

# Intermatic T51211BC and T51311BC wiring

T50000 series are 120Volt timers that can be wired many ways.

There are three or four internal relays, and each relay has NO and NC terminals.

One or two internal relays are controlled by timer dial trippers, and other relays are controlled by dawn-dusk photo eye.

Below is basic example of 120Volt wiring application, and then installer can test terminals and experiment with knob settings, and tripper settings.

<http://www.intermatic.com/products/ec%204%20layer/mechanical%20time%20switches/24%20hour%207%20day/t50000%20series%207-day%20time%20switch.aspx>

## 1) Typical wiring project can have 4 electrical cables:

- one cable from circuit breaker box;
- one cable going to photo control;
- one cable going to outdoor Load (lite);
- one cable going to indoor Load (lite).

## 2) 120Volt cable from circuit breaker has 2 wires:

- Black Hot wire connects to terminal 1
  - White Neutral connects to terminal 2
- This will power clock motor and timer relays.

## 3) Photocell has 3 wires:

- Black connects to terminal 1
- White to terminal 2
- Red to terminal 3.

Photocell turns relay on-off, and reverses NO and NC contacts with dawn and dusk operation.

Do not mix different size wires under same screw terminal, or smaller wire will come loose over time. Also do not mix stranded wire and solid copper under same screw terminal for same reason.

## 4) Terminals 4 thru 12 are 'dry'.

Dry terminals receive no power when power is applied to terminals 1 and 2.

To put power on dry terminals, so that Load will have power, attach Black hot wire from breaker to terminals 6, 9 and 12.

So add a jumper wire from terminal 1 to terminal 6, and another jumper wire from 6 to 9, and another jumper wire from terminal 9 to terminal 12.

120Volt power is now connected to terminals 1, 6, 9 and 12

## 5) Circuit B is dawn to dusk for outdoor Load.

Outdoor load cable has Black and White wire.

Connect outdoor Black wire to either terminal 10 or 11.

To test which is correct for your application, set switch to Auto, and then test across terminals 12 and 11, and across terminal 12 and 10. Repeat test after dark. Rotate knob B to each position and repeat test.

Connect outdoor White wire to terminal 2, and this will complete the circuit.

## 6) Circuit A is Dusk ON and timer OFF for indoor load.

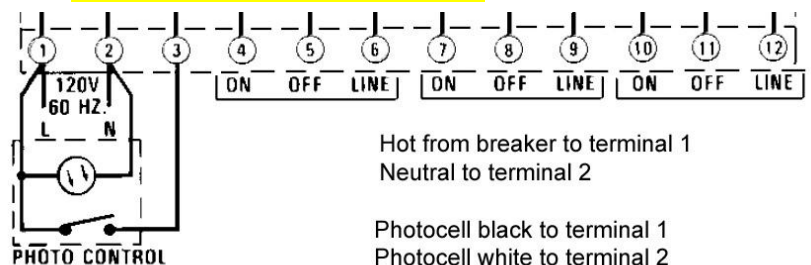
Indoor cable has Black and White wire.

Connect indoor Black wire to either terminal 7 or 8.

To test which is correct for application, set switch to Auto, and then test across terminals 9 and 8, and across terminal 9 and 7. Repeat test after dark. Rotate knob B and repeat test.

Connect outdoor White wire to terminal 2, and this will complete the circuit.

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Hot from breaker to terminal 1  
Neutral to terminal 2

Photocell black to terminal 1  
Photocell white to terminal 2  
Photocell red to terminal 3