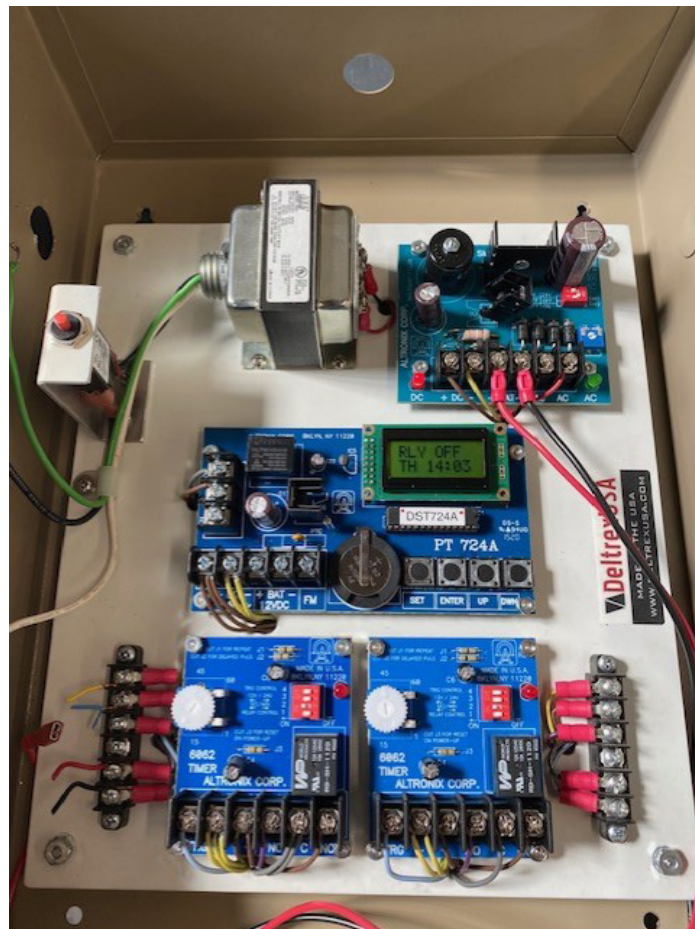


INSTALLATION INSTRUCTIONS

901F-System - For One Door 902F-System - For Two Doors 365 Days Adjustable Timer with Power Supply and Door Control



SPECIFICATIONS

Input:

- 12 to 24 VAC or VDC operation.

Relay:

- Form “C” relay contacts are rated 10A @ 120VAC/28VDC.
- Standby current: 10mA (relay off) 50mA (relay on).

Features:

- EE Prom memory protects against loss of programming due to power failure.
- Accurate crystal controlled clock.
- Momentary and/or Latching Events.
- 50 individually programmed daily/weekly events.
- Block programming capacity can accommodate a total of 350 events per week.
- 10 programmable Holiday dates.
- “First man in” option.
- Standard or Daylight Savings Time settings.
- Automatic compensation for leap year.

Visual Indicators:

- Alphanumeric LCD display simplifies programming.

Battery Backup:

- Built-in charger for 12VDC sealed lead acid or gel type batteries (Max charge current 100mA).
- Optional lithium battery backup maintains clock.

Mechanical:

- 901F-System - Timer module.
- 902F-System - Timer module.

Board Dimensions (approx.):

Enclosure Dimensions (H x W x D approx.):
8.5” x 7.5” x 3.5” (215.9mm x 190.5mm x 88.9mm).

INSTALLATION INSTRUCTIONS

1. Mount 901F-System/ 902F-System in desired location.
2. Connect 12 to 24 volts AC or DC to terminals marked [+ DC - / ~ AC ~]. When using DC carefully observe polarity.
3. Connect 12VDC battery (optional) to terminals marked [+ BAT - / 12VDC].
4. Insert lithium battery in battery holder.
5. Connect devices to be controlled to dry outputs marked [NO, C, NC].
Note: It is important when connecting DC powered electromechanical devices such as Mag Locks, Electric Strikes, Bells, Relays, etc. to install a catch diode across the pos (+) and neg (-) terminals of the device. Connect diode as close to the device as possible with the banded side facing the pos (+) terminal. This will reduce the possibility of interference.
6. Program clock and desired event schedule (see programming instructions).

