

# Operating Instructions for CA17TU00 Series Voltage Monitor Relay

# CA17TU00

## Function Features

- Controls its own supply voltage (TrUs RMS measurement).
- Set 8-level rated operating voltage through knob.
- The relay is only 18mm wide.
- Voltage measurement accuracy < 1%.
- Control status is indicated by a LED.
- The relays are designed for clip-on mounting on 35mm rail.

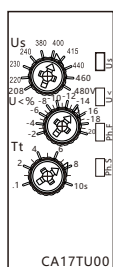
## Applications

- Control for connection of moving equipment (site equipment, agricultural equipment, refrigerated trucks).
- Control for protection of persons and equipment against the consequences of reverse running.
- Normal/emergency power supply switching.
- Protection against the risk of a driving load (phase failure).

## Technical Parameters

Rated control supply voltage	208...480V AC 3phases 3wire 50/60Hz
Working voltage range	60...600V AC
Threshold adjustment voltage	2%...20% of Un selected
Adjustment of asymmetry threshold	5%...15%
Hysteresis	2%
Time delay	Adjustable 0.1s...10s, 10%
Run up delay at power up	0.5s time delay
Reset delay	1s
Measurement error	< 1% over the whole range with voltage variation
Knob setting accuracy	1% of scale value
Rated insulation voltage	600V
Type and set of contacts	15 ——— 16 18
Utilisation category	AC-15
Contact capacity	Ith: 8A; Us/le: 250V/8A 415V/4A
Electrical durability	100000 cycles
Mechanical durability	1000000 cycles
Pollution degree	3
Degrees of protection	IP20
Uimp	4kV
SCPD	NT00-16A
Power consumption	<= 1.5W
Storage temperature	-25...55°C, up to 70°C in a short time (24h)
Permissible relative humidity	<= 50% (40°C) (No condensation)
Operation temperature	-5...40°C
Height above sea level	<= 2000m
Installation	Screw mounting or DIN rail mounting

## Panel Diagram



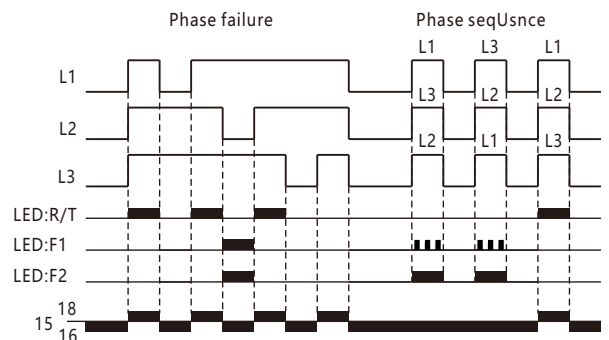
- R/T : Relay output and time delay LED.
- U> : Over Voltage
- U< : Under Voltage
- Asy : Voltage Asymmetry
- Ph.S : Phase Sequence Error
- Ph.F : Phase Failure
- U>/U< : Over Voltage Or Under Voltage

## Description of Function diagram and LED

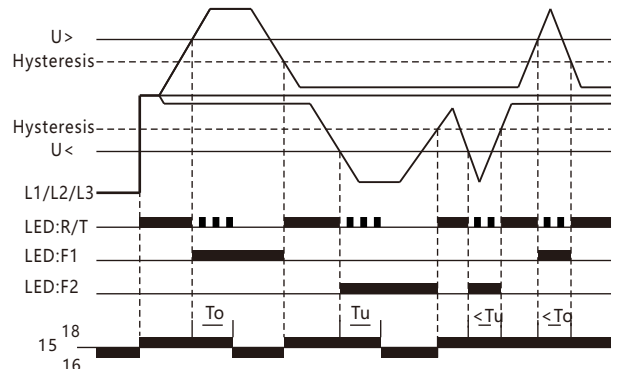
### LED functions

Function	LED	Set Error
Output relay energized	R/T	
Ph.F		
Ph.S		
Asy		
U>		
U<		
U>/U< : U>		
U>/U< : U<		

