NON POWER FAILURE 24 HOURS TIME SWITCH TB-17N SERIES

SPECIFICATIONS

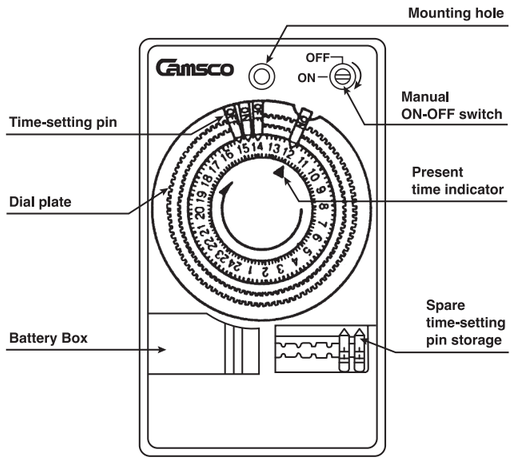
Model No.	TB-17N / TB-17NB
Movement type	AC - type
Rated Voltage	100 - 240V
Voltage Tolerance	85 - 264V
Frequency	50/60Hz Common Use
Movement	Quartz
Power Consumption	110V AC 1W, 220V AC 2W
Back up Power	150 Hours
Ambient Temperature	-10°C ~ +50°C
Resistive Load	250V AC 20A
Lamp Load	10A
Inductive Load	12A (cosø=0.7 or more)
Motor Load	110V AC 750W, 220V AC 1500W
Minimum Setting Unit	15 minute units
Minimum Setting Interval	30 minutes
No. of ON-OFF Operations	Stand 6 operation
Dimensions(mm)	Max. 48 operations are possible 123 x 72 x 51 / 164 x 97 x 58

TB-17N

TB-17NB
(TB-17N WITH METAL CASE)

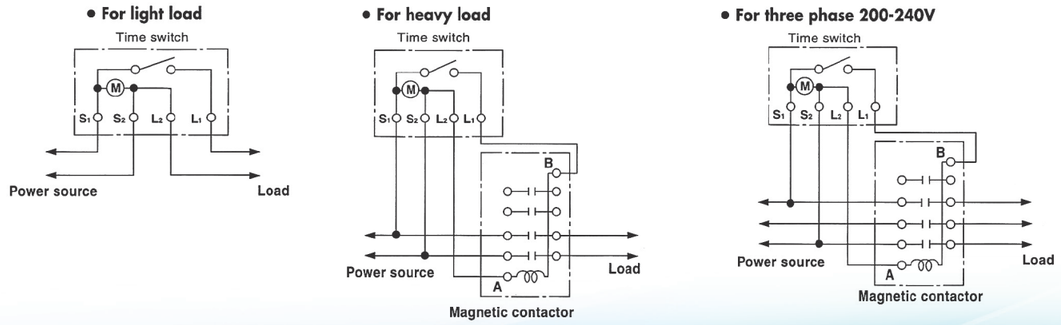
CAUTIONS

1. For the first time, please charge battery first for 10 minutes before use.
2. To set the correct time, turn the dial in the direction of the arrow (clockwise) and set the present time.
3. Please observe the rated voltage and voltage tolerance of the time switches for adequate use.
4. If the load capacity exceeds the rating, an electromagnetic switch is required.
5. Do not use the time switch where:
   - the ambient temperature goes below -10°C or above +50°C
   - there is much dust
   - there is much moisture
   - outdoors or where it will be exposed to rain or water
   - there is much vibration



WIRING CONNECTION DIAGRAM

When the time switch is used for loads exceeding the rated capacity, it is imperative that the time switch be used in combination with one or more magnetic contactors according to each load.



When the time switch is used with a heater, it is imperative that the load circuit be protected by a thermo-switch.