BASIC OPERATION

901F-System/902F-System controls an independently operated dry form “C” relay output. Relay can be programmed to: turn on (latch), turn off (release latch) or pulse (momentary toggle) at a specified time and day (this is referred to as an event). Events are programmed via the push buttons and LCD display. Events may be programmed to occur on any day of the week at any time. In addition, events may be repeated at a specific time on two (2) or more consecutive days (i.e. M-F, Sun-Th, etc). Multiple combinations of individual and block events may be programmed. Holiday exceptions are individually selected by date and will override all regularly scheduled events.

OUTPUT RELAY MODES

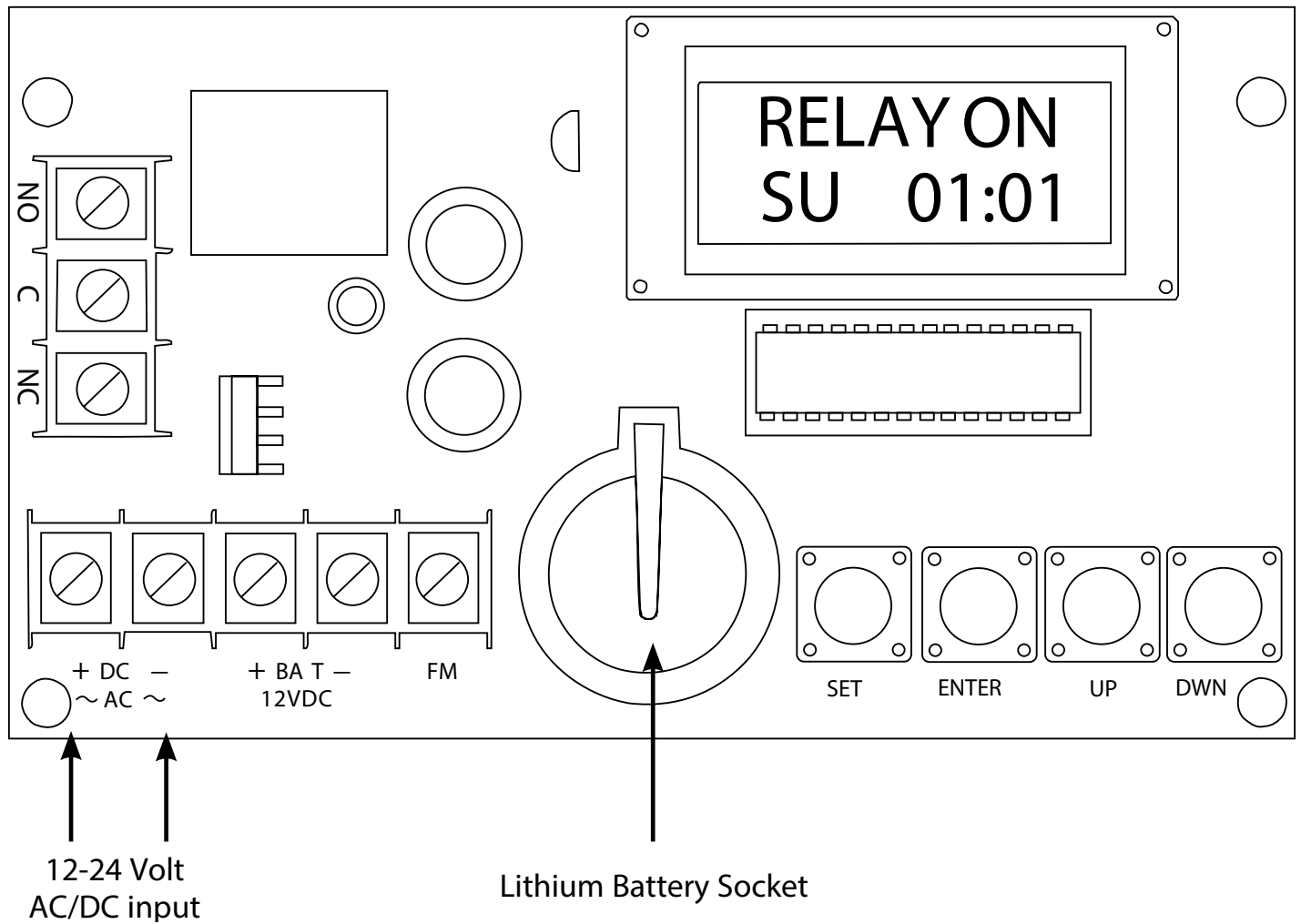
Mode	Status
Relay OFF	De-energizes the relay until a relay ON event is detected.
Relay ON	Energizes the relay until a relay OFF event is detected.
Disable	Used to cancel an existing programmed event.
Pulse	Momentarily energizes the relay for a selectable time period of 1 sec. to 15 secs.

