

# INTERMATIC®

## MODEL ET1700 Series

### Installation and User Instructions

# Electronic 7-Day Time Switch

With Battery Carryover

#### ⚠ WARNING Risk of Fire or Electric Shock

- Disconnect power at the circuit breaker(s) or disconnect switch(es) before installing or servicing.
- Installation and/or wiring must be in accordance with national and local electrical code requirements.
- For outdoor locations or wet locations (rain-tight), conduit hubs that comply with requirements of the UL514B (standard for fitting conduit and outlet boxes) are to be used.
- This enclosure does not provide grounding between conduit connections. When metallic conduit is used, you must also install grounding type bushings and jumper wire.
- For plastic enclosures, bonding between conduit connections is not automatic and must be provided as part of the installation.
- Use #18 - #10 AWG wires, rated at least 75°C - COPPER conductors ONLY.
- If the power disconnect point is out of sight, lock it in the OFF position and tag it to prevent unexpected application power.
- Make sure there is no wire insulation under the terminal plate on the time switch connector. Firmly tighten terminal screws.
- Do not remove insulator that is covering terminals.
- KEEP DOOR CLOSED AT ALL TIMES when not servicing.

#### NOTICE

- Do NOT touch circuit board components, contact can create a static discharge, which can damage the microprocessor.

#### Description

The Intermatic ET1700 Series Electronic 7-Day Time Switch automatically switches loads to a preset weekly schedule with to-the-minute accuracy.

The independent 7-day programming provides complete flexibility for applications where load switching differs each day of the week.

Use the ET1700 series as an ON/OFF timer in applications requiring 7-day load control such as lighting, air conditioning systems, pumps, etc. Each load output of the Time Switch can support up to 14 timed ON and 14 timed OFF events per day. The program can be overridden by pushing the ON/OFF load override button(s).

The ET1700 Series Time Switch is designed to directly switch tungsten or ballast loads up to its rating, and inductive or resistive loads up to 30A at 120, 208, 240, or 277 VAC.

#### Specifications

##### Time Switch

- Input Voltage: 120/208/240/277 VAC, 60 Hz
- Power Consumption: 6.0 W Max.
- Contact Configuration: SPST (ET1705C), DPST (ET1725C), and SPDT (ET1715C). See wiring diagrams on next page.

##### Switch Ratings—ET1705C, ET1725C (per pole)

- 30 A Inductive/Resistive, 120/240 VAC, 60 Hz
- 20 A Ballast, 120-277 VAC, 60 Hz
- 20 A Resistive, 28 VDC
- 5 A Tungsten: 120/240 VAC, 60 Hz
- 1 HP, 120 VAC, 60 Hz
- 2 HP, 240 VAC, 60 Hz

##### Switch Ratings—ET1715C (NO/NC) Normally Open/Normally Closed Contact

- 20 A/10 A Inductive/Resistive, 120/240 VAC, 60 Hz
- 20 A/3 A Ballast, 120-277 VAC, 60 Hz
- 5 A Tungsten: 120/240 VAC, 60 Hz
- 1 HP / ¼ HP, 120 VAC, 60 Hz
- 2 HP / ½ HP, 240 VAC, 60 Hz

**Set Points (Events)**—Each load output of the Time Switch can support up to 14 timed ON and 14 timed OFF events per day.

