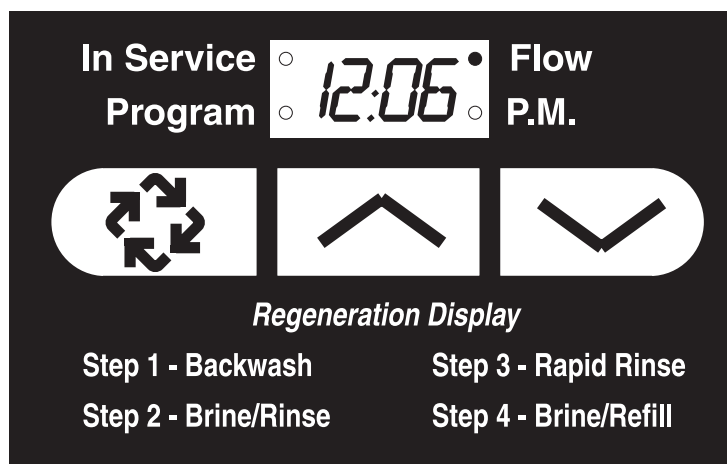


# SE TIMER

## *Supplemental Service Manual*



ET040-0

# SE TIMER

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# Job Specifications Sheet

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Please circle and/or fill in the appropriate data for future reference.

**Programming Mode:**

Volume Remaining \_\_\_\_\_ Gallons      Liter      Cubic Meters  
Regeneration Time: Delayed \_\_\_\_\_ a.m. / p.m.      or      Immediate  
Regeneration Day Override (A)      Off      or      Every \_\_\_\_\_ Days

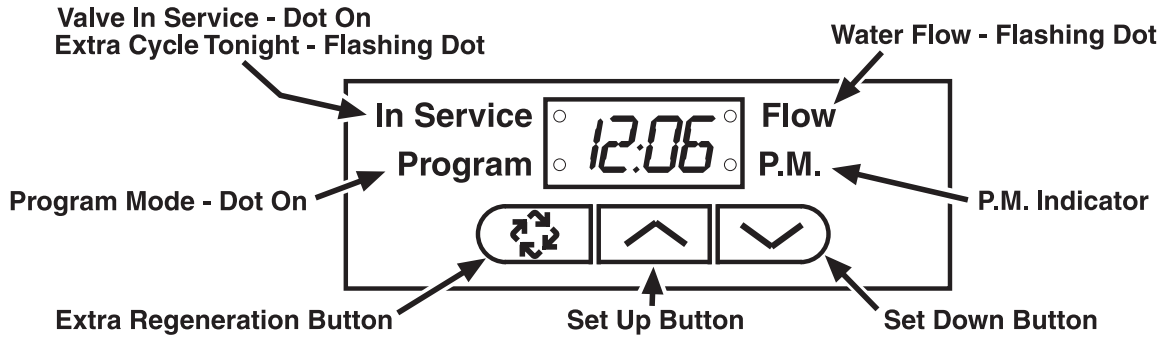
**Master Programming Mode:**

Display Format (U)      1. US Gallons      2. Liter      3. Cubic Meters  
Regeneration Type (T)      1. Time Clock      2. Meter Immediate      3. Meter Delayed  
Regeneration Cycle Step #1      \_\_\_\_\_ Minutes  
Regeneration Cycle Step #2      Off      or      \_\_\_\_\_ Minutes  
Regeneration Cycle Step #3      Off      or      \_\_\_\_\_ Minutes  
Regeneration Cycle Step #4      Off      or      \_\_\_\_\_ Minutes  
Regeneration Cycle Step #5      Off      or      \_\_\_\_\_ Minutes  
  
Flow Meter Pulses (F)      \_\_\_\_\_ Pulses  
Valve Type (O)      1. 2510, 2750, 2850      2. 9000, 9100, 9500  
Line Frequency      50Hz      or      60Hz

# SE TIMER

## Control Start-Up Procedures

### Display



ET023-0

In normal operation the **Time Of Day** display alternates with **Volume Remaining** and Tank in Service displays (9000, 9100, 9500 SE Timer only). As treated water is used, the **Volume Remaining** display counts down (in gallons) from a maximum value to zero or (---). Once this occurs a regeneration cycle initiates immediately or delayed to the set **Regeneration Time**. Water flow through the valve is indicated by the flashing **Flow Dot Indicator**.

