

## 7-day/24 hour programmable digital time clock with battery powered carryover gas-fired duct furnace/make-up air units model series: "D", "H", "I", "O", "M", & "Q"



### WARNING

1. Disconnect power supply before making wiring connections to prevent electrical shock and equipment damage.
2. All units must be wired strictly in accordance with wiring diagram furnished with the unit. Any wiring different from the wiring diagram could result in a hazard to persons and property.
3. All wiring must be done with a wiring material having a temperature rating of at least 105°C.
4. All line and low voltage wiring to time clock must be suitable for line voltage in compliance with NEC requirements for separation of circuits.

### IMPORTANT

1. The use of this manual is specifically intended for a qualified installation and service agency. All installation and service of these kits must be performed by a qualified installation and service agency.
2. These instructions must also be used in conjunction with the Installation and Service (I&S) Manual originally shipped with the appliance being converted, in addition to any other accompanying component supplier literature.

### Application

The INTERMATIC ET1715C Electronic 7-Day Time Switch automatically switches loads ON or OFF 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. The Time Switch can support up to 14 timed ON and 14 timed OFF events per day (set points).

The program can be overridden by pushing the ON/OFF load override button. The override begins immediately when initiated and remains until overridden again or until the next set point is reached.

The ET1715C Time Switch is designed to directly switch inductive or resistive loads. See Specifications in the next column for contact ratings.

**Figure 1.1**  
**ET1715C Programmable Digital Time Clock**



### Specifications

#### Time Switch

- Input Voltage: 120/208/240/277 VAC, 60 Hz
- Power Consumption: 6.0 watts max.
- Contact Configuration: SPDT

#### Switch Ratings

- 20A/10A Inductive/Resistive: 120 through 277 VAC, 60 Hz
- 20A/10A Resistive: 28 VDC
- 1 HP / ¼ HP: 120 VAC, 60 Hz
- 2 HP / ½ HP: 240 VAC, 60 Hz

**Set Points (Events):** Each load output can support up to 14 timed ON and 14 timed OFF events per day.

**Minimum ON or OFF time:** 1 minute

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

**Battery-Powered Clock Operation:** 2 years minimum (includes 2 AAA industrial grade alkaline batteries)

**Shipping Weight:** 2.5 lb. (1.1 kg)

**Enclosure:** Metal, NEMA 1 indoor (7.5" H x 5" W x 3" D)

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

**Wire Size:** AWG #10 through #18

# INSTALLATION – PROGRAMMABLE DIGITAL TIME CLOCK

## Installation

The time clock is housed in a NEMA 1 drawn steel enclosure with lockable hasp. The unit is to be mounted indoors in an environment free of excessive contaminants such as oil, moisture, and dirt. Mounting holes are provided in the rear of the enclosure for mounting to a wall, terminal box, etc. Conduit entrance knockouts are provided on the sides, bottom, and rear of enclosure.

## Wiring



### WARNING

1. Disconnect power supply before making wiring connections to prevent electrical shock and equipment damage.
2. All units must be wired strictly in accordance with wiring diagram furnished with the unit. Any wiring different from the wiring diagram could result in a hazard to persons and property.
3. All wiring must be done with a wiring material having a temperature rating of at least 105°C.
4. All line and low voltage wiring to time clock must be suitable for line voltage in compliance with NEC requirements for separation of circuits.

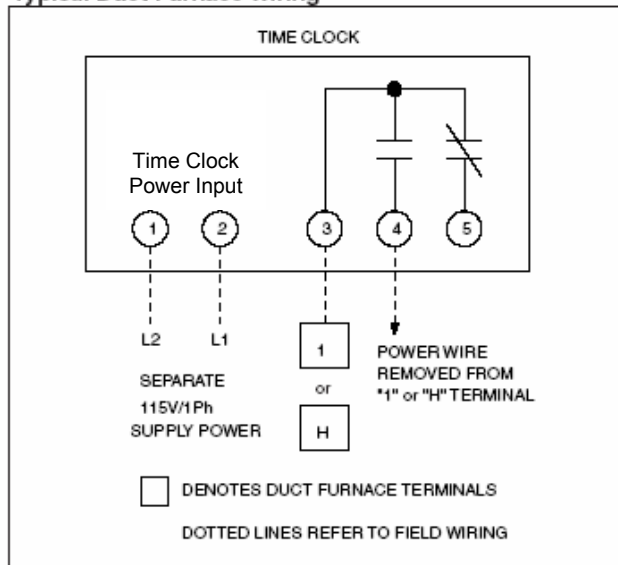
Installation of wiring must conform with local building codes, or in the absence of local codes, of the National Electric Code ANSI/NFPA 70 - Latest Edition. Unit must be electrically grounded in conformance to this code. In Canada, wiring must comply with CSA C22.1, Part 1, Electrical Code.

The terminals for supply power and relay contacts will accommodate #18 to #10 AWG copper wire. Power supplied to the controller enables the time and program information to be maintained. However, the relay contacts act as switches only, power must be supplied to operate the load.

### Wiring Diagram Selection:

- For duct furnaces (non-factory supplied blower) refer to the Figure 2.1 for wiring or the actual wiring diagram supplied with the unit.
- For direct- and indirect-fired system units (factory supplied blower) refer to the job specific unit-wiring diagram provided with the unit.
- For deviations to these wiring diagrams or the job specific wiring diagrams, consult the factory.

Figure 2.1  
Typical Duct Furnace Wiring



## Programming

The ET1715C time clock is a user-friendly controller designed for ease of programming. Please see component supplier literature included with the controller for specific instructions.

## Battery Maintenance

The power outage carry-over feature allows for power to be interrupted to the controller without losing the program or time of day information. The controller uses (2) AAA batteries and is designed for long battery life.

Batteries can be easily replaced without removing the time clock 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. Be sure to observe battery polarity markings when installing batteries. No other battery maintenance is required.

Modine Manufacturing Company has a continuous product improvement program, and therefore reserves the right to change design and specifications without notice.