

INDOOR/OUTDOOR TIME SWITCH



MULTI-VOLT

Instructions for models 59401 and 59402

APPLICATION

The Time Switches are universal electromechanical time switches which can be *field configured* for various power supply voltages. The voltage options include 120VAC, 208/240VAC and 277VAC— all within the same unit! Selection of the desired supply voltage is easily achieved by configuring the DIP switches (see diagram below). The mechanism is mounted in a NEMA indoor or outdoor enclosure and is intended for the control of lighting, heating, air conditioning, pumps, motors, or general electrical circuits in residential, commercial, industrial and agricultural facilities.

SPECIFICATIONS

Input Voltage: 120 VAC, 208/240 VAC, or 277 VAC in all units based upon DIP switch configuration.

Switch Rating: SPST and DPST Models

RATINGS:

Normally Open Contacts

- 40A Resistive, 120-277Vac.
- 30A General Purpose, 120-277Vac.
- 20A Resistive, 30Vdc
- 1 HP, 120Vac ; 2HP, 240Vac
- 20A Ballast, 120-277Vac.
- 15A Tungsten, 120Vac
- 800VA, Pilot Duty, 120Vac.
- 720VA, Pilot Duty, 240Vac.
- TV-5, 120Vac

ENVIRONMENTAL RATINGS

Ambient Temperature: -40°F to 130°F

Humidity: 0-95% RH, Non-condensing

WIRING CONNECTIONS

Screw clamp terminal for up to 2 #8 AWG wires per position.

INSTALLATION

WARNING: INSTALLATION SHOULD BE MADE BY A LICENSED ELECTRICIAN.

CAUTION: Before wiring or service, power to this time switch and the equipment it controls must be turned off. Turning off the time switch only will NOT prevent a shock hazard. Replace cover plate within housing before supplying power to time switch. Installation should be performed by a licensed electrician only. Before installing this product read all instructions carefully.

Remove protective cover panel within time switch housing by removing screws located above timer face and at the bottom of the cover panel.

WIRING CONNECTIONS:

Screw clamp terminals for supply connections, use 8 AWG or larger suitable for at least 105°C (221°F) per position.

LIGHTS

Power LED (Orange)

Light illuminates when power is applied to the timer.

Status LED (Green)

Light illuminates when power is supplied to load.

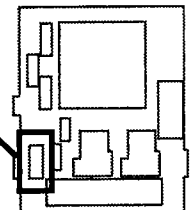
DIP SWITCH CONFIGURATION

WARNING: Failure to properly configure the DIP switch will result in damage to the unit and void the warranty! Before installing and wiring the Woods Time Switch, proper configuration must be selected. This is accomplished as follows:

INPUT VOLTAGE DIP SWITCH SETTING:

- Do not apply power to the timer prior to setting correct input voltage DIP switch.
- Determine the input voltage which will be applied to the timer (i.e. L1 and L2/N terminals, see wiring diagram on back side).
- Set the DIP switch according to the diagram below.

120VAC	208-240VAC	277VAC (Default)
4 ← ON	4 → OFF	4 → OFF
3 ← ON	3 ← ON	3 → OFF
2 ← ON	2 ← ON	2 → OFF
1 ← ON	1 → OFF	1 → OFF



NOTE: Unit is shipped with DIP switch for 277VAC input voltage.

CAUTION: Do not check circuits by "sparkling" wires to terminals. Damage to the timer may result.

⚠ WARNING

Risk of electric shock

- Shut off power at fuse box or circuit breaker box before installation
- Use indoors only

Risk of fire

- Do not use to control receptacle outlets
- Use copper wire only with this device

Do not exceed electrical ratings



Note: For outdoor locations (model 59401/59402 only), rain tight or wet location conduit hubs that comply with requirements of UL 514B (standard for fittings for conduit and outlet boxes) must be used.