Time Of Day	Service	●	12:00	●	Flow
	Program	○		○	P.M.
833 Gallons of Treated Water Remaining	Service	●	833	●	Flow
	Program	○		○	P.M.
0 Gallons of Treated Water Remaining	Service	●	---	●	Flow
	Program	○		○	P.M.
Tank #1 in Service Twin Tanks Only	Service	●	-U1-	●	Flow
	Program	○		○	P.M.

ET024-0

### Set Time of Day



ET025-0

When the valve is **In Service**, push either the **Set Up** or **Set Down** button once to adjust the **Time Of Day** by one digit. Push and hold to adjust by several digits.

### Start an Extra Regeneration Cycle



ET026-0

Push the **Extra Regeneration** button to start an extra regeneration tonight. Push and hold the **Extra Regeneration** button for 5 seconds to start an **Extra Regeneration** immediately.

*Control Start-Up Procedures (Cont'd.)*

**Set Control Programming**

1. Push and hold both the **Set Up** and **Set Down** buttons for 5 seconds.



ET027-0

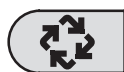
2. Set the Treated Water Capacity. Using the **Set Up** or **Set Down** buttons, set the amount of treated water to flow through the unit before a regeneration is required.

650 Gallons Capacity



ET028-0

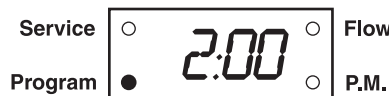
3. Push the **Extra Regeneration** button.



ET026-0

4. Set the **Regeneration Time**. Use the **Set Up** or **Set Down** buttons to set the desired time of day for regeneration to occur.

2:00 A.M.  
Regeneration Time



ET030-0

5. Push the **Extra Regeneration** button.



ET026-0

6. Set **Regeneration Day Override**. Use the **Set Up** or **Set Down** buttons to set the maximum number of days before a regeneration cycle must occur.

Regenerate Every  
7 Days Minimum



ET031-0

7. Push the **Extra Regeneration** button to exit the program.\*



ET026-0

**\*NOTE: If setting up the system for the first time, perform the following Fast Cycle Regeneration:**

1. Push the **Extra Regeneration** button for 5 seconds to force an extra regeneration immediately.
2. Once the valve reaches Regen Step #1, let water run to drain for approximately 5 minutes.
3. Push the **Extra Regeneration** button once to advance valve to Regen Step #2.
4. Push the **Extra Regeneration** button once to advance valve to Regen Step #3 (if active).
5. Push the **Extra Regeneration** button once to advance valve to Regen Step #4 (if active).
6. Push the **Extra Regeneration** button once to advance valve to Regen Step #5 (if active)
7. Push the **Extra Regeneration** button once more to advance the valve back to **Service**.

# SE TIMER

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## *Control Start-Up Procedures (Cont'd.)*

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### Immediate Regeneration Valves With Days Between Regeneration Override Set

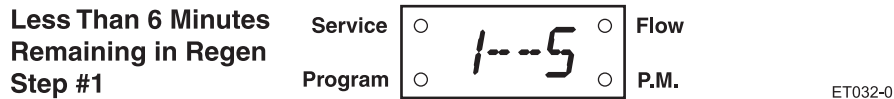
When the valve reaches its set **Days Since Regeneration Override** value, a regeneration cycle initiates immediately. This event occurs regardless of the **Volume Remaining** display having reached zero gallons.

### Delayed Regeneration Valves With Days Between Regeneration Override Set

When the valve reaches its set **Days Since Regeneration Override** value a regeneration cycle initiates at the preset **Regeneration Time**. This event occurs regardless of the **Volume Remaining** display having reached zero gallons.

