trip	: 7-segment display and red LED indicators

### ACCURACY

Protection thresholds	: ± 3%
Time delay	: 0 to 0.5s, ± 15% with minimum 40ms
Measurements	: 0.6s and above, < ± 3%
	: ± 3%

### ENVIRONMENTAL CONDITIONS

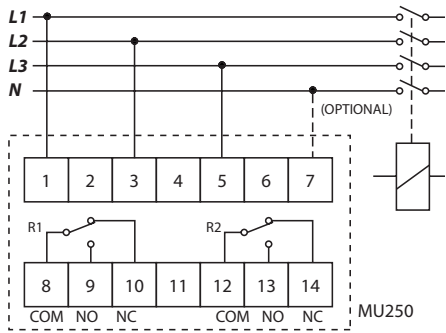
Temperature	: -5°C to +55°C
Humidity	: 56 days at 93% RH and 40°C non-condensing

### MECHANICAL

Mounting	: DIN rail
Dimension (mm)	: 71(w) x 85(h) x 70(d)
Approximate weight	: 0.4 kg

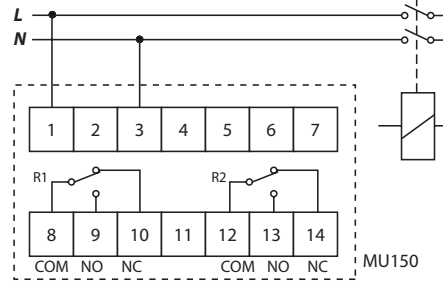
### Typical Application Diagrams

#### MU250

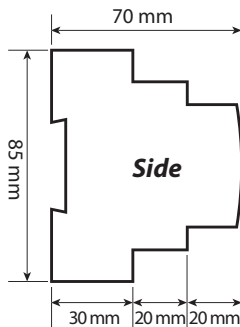
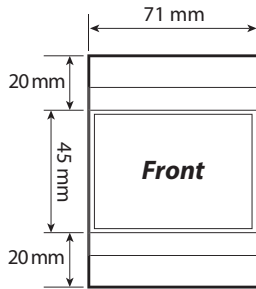


(Neutral connection is optional)

#### MU150



### Case Dimensions



### Ordering Information

MODEL	DESCRIPTION
MU150-240V	Single-Phase, 220/230/240 V AC, 45-65 Hz power supply
MU250-415V	3-Phase, 380/400/415 V AC, 45-65 Hz power supply

\* MU250-240V model available upon special request