VOLTAGE & CURRENT PROTECTION RELAY VA-P1

SINGLE PHASE

MAIN FEATURES

- MULTI-FONCTION INDICATOR: V, A. (ONLY AC TYPE MIN. 0.5A) P (ACTIVE POWER), HZ DISPLAYS
- UNDER VOLTAGE & OVER VOLTAGE PROTECTION
- OVER CURRENT PROTECTION

TECHNICAL DATA

- OVER VOLTAGE: AC/DC 270V (130V~300V ADJUSTABLE)
- UNDER VOLTAGE: AC/DC 170V (80V~210V ADJUSTABLE)
- VOLTAGE TRIP DELAY: 0.5S (0.1S~10S ADJUSTABLE)
- VOLTAGE HYSTERESIS: 5V ADJUSTABLE (P4/P11 SETUP)
- OVER CURRENT: AC 63A (1~63A ADJUSTABLE)
- CURRENT TRIP DELAY: 0.5S (0.1S~10S ADJUSTABLE)
- UNDER AUTOMATIC RESET FUNCTION (P16 SETUP):

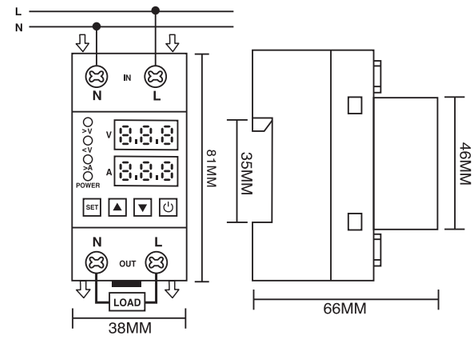
★ NUMBER OF CONTINUOUS OVER CURRENT PROTECTION (P11 SETUP)

- CURRENT FAILURE:

★ START THE RELAY AFTER MANUAL RESET (PRESS KEY ⏻)

- RATED FREQUENCY: 50/60 Hz
- AMBIENT TEMPERATURE: -5°C ~ +55°C

WIRING DIAGRAM

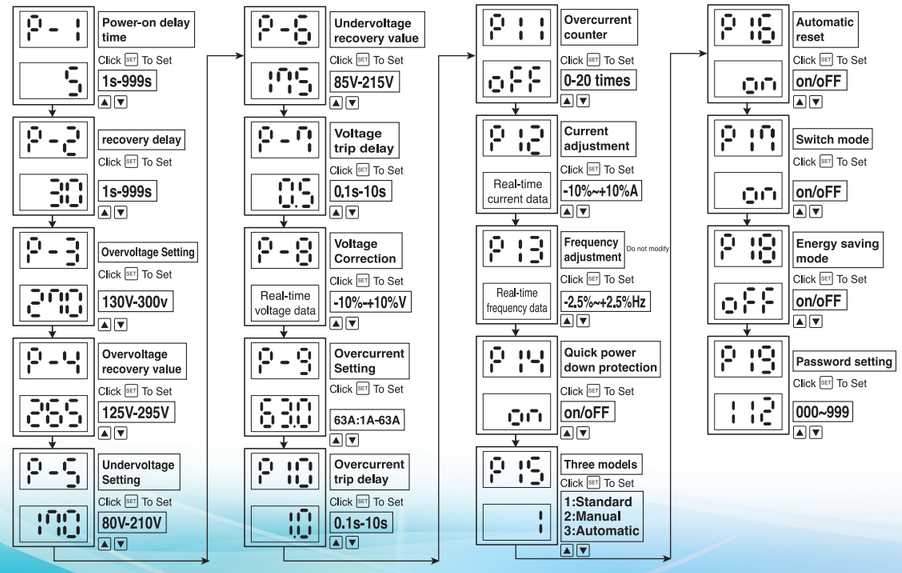


SETTING INSTRUCTIONS

- Long press the down "SET" keys for 5s enter the SET state. Press the UP and DOWN keys to modify the over voltage, under voltage, current. press the SET key to save.

SET	Menu selection
▲	Digit+/Up
▼	Digit+/Down
⏻	ON/OFF

PARAMETER SETTING



Notes

Under DC power, only the voltage is displayed, and current is not shown. In parameter P15, there are three display modes: Mode 1 (Standard) shows parameters P1-P19; Mode 2 (Manual) allows the user to press the ▲ or ▼ button to manually view voltage (-U-), power (-P-), current (-A-), and frequency (-H-); Mode 3 (Automatic) will automatically display voltage (-U-), power (-P-), current (-A-), and frequency (-H-) in sequence. For parameter P19 (Password), the initial password is set to 112. After changing the lock parameter, the password may be reset. To unlock, the parameter must be restored to the initial password (112).