### Control Operation During Regeneration

In Regeneration the control displays a special Regeneration display. In this display the control shows the current regeneration step number the valve is advancing to, or has reached, and the time remaining in that step. The step number that displays flashes until the valve completes driving to this regeneration step position. Once all regeneration steps are complete the valve returns to **Service** and resumes normal operation. For Example:



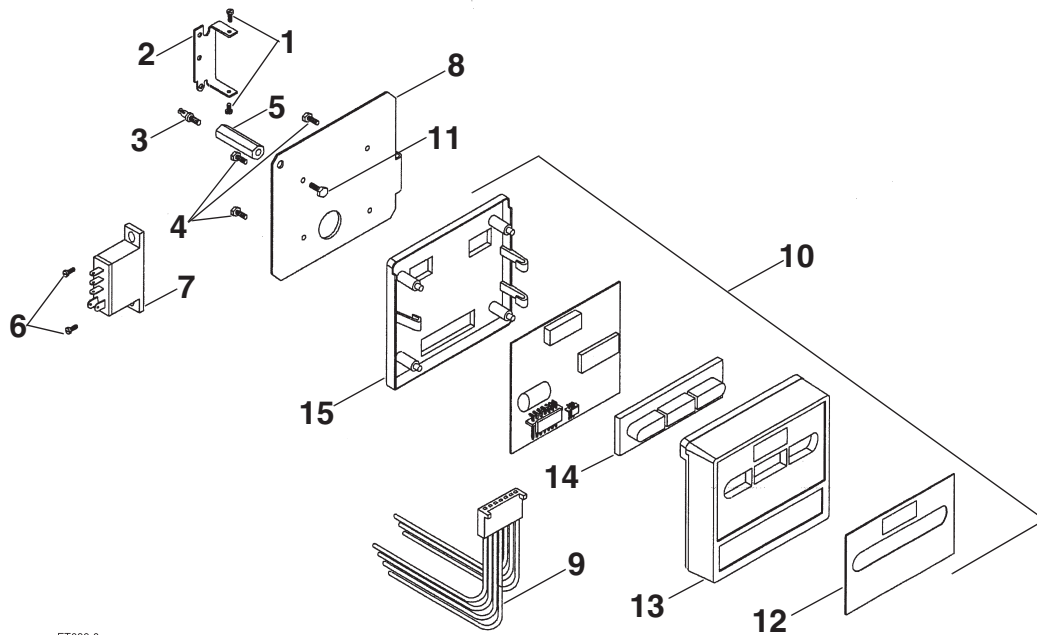
Pushing the **Extra Cycle** button during a regeneration cycle immediately advances the valve to the next cycle step position and resumes normal step timing.

### Control Operation During Programming

The control only enters the **Program Mode** with the valve **In Service**. While in the **Program Mode** the control continues to operate normally monitoring water usage and keeping all displays up to date. Control programming is stored in memory permanently. There is no need for battery backup power.

### Control Operation During A Power Failure

During a power failure all control displays and programming are stored for use upon power re-application. The control retains these values for years, if necessary, without loss. The control is fully inoperative and any calls for regeneration are delayed. The control, upon power re-application, resume normal operation from the point that it was interrupted. An indication that a power outage has occurred is an inaccurate **Time Of Day** display.