Time is displayed in 24 hr. military format.

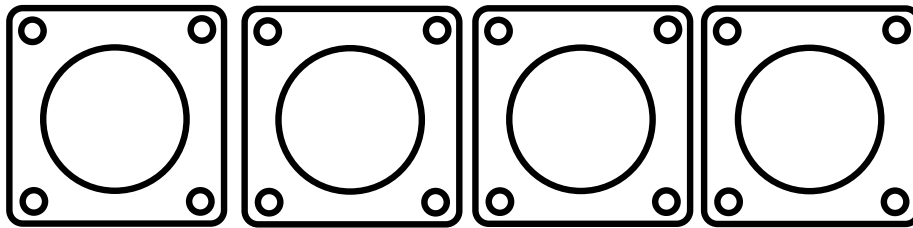
TERMINAL IDENTIFICATION TABLE

Terminal Legend	Function/Description
NO, C, NC	Dry Contact output used to switch controlled devices. When these relays are energized (ON) the NC and C terminals are open and the NO and C terminals are closed. When this relay is de-energized (Off) the NC and C terminals are closed and the NO and C terminals are open.
+ DC - ~ AC ~	12VDC stand-by battery input (battery leads provided).
+ BAT - 12VDC	12VDC stand-by battery input (battery leads provided).
FM	When this terminal is connected to DC neg. (-) the “First Man in” feature is enabled. The relay will remain in its present position until this connection is terminated. At that time the relay will resume normal operation and latest scheduled events will occur.

BATTERY HOLDER



PUSH BUTTON LAYOUT



SET

ENTER

UP

DWN

PUSH BUTTON DESCRIPTION TABLE

Push Button	Function/Description
SET	Scrolling keys for programming. Escaping out of existing programming.
ENTER	Accepts selections made to programming.
UP	Scrolls through selections.
DOWN	Scrolls through selections.

UP and **DOWN** keys can be used to select data entries. After scrolling to the correct entry, depress **ENTER** to accept.

PROGRAMMING INSTRUCTIONS

A. Setting Clock/Calendar:

Upon initial power up	RLY OFF SU 01:01	will appear on display.
Depress SET	ENTER to SET TIME	will appear on display.
Depress ENTER	01/01/01 SU/01:01	will appear on display.

Enter the current date, day of week and time (military) by depressing **UP** and **DWN** to make the selection then depress **ENTER** to accept.

Next select either DS (daylight savings mode) or ST (standard time mode) by depressing **SET** until

ENTER to SET BK	appears on display.
--------------------	---------------------

Depress **ENTER** to scroll until flashing cursor appears under DS (daylight savings mode) in display. To change mode depress **UP** or **DWN** once ST (standard time mode) will appear in display. Depress **ENTER** to accept correct selection.