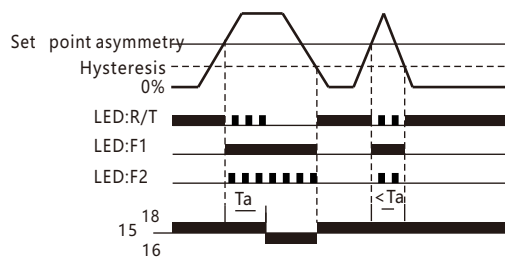
### Phase failure and phase sequence function diagram



### Overvoltage and undervoltage function diagram



### Asymmetry function diagram

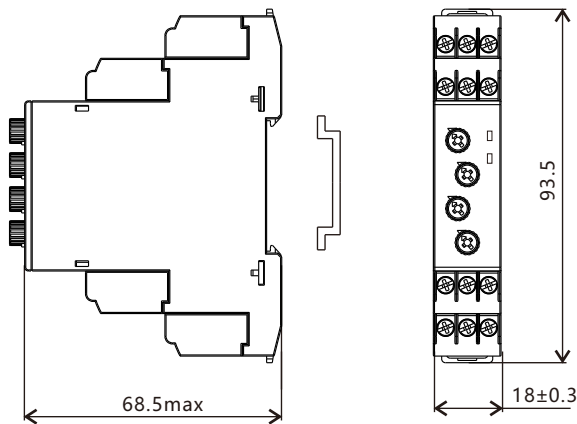


- To: Overvoltage threshold tripping delay.
- Tu: Undervoltage threshold tripping delay.
- Ta: Asymmetry threshold tripping delay.

## □ Operating Instructions

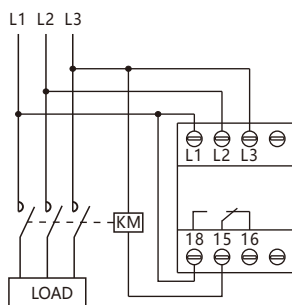
1. Set the rated voltage range control knob.  
The position of this knob is only taken into account on energization of the device. If the switch position is changed while the device is operating, all the LEDs flash, but the product continues to operate normally with the voltage selected at the time of energization preceding the change of position.  
The LED's return to their normal state if the switch is returned to the original position selected prior to the last energization.
2. Set operation threshold value.
3. Set the time delay interval to 0.1s...10s so as to prevent operation in case of transient fault.
4. In case of voltage failure, the relay would be disconnected at the expiration of set time delay interval.
5. If the relay detects voltage failure during electrification, the output relay would be kept in off-state.
6. The measured voltage  $U < U_n * 70\%$  indicates open phase fault, and the minimum open phase voltage is 84V.
7. When DV5-03 phase sequence is correct, the output relay would close and the R/T LED would go ON at input voltage ( $> 151V$ ); when DV5-03 detects phase sequence error and the failure of one or more phases, the output relay would be disconnected, and the R/T LED does not go ON.
8. In case of open phase fault at power input terminals L1 and L2, the function LED would not make indication.

## □ Overall Dimensions



## □ Wiring Diagram

### ○ 3 phase 3 wire



## ⚠ Warning

1. This product shall be installed, operated and maintained by professional personnel.
2. Whether or not the product functions normally, user shall not dismantle or repair the said product without permission, and we shall not assume any responsibility for the accident as a result thereof.
3. Please refer to the wiring diagram in Operation Instructions when arranging wires.
4. Never place power input line in the same conduit with other wires with heavy current. Please use shielded wire if necessary so as not to bring about interference that may influence the normal operation of relay.
5. Do not use this product in areas with dust, corrosive gases and with exposure to direct sunlight and rain.
6. Never use this product in medium with explosion hazard and with gases that may corrode metals and destroy the insulation, and do not use this product in a space with conductive dust.
7. Please store and use this product at rated supply voltage and stated temperature, height above sea level and humidity.
8. Failure to follow these instructions can result in death, serious injury, or equipment damage.
9. The warranty period of this product shall be 18 months under normal use.