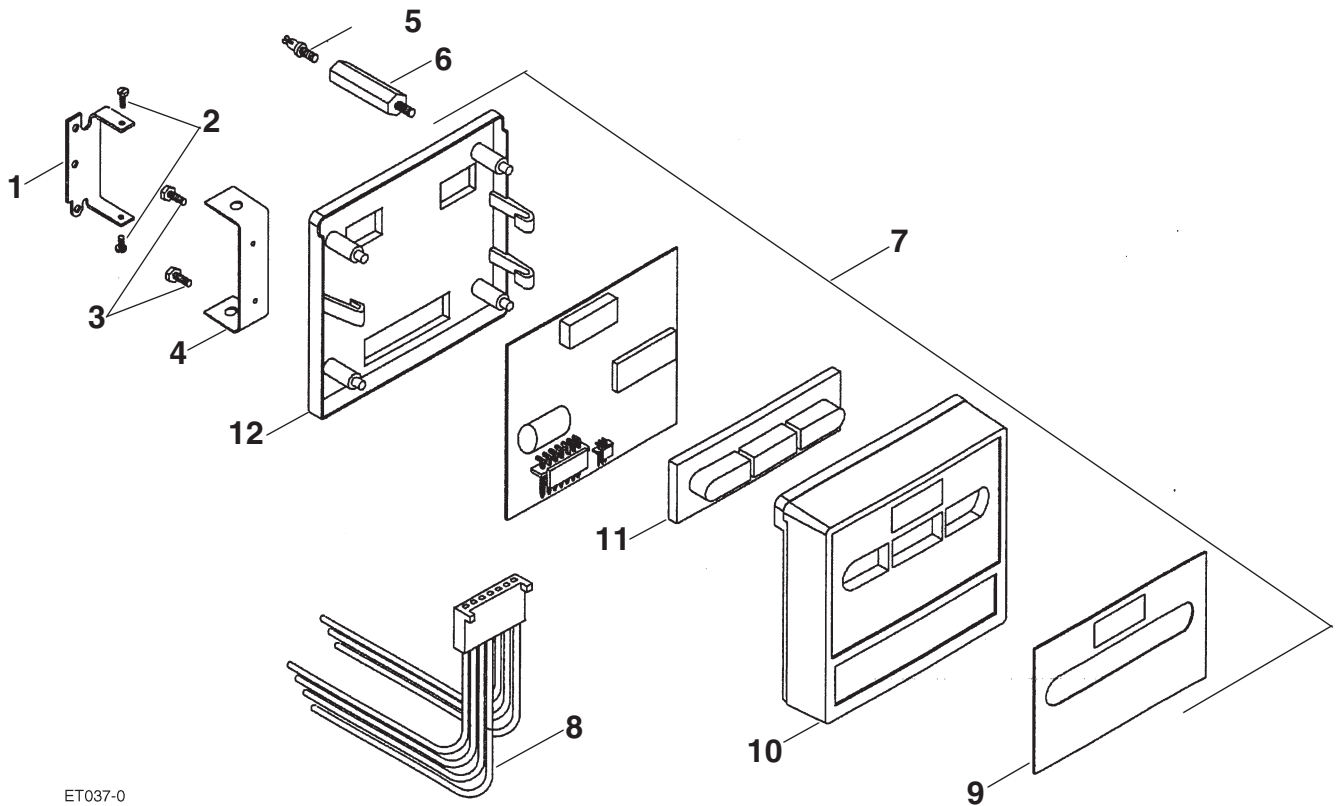


ET036-0

Item No.	No.Req'd	Part No.	Description
1	2	11384	screw, timer hindge
2	1	13881	bracket, hindge timer
3	1	14265	spring clip
4	3	13296	screw, hex wsh, 6-20 x 1/2
5	1	27172	stand-off timer 2510SE, 2750SE
6	2	11384	screw, timer hindge/relay, 2510SE/2750SE
7	1	17749-00	relay, 24V, SPDT
8	1	27168	bracket, timer, 2510SE, 2750SE
9	1	40429	harness, SE, designer, environmental
10	1	61464	timer, SE, 2510, 2750, 9000SE
11	1	21363	screw, hex HD, M4 x 12mm, FE
12	1	19697-01	label, display, 5600SE
12A	1	27793	label, display, 5600SE, pictograph
13	1	19471-02	cover, front panel, 5600SE
14	1	40376	button, conductive rubber
15	1	19889	housing, circuit board