VOLTAGE & CURRENT PROTECTION RELAY VA-P3

3Φ 4W

MAIN FEATURES

- UNDER VOLTAGE & OVER VOLTAGE PROTECTION
- OVER CURRENT PROTECTION
- PHASE SEQUENCE PROTECTION
- THREE PHASE VOLTAGE UNBALANCE PROTECTION

TECHNICAL DATA

- OVER VOLTAGE(L-N): AC 270V (130V~300V ADJUSTABLE)
- UNDER VOLTAGE(L-N): AC 170V (80V~210V ADJUSTABLE)
- VOLTAGE PROTECTION ACTION DELAY: 0.5S (0.1S~10S ADJUSTABLE)
- VOLTAGE HYSTERESIS: 5V ADJUSTABLE (P4/P6 SETUP)
- THREE PHASE VOLTAGE UNBALANCE VALUE: 50V L-N (20V~100V ADJUSTABLE)
- THREE PHASE VOLTAGE UNBALANCE RECOVERY VALUE: 20V L-N (5V-95V ADJUSTABLE)
- OVERCURRENT:63A (1~63A ADJUSTABLE)
  1. NUMBER OF CONTINUOUS OVER CURRENT PROTECTION (P14 SETUP)
  2. CURRENT FAILURE: START THE RELAY AFTER MANUAL RESET (PRESS KEY ⏻)
- AMBIENT TEMPERATURE: -5°C ~ +40°C

SETTING INSTRUCTIONS

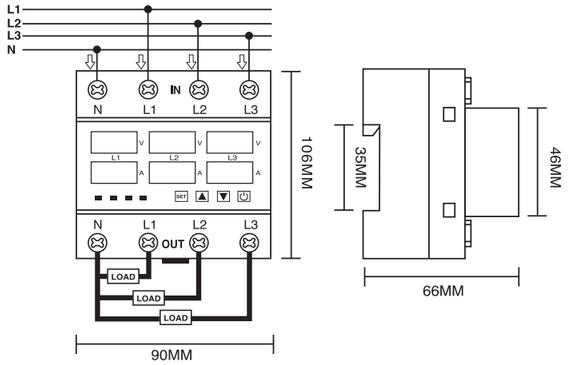
- Long press the down "SET" keys for 5s enter the SET state. Press the UP and DOWN keys to modify the over voltage, under voltage, current. press the SET key to save.

SET	Menu selection
▲	Digit+/Up
▼	Digit+/Down
⏻	ON/OFF

PARAMETER SETTING

- If a voltage fault is detected during the relay's reset/ start delay count, the output relay turns on and the fault indicating LED lights up
- The operating voltage and current values will be displayed on the screen when the relay is operating normally. If a voltage or current fault is detected, the output relay turns on and the fault indication LED lights up
- Voltage failure: If the input voltage is detected to trip back to Hys after a voltage failure; During counting the relay will automatically reset reset/start delay fault indicator light off working voltage and current value flashing screen
- Current failure: When the relay fails due to current trip, it will reset automatically. Reset/start delay during counting, failure indicator LED off operating voltage and current value flashing on the screen.