1. Remove 2 screws retaining the interior cover panel and remove panel by prying out with a thin blade at the top.
2. Select knockouts to be used. Remove the inner (3/4") knockout by inserting a screwdriver in the slot and carefully punch knockout loose. Remove slug. If the 1" knockout is required, remove the outer ring with pliers after removing the 3/4" knockout. Smooth edges with knife if necessary.
3. Place enclosure in desired mounting location and mark the three mounting holes.
4. Drill holes for #10 screws, start screws in holes.
5. Place enclosure over screws and tighten screws.
6. Connect conduit hubs to conduit before connecting the hubs to the enclosure. After inserting hubs into enclosure, carefully tighten hub lock nut. Do not over-tighten.
7. Install in accordance with all applicable National and Local code requirements.
8. Replace interior cover panel and 2 screws.

GROUNDING: This enclosure is of plastic construction and does not require a ground connection and does not require bonding in pool applications.

This enclosure does not provide grounding between conduits. When using non-metallic conduit or cable, connect the ground wires of all cables together with a wire nut. When metallic conduit is used, use grounding type bushings and a jumper wire between each conduit.

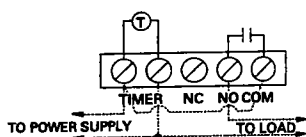
OPERATING INSTRUCTIONS:

When the Time Switch is installed and power applied, the timer's dial will turn clockwise maintaining time. The pointer on the face of the dial points to the current time.

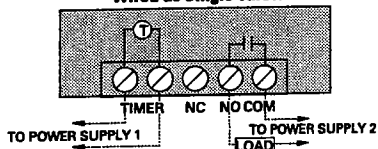
1. Locate the segments around on the outer edge of the timer's dial. These segments, each representing 15 minutes, can slide outward (try using the tip of a pen or pencil). Conversely, segments that have been slid outward can be easily slid back by hand. Be sure all segments are slid inward before programming. Select a time period (or periods) you want the device turned on, then slide outward ALL the segments that fall on or within that time period. For example, to have the timer turn a device on at 10PM and off at 2AM, slide outward the segments representing 10PM and 2AM, and ALL the segments in between. You may need to turn the dial clockwise to access the desired segments.
2. Rotate the timer's dial clockwise until the pointer on the face of the dial points to the current time of day. Note: Nighttime hours (from 6PM to 6AM) are linked with a black line.
3. Set master switch to the TIMER position.
4. To override timer program and control output load manually:
 - set master switch to OFF (center position) to turn load OFF
 - set master switch to ON (bottom position) to turn load ON
5. **Disconnect power at fuse box or circuit breaker before removing panel or servicing connected equipment.**
In case of power failure, reset the time of day as explained in step 2.

Typical Wiring Diagrams—SPST

Timer and Load, Same Voltage
Wired as Single Throw

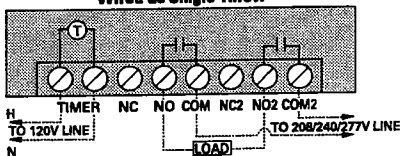


Timer and Load, Different Voltage
Wired as Single Throw

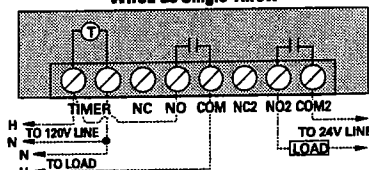


Typical Wiring Diagrams—DPST

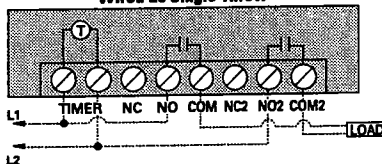
120V Timer, 200/240/277V Load Double Break
Wired as Single Throw



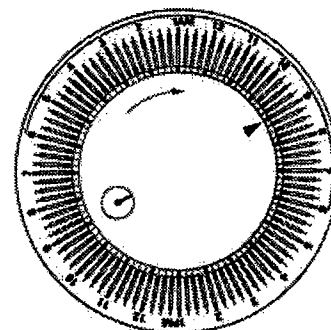
120V Timer, 120V Load and 24V Load
Wired as Single Throw



200/240/277V Timer, 200/240/277V Load, Double Break
Wired as Single Throw



Timer Dial



Shows timer set to turn device ON at 10 PM and OFF at 2 AM. Notice ALL segments between 10 PM and 2 AM have been pushed out. Current time is 9:00 PM.

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