**Battery-Powered Clock Operation**—3 years minimum (uses 2 AAA industrial grade alkaline batteries, supplied)

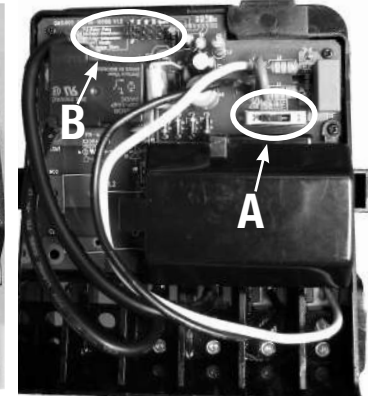
**Minimum ON or OFF time**—1 minute

**Maximum ON or OFF time**—6 days, 23 hours, 59 minutes

**Shipping Weight**—2.5 lb. (1.1 kg)



Front View



Rear View

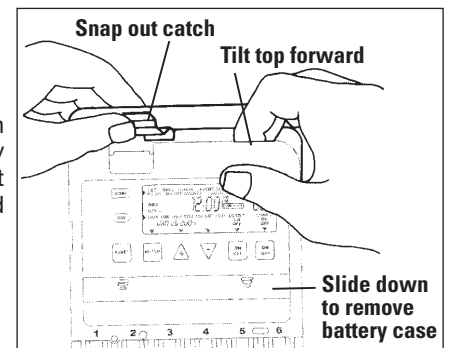
**Enclosures**—Three enclosure options are available.

- ET17x5C – TYPE 1 indoor metal enclosure
- ET17x5CR – TYPE 3R indoor/outdoor lockable metal enclosure
- ET17x5CPD82 – TYPE 3R indoor/outdoor lockable impact resistant polycarbonate enclosure with clear cover

**Knockouts**—Combination 1/2-3/4 inch size, 1 on back and each side, 2 on bottom

**Wire Size**—AWG #18 through #10

#### Installation Instructions



1. Remove the mechanism from the case by depressing the catch at the top of the case and pulling out, as shown.

2. Set voltage selector for desired input voltage. The timer is shipped with voltage set for 120 VAC. To operate at 208, 240 or 277 VAC, move the selector switch to the desired setting as marked on the circuit board. See location **A** in Rear View above and detail at the right.

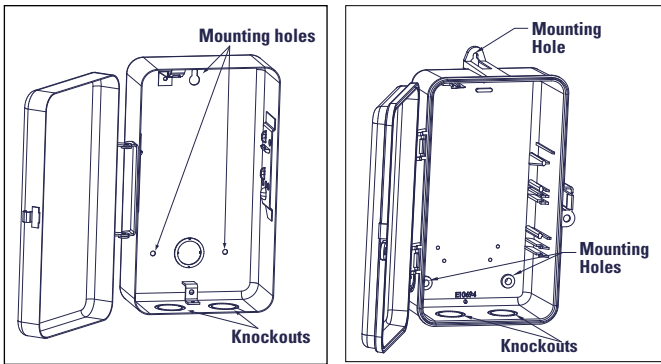


3. The timer is shipped with DST (Daylight Saving Time) enabled. To disable DST, insert a jumper at location marked DST. See location **B** in Rear View above and detail at the right.

4. **ET1725C ONLY**—Decide whether you want to control multiple loads simultaneously (SIM), independently (IND), or with a 2-second pulse (PUL) (e.g., for use with mechanically held contactors or bell ringing applications), and make sure the jumper is positioned accordingly. See location **B** in Rear View above and detail at the right. (The unit is shipped with the loads set for IND.)

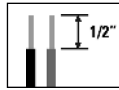


- Mount the enclosure in the desired location using the 3 mounting holes provided.



Position at eye level if possible, providing space to the left of the enclosure for the cover to swing open fully, as shown.

- Replace the mechanism in the enclosure.
- Lift the left side of the plastic insulator off the retaining post and pivot it up and away to expose the terminal strip.
- Strip the supply and load wires to 1/2". Use #18 - #10 AWG wires, rated at least 75°C - COPPER conductors ONLY.



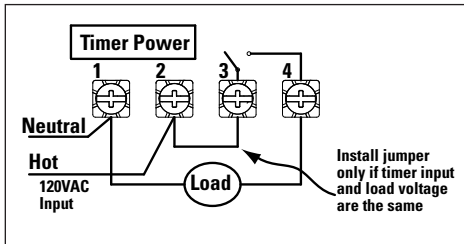
- Insert the wire ends under the proper terminal plates (see wiring diagrams elsewhere on this page) and tighten the screws firmly.
- Connect ground wire to grounding terminal at bottom of enclosure.
- Replace the plastic insulator on the retaining post.
- Remove the battery case by sliding it down as shown by the arrows, then install 2 AAA alkaline batteries. Make sure the batteries are pointing in the direction shown.
- Verify that the display is **ON** to make sure the batteries are OK. If the display shows scrambled information, press the RESET button to clear it up.
- Apply power to the Time Switch.

