



MU2300

Features

- Multifunction numerical voltage protection relay
- Low-set undervoltage stage ($U<$) with definite-time or inverse-time characteristic
- High-set undervoltage stage ($U<<$) with definite-time
- Low-set overvoltage stage ($U>$) with definite-time or inverse-time characteristic
- High-set overvoltage stage ($U>>$) with definite-time
- Negative sequence overvoltage protection ($U_2>$) with definite-time or inverse-time characteristic
- Neutral displacement / residual overvoltage protection ($U_0>$) with definite-time or inverse-time characteristic
- Can be used in single-phase or three-phase operation
- Multi-function isolated digital input with wide input voltage range
- Fault record and event code recording
- Five programmable voltage-free output contacts
- Isolated RS485 Modbus - RTU communication
- ANSI Code : 27, 47, 59, 60

Introduction

The MU2300 is a microprocessor based numerical relay for voltage protection functions in electrical distribution network.

Technical Data

INPUTS

Measuring input:

Rated voltage input : 57 ~ 130 V
Rated frequency : 50 / 60 Hz

Rated auxiliary voltage:

Model MU2300-150D : 24 ~ 150 V DC
Model MU2300-240AD : 85 ~ 265 V AC
110 ~ 340 V DC

Power consumption:

AC auxiliary voltage : 6 ~ 10 VA typical
DC auxiliary voltage : 5 ~ 9 W typical

Binary Input:

External binary input : 85 ~ 265 V AC/DC

COMMUNICATION

RS485 Modbus - RTU

OUTPUT CONTACTS

5 programmable contacts + 1 IRF contact:

Rated voltage : 250 V AC / DC
Continuous carry : 5 A
Make and carry for 0.2 s : 30 A
Expected electrical life : 100,000 operations at rated current
Expected mechanical life : 5×10^6 operations

UNDER-VOLTAGE ELEMENT

Low set setting $U<$: 5 - 130 V
High set setting $U<<$: 5 - 130 V
Time multiplier, TMS : 0.5 - 100
Low set Definite time $tU<$: 0 - 600 s
High set Definite time $tU<<$: 0 - 600 s

OVER-VOLTAGE ELEMENT

Low set setting $U>$: 5 - 200 V
High set setting $U>>$: 5 - 260 V
Time multiplier, TMS : 0.5 - 100
Low set definite time $tU>$: 0 - 600 s
High set definite time $tU>>$: 0 - 600 s

NEGATIVE SEQUENCE OVER-VOLTAGE ELEMENT

Negative sequence over-voltage setting, $U_2>$: 5 - 200 V
Time multiplier, TMS : 0.5 - 100
Negative sequence over-voltage definite time $tU_2>$: 0 - 600 s

RESIDUAL OVER-VOLTAGE ELEMENT

Residual over-voltage setting, $U_0>$: 0.5 - 130 V
Time multiplier, TMS : 0.5 - 100
Residual over-voltage definite time $tU_0>$: 0 - 600 s

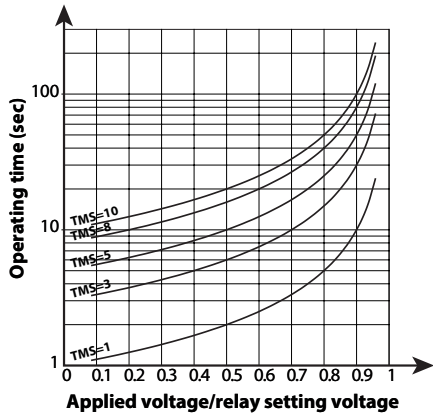
ENVIRONMENTAL CONDITIONS

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

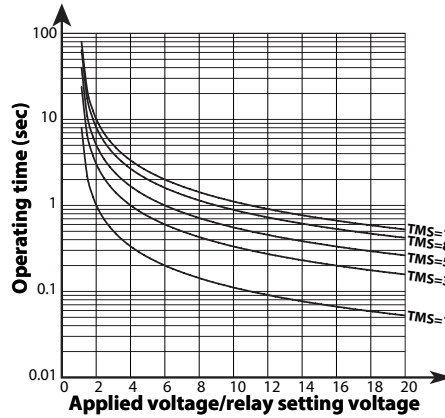
MECHANICAL

Mounting : Panel mounting
Dimension (mm) : 142(w) x 165(h) x 198(d)
Enclosure protection : IP54 at the panel
Approximate weight : 2.7 kg