# SE TIMER

## 9000 / 9100 / 9500 Twin Tank Timer Assembly

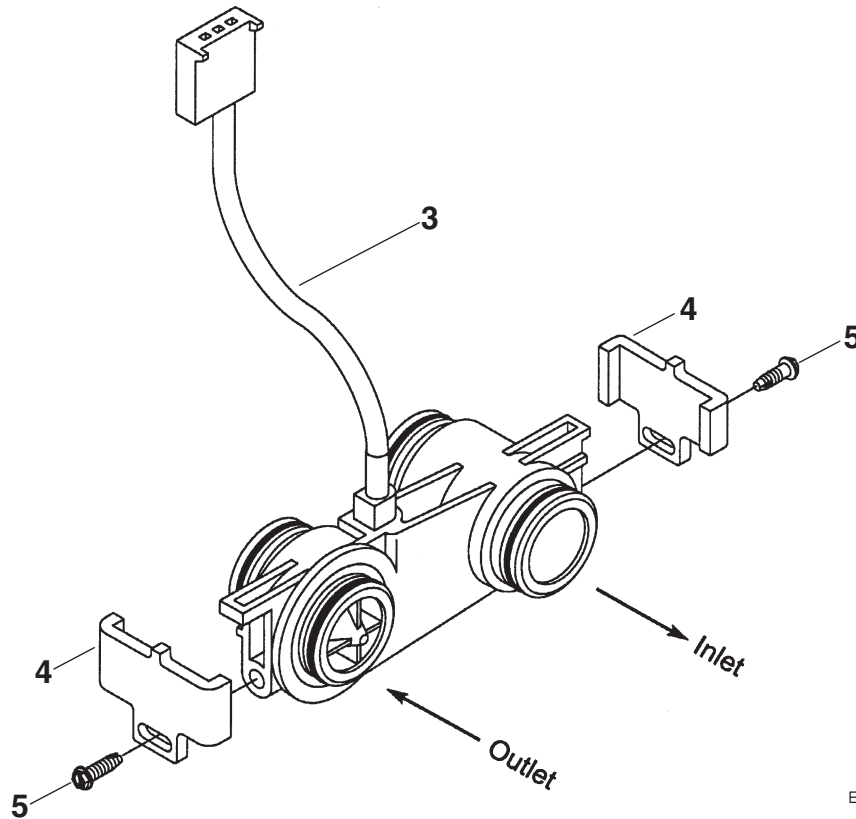


ET037-0

Item No.	No.Req'd	Part No.	Description
1	1	13881	bracket, hindge timer
2	2	11384	screw, timer hindge
3	2	13296	screw, hex wsh, 6-20 x 1/2
4	1	26982	bracket, mounting timer, 9000SE
5	1	14265	spring clip
6	1	26983	stand-off timer 900SE
7	1	61464	timer, SE, 2510/2750/9000, D/F
8	1	19474-01	harness, power 9000SE
9	1	19697-01	label, display, 9000/9100SE
9A	1	27793	label, display, pictograph, 9000/9100SE
10	1	19471-02	cover front panel
11	1	40376	button, conductive rubber
12	1	19889	housing, circuit board



*3/4" Turbine Meter Assembly*

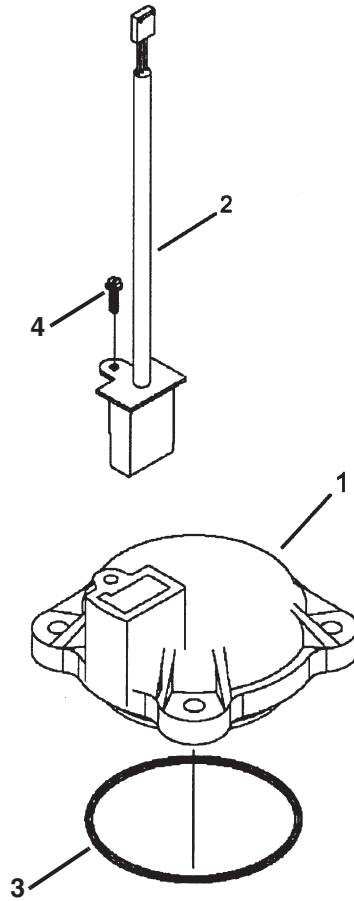


ET038-0

Item No.	No.Req'd	Part No.	Description
1	1	60626	assembly, meter without meter cable
2	1	60626-01	assembly, meter with meter cable
3	1	19791-01	meter cable assy, turbine
4	2	19569	clip flow meter
5	2	13314	screw, slot ind hex, 8-18