WIRING DIAGRAM



PARAMETER SETTING

Set character	Technical parameter	Set range	Default value	Step forward	Function description
P-1	Power-on delay time	1s-600s	5s	1s	The time required after the external power supply is cut off is used Power on when power is restored.
P-2	Protection recovery delay	1s-600s	30s	1s	After voltage and current recovery, automatic resetTime required
P-3	Overvoltage protection value	230V-300V	270V	1V	When the voltage is above the set value. The protector will cut broken line
P-4	Overvoltage recovery value	225V-295V	265V	1V	The protector will be automatic when the voltage falls below the set value Reset, and the value must be less than the overcharge Voltage protection value greater than 5V
P-5	Under voltage protection value	120V-210V	170V	1V	When the voltage falls below the set value, the protector willCut the line.
P-6	Undervoltage recovery value	125V-215V	175V	1V	The protector will be automatic when the voltage is higher than the set value Reset, the set value must begreater than the undervoltage protection voltage The pressure is over 5V
P-7	Voltage protection action delay	0.1s-10s	0.5s	0.1s	When the voltage is below or above the set value, the protection action The time required to do it
P-8	Three-phase voltage unbalance value	20V-100V	50V	1V	When the error ratio between the three phase voltage is set if the value deviates, the protector will cut the line
P-9	Three-phase voltage unbalance recovery value	5V-95V	20V	1V	When the three-phase voltage unbalance value is less than set value, The protector will reset automatically
P10	Three-phase voltage calibration	-9.5V~9.5V	0V	1V	Correct three-phase voltage error
P11	Phase-sequence switch	On / off	ON		Three-phase voltage sequential protection
P12	Overcurrent protection value	1~63A	63A	1A	Protector when the current is higher than the set value will cut the line
P13	Overcurrent protection operation time	0.1s~10s	0.5s	0.1s	When the current is higher than the set value, the protection movesThe time required to do it
P14	Number of continuous overcurrent protection	0~20	OFF	1	When the number of consecutive passes
P15	Three phase current error value	-9.5A~9.5A	0	1	Correct the three phase current error value

AUTOMATIC CHANGEOVER SWITCH ACS-VP1

MAIN FEATURES

- AUTOMATIC CHANGEOVER SWITCH
- UNDER VOLTAGE & OVER VOLTAGE PROTECTION
- OVER CURRENT PROTECTION

TECHNICAL DATA

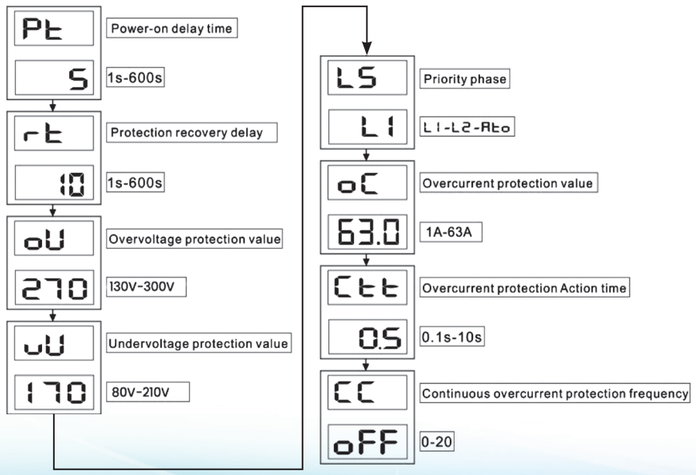
- OVER VOLTAGE: AC 270V (AC 130V~300V ADJUSTABLE)
- UNDER VOLTAGE: AC 170V (AC 80V~210V ADJOSTABLE)
- VOLTAGE HYSTERESIS: 5V
- OVER CURRENT PROTECTION: 1-63A ADJUSTABE
  1. NUMBER OF CONTINUOUS OVER CURRENT PROTECTION (CC SETUP)
  2. CURRENT FAILURE: START THE RELAY AFTER MANUAL RESET (PRESS KEY ⏻)
- AMBIENT: -5°C ~ +40°C

SETTING INSTRUCTIONS

- Long press the down "SET" keys for 5s enter the SET state. Press the UP and DOWN keys to modify the over voltage, under voltage, current. press the SET key to save.

SET	Menu selection
▲	Digit+/Up
▼	Digit+/Down
⏻	ON/OFF

PARAMETER SETTING



WIRING DIAGRAM

- STANDING POWER (PRIORITY PHASE)/ BACK UP POWER (SETUP L5)
- WHEN A POWER OUTAGE: OVER VOLTAGE OR UNDER VOLTAGE; FAILURE OCCURS IN THE STANDING POWER, ACS-VP1 WILL SWITCH FROM THE STANDING POWER SUPPLY TO THE BACKUP POWER SUPPLY TO CONTINUE SUPPLYING POWER.
- WHEN THE STANDING POWER SUPPLY RETURNS TO NORMAL, ACS-VP1 WILL SWITCH FROM THE BACKUP POWER SUPPLY TO THE STANDING POWER SUPPLY.