Note: The flashing cursor denotes location of data entry selection to be made. If an entry was made in error or requires changing, depress **SET** to backspace, make the correct selection and depress **ENTER** to accept data and advance the cursor. To change or program clock/calendar simply repeat the steps above.

B. Setting Events:

Depress **SET** until

ENTER to
SET

will appear on display.

Depress **ENTER**.

#01 OFF
SU 00:00

will appear on display.

Depress **ENTER** until the flashing cursor appears under OFF in display. Now select type of event required, by scrolling using the **UP** and **DWN** push buttons until either:

ON - Relay ON (latching mode), **OFF** - Relay OFF (latching mode), or **PL** - Relay Pulse (momentary), appears in display and depressing **ENTER** will make selection.

When selecting the pulse mode PL01 will appear in the display. It is now necessary to assign the length of time (duration of relay activation). The pulse can range in length from 1 second minimum to 15 seconds maximum and is selected by using **UP** or **DWN** push buttons, then depressing **ENTER** to accept.

Note: If pulse duration is not selected relay output defaults to 1 second.

Next select the day of the week and time (military) by scrolling using **UP** and **DWN** push buttons and depress **ENTER** to accept. You may continue to program events by repeating the previous steps or exit programming by depressing **SET**.

Note: When programming additional events it is necessary to select the next consecutive event number following the last event program to continue.

Note: When it is required to have the same event repeated on two (2) or more consecutive days of the week (Block Programming), enter the first day followed by the last day by depressing SUN through SAT.

Example:

- 1) Monday through Thursday depress MON followed by THURS.
- 2) Wednesday through Sunday depress WED followed SUN.

C. Setting Block Events (weekly repeat):

Depress **SET** until

ENTER to
SET BK

appear on display.

Depress ENTER.

BK=SA/SU
TIME=DS

will appear on display.

Flashing cursor will appear at the location of the first day of the week desired. Depress **UP** and **DWN** to select day. Depress **ENTER** to confirm selection, then cursor will appear at the location of the last day of the week desired. Depress **UP** and **DWN** to select day. Depress **ENTER** to confirm selection.

D. Setting Holiday Events:

Depress **SET** until

ENTER to
SET EVENT

will appear on display.

Depress ENTER.

#01^ON
HL 00:00

will appear on display.

Next select HL to indicate as holiday event and time by scrolling using **UP** and **DWN** push buttons and depress **ENTER** to accept. Exit programming by depressing **SET**. If no holiday event has been entered and a holiday date is entered, the unit will stay in its last position when that date comes up.

E. Setting Holiday Dates:

It is now necessary to assign these holiday events specific calendar dates which they are to occur. To select Holiday events depress **SET** until

ENTER to
SET HOL

appear on display.

Depress **ENTER.**

#01^HOL
SU 00:00

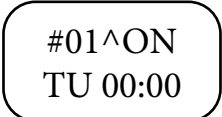
will appear on display.

Note: Holiday events will override all regularly programmed events.

F. Delete/Disable Events or Edit Events:

Previously programmed regularly scheduled and/or holiday events may be deleted/disabled without having to erase all events.

Depress **SET** until  appear on display.

Depress **ENTER**.  will appear on display.

Now scroll using **UP** and **DWN** push buttons to the event you wish to delete, depress **ENTER** to move flashing cursor under relay option then depress **UP** and **DWN** push buttons until **DIS** is displayed, depress **ENTER** to confirm.

G. Delete All Events:

All previously programmed events can be deleted by depressing **SET** until

 appear on display.

Depress **ENTER**.  will appear on display.

Depress **ENTER**.  will appear on display.

Depressing **UP** push button will now clear all events previously programmed. If you wish to escape from this selection depress any of the other push buttons: **SET**, **ENTER** and **DWN**.

901F-System/ 902F-System

Enclosure Dimensions (H x W x D approximate):
8.5" x 7.5" x 3.5" (215.9mm x 190.5mm x 88.9mm)