**IMPORTANT:** Press and hold the **ENTER** button, then press the **RESET** button. The screen will flash 12:00 AM and MON, and timer status is Manual Mode.

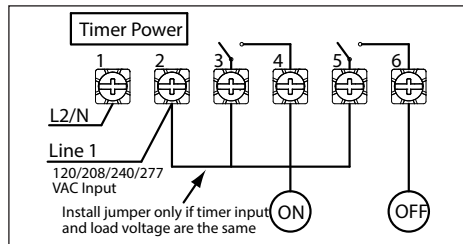
**NOTE:** You must reset the time switch using this procedure whenever you change the jumpers.

The Time Switch is now ready for programming.

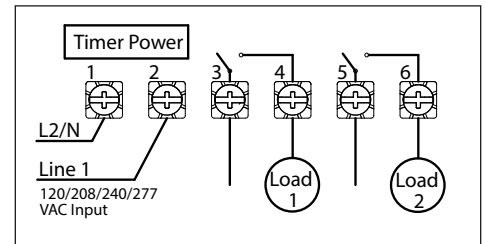
## Wiring Diagrams



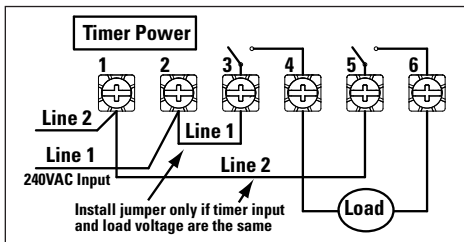
ET1705 configured for SPST, 120 VAC load



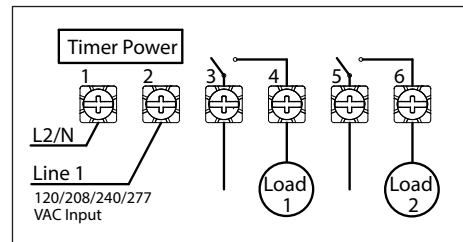
ET1725 configured for pulse SPST load with jumper set to PUL



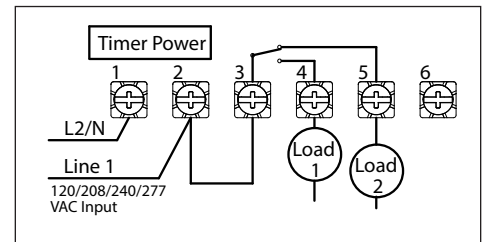
ET1725 configured for 2 SPST loads with jumper set to IND



ET1725 configured for 240 VAC DPST load with jumper set to SIM



ET1725 configured for DPST loads with jumper set to SIM



ET1715 configured for SPDT load switching

## Programming Overview

By pressing the **MODE** button, the Time Switch will cycle through the menus necessary for programming the current time, date, and timed events.

The basic procedure is to use the **MODE** button to move from one menu to the next (e.g., DATE, TIME, etc.), the + or - buttons for the first part of a setting (e.g., MONTH), the **ENTER** button to move to the next part of the setting (e.g., YEAR), then **MODE** to exit and move to the next menu. To skip a menu, press **MODE** to move ahead.

**If you make a mistake, press the MODE button repeatedly to cycle back around to the error, then make the correct entry.**

**NOTE:** DATE and TIME must be set before you can access any other programming menus.

## Setting Date

- Press the **MODE** button repeatedly until the words SET and DATE appear in the upper area of the display.
- Press the + or - buttons to enter the current Month.
- Press the **ENTER** button when the Month is correct to save the setting. The screen advances to current Date.
- Again press the + or - buttons to enter the current Date, followed by the **ENTER** button.
- Repeat to set the correct Year.
- Press the **MODE** button to exit and advance to setting the time.