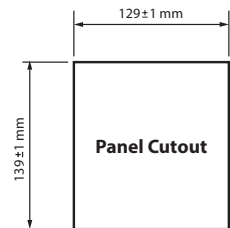
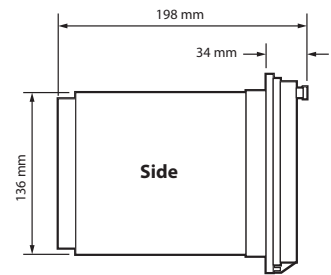
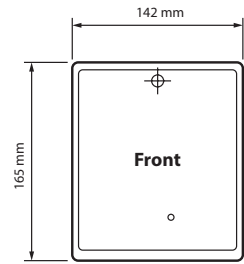
Undervoltage Characteristic



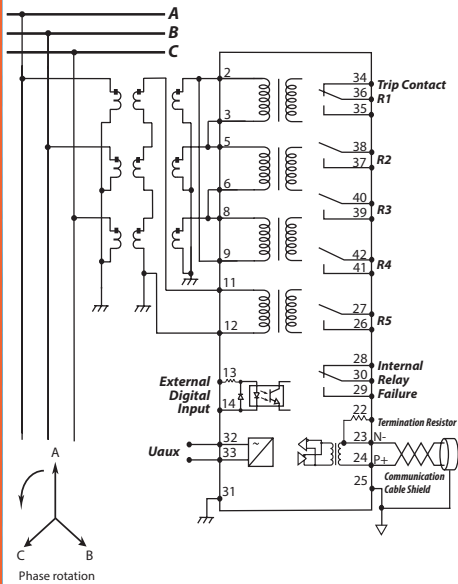
Overvoltage Characteristic



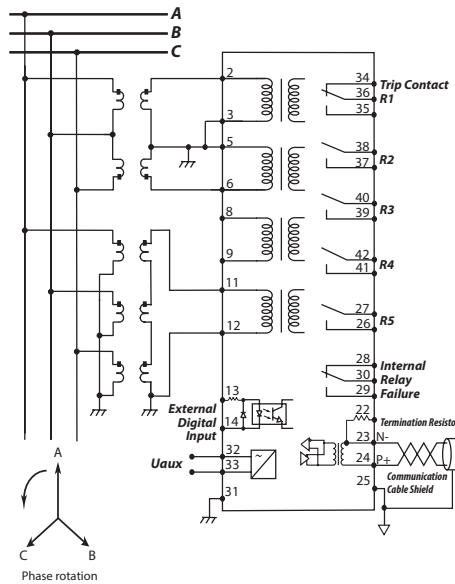
Case Dimensions



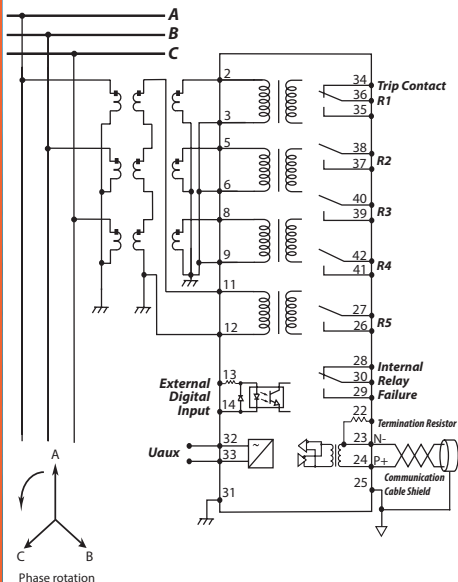
Typical Application Diagrams



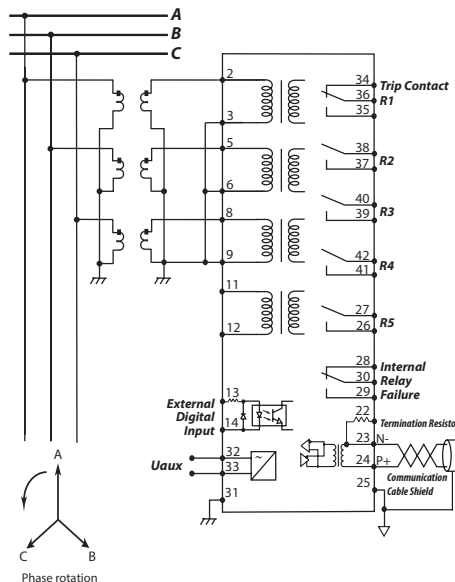
3V_{p-p} + V_{residual} connection



2V_{p-p} + V_{residual} connection



3V_{p-n} + V_{residual} connection



3V_{p-n} connection

Ordering Information

MODEL	DESCRIPTION
MU2300-150D	For 50 / 60 Hz system, auxiliary voltage 24 ~ 150 V DC
MU2300-240AD	For 50 / 60 Hz system, auxiliary voltage 85 ~ 265 V AC or 110~340 V DC