



MU250 3-phase



MU150 Single-phase

# **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.



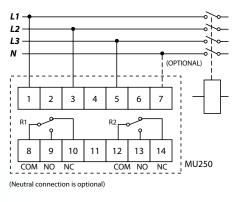
- Microprocessor based numerical relay
- Undervoltage
- Overvoltage
- Delay-on
- 2 voltage-free output contacts
- Voltage and frequency display

# Features For MU250 only

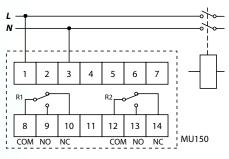
- 3-Phase
- Unbalance
- Phase loss
- Phase sequence
- With or without neutral connection
- Phase to phase or phase to neutral monitoring

### **TYPICAL APPLICATION DIAGRAMS**

#### MU250



MU150





Moving Technology

# **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: 220V(-25%) to 240V(+20%) AC (Phase-Neutral)

 : MU250: 380V(-25%) to 415V(+20%) AC (Phase-Phase)

 Supply frequency
 : 45Hz to 65Hz

 Maximum power consumption
 : MU250: 3VA

 : MU150: 2.5VA

: Change-over

: Silver alloy

: 5A, 250V AC (cos φ=1)

: 5 X 10<sup>6</sup> operations

: Green LED indicator

: Red LED indicator

: Din rail mounted

: MU150: 0.27kg : MU250: 0.31kg

: 100,000 operations at rated current

: 7-segment display and red LED indicators

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#### **CONTACTS**

Contact arrangement Contact rating Contact material Expected electrical life Expected mechanical life

#### **INDICATORS**

Auxiliary supply Pickup indicator Trip

## MECHANICAL

Mounting Approximate weight

### ACCURACY

Protection thresholds Time delay

Measurements

### **ENVIRONMENTAL CONDITIONS**

Temperature Humidity : -5 C to +55 C

:±3%

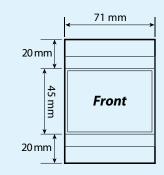
: ± 3%

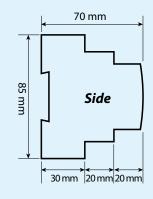
: 56 days at 93% RH and 40 C non-condensing

: 0 to 0.5s,  $\pm$  15% with minimum 40ms

: 0.6s and above,  $< \pm 3\%$ 

#### **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