## Setting Time

1. If necessary, press the **MODE** button repeatedly until the words SET and CLOCK appear in the upper area of the display.
2. Press the + or – buttons to enter the current time.  
**NOTE:** To go from AM to PM, keep pressing the + or – buttons to cycle through the day. You can hold the + or – buttons down for 3 seconds to make the time scroll quickly.
3. Press the **MODE** button to exit and advance to setting Events.

## Setting ON/OFF Events

1. If necessary, press the **MODE** button repeatedly until the words SET ON/OFF EVENTS and EVENT 01 appear on the display.
2. If necessary, press the **ENTER** button to display ON @ or OFF @ (depending on what you want to set).
3. Press the **DAY** button to display 12:00 am and all days of the week.
4. Press the + or – buttons to enter the time you want to set.  
**NOTE:** To go from AM to PM, keep pressing the + or – buttons to cycle through the day. You can hold the + or – buttons down for 3 seconds to make the time scroll quickly.
5. If you want the Event to occur for a combination of days rather than every day (e.g., weekends only, weekdays only, or individual days), press the **DAY** button again as necessary to cycle through the individual days or combination of days you want.  
**NOTE:** To choose a combination not shown during cycling (e.g., Tuesday and Thursday), you must create an individual event for each of the days you want.
6. **ET1725C ONLY**—For a multi-circuit device with loads set independently, you can choose the load you want the event to control. The default setting is for both loads, as you can see on the display. Press the **ON/OFF** button under a load to remove the load from the event.
7. When you have set the event correctly, you have two choices:
  - Press the **ENTER** button to set the next ON/OFF event (up to 28 events).
  - Press the **MODE** button to exit.

## Operating the Time Switch

Press the **MODE** button repeatedly to select the desired operating mode on the display. There are 2 options:

- **AUTO**—where the Time Switch follows the events you have programmed, turning the circuits ON and OFF at the time(s) set.  
**NOTE:** You can override programmed events and force the Time Switch ON or OFF by pressing the **ON/OFF** button.
- **MANUAL**—where any events set are disabled and the Time Switch controls all circuits through the **ON/OFF** button.  
**NOTE:** You can review or edit any programmed events at any time by pressing the **MODE** button repeatedly to return to the appropriate menu, then following programming instruction provided on this sheet.

## OPTIONAL – Deleting (Clearing) an Event

Use this procedure to clear the settings programmed for an event.

1. If necessary, press the **MODE** button repeatedly until the words SET ON/OFF EVENTS are shown on the display.
2. Press the **ENTER** button as necessary to cycle through events that have been set until you see the event you want to delete.
3. Press the + or – buttons AT THE SAME TIME to display --:-- --.
4. Press the **MODE** button to exit.

## Battery Maintenance

- Batteries can be easily replaced without removing the Time Switch mechanism or field wiring.
- Press in and downward (in the direction of the arrows) on the battery cover.
- It is recommended to replace the batteries every 2-3 years with 2 AAA industrial grade alkaline cells as part of normal maintenance on the Time Switch.
- Be sure to observe battery polarity markings when installing batteries.
- No other battery maintenance is required.

### LIMITED ONE-YEAR WARRANTY

If within the warranty period specified, this product fails due to a defect in material or workmanship, Intermatic Incorporated will repair or replace it, at its sole option, free of charge. This warranty is extended to the original household purchaser only and is not transferable. This warranty does not apply to: (a) damage to units caused by accident, dropping or abuse in handling, acts of God or any negligent use; (b) units which have been subject to unauthorized repair, opened, taken apart or otherwise modified; (c) units not used in accordance with instructions; (d) damages exceeding the cost of the product; (e) sealed lamps and/or lamp bulbs, LED's and batteries; (f) the finish on any portion of the product, such as surface and/or weathering, as this is considered normal wear and tear; (g) transit damage, initial installation costs, removal costs, or reinstallation costs.

**INTERMATIC INCORPORATED WILL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY MODIFIED TO EXIST ONLY AS CONTAINED IN THIS LIMITED WARRANTY, AND SHALL BE OF THE SAME DURATION AS THE WARRANTY PERIOD STATED ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON THE DURATION OF AN IMPLIED WARRANTY, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.**