# SE TIMER

## *3/4", 1" or 1 1/2" Paddle Wheel Meter Cap Assembly*

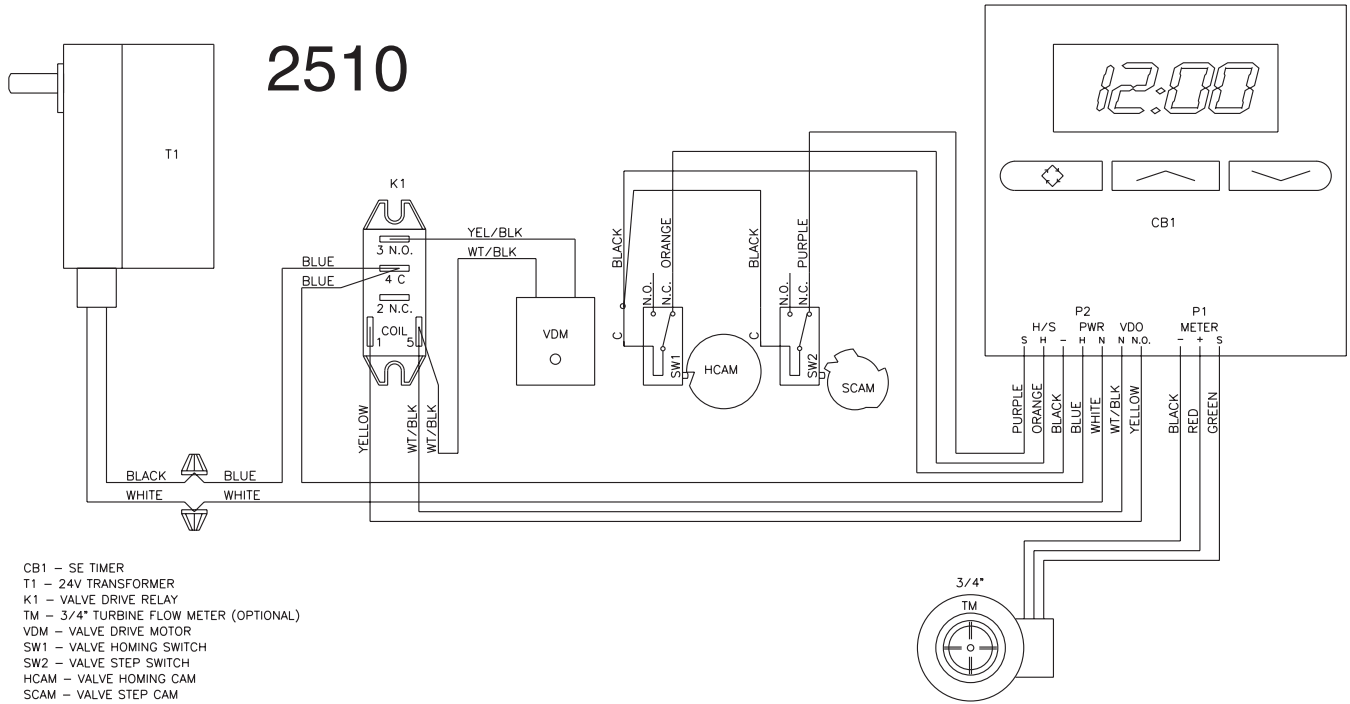


ET039-0

Item No.	No.Req'd	Part No.	Description
1	1	14716	assembly, meter cap
2	1	19121-01	harness assembly, flow meter
3	1	13847	O-ring, -137, STD/5600CD
4	1	17798	screw, slot hex wsh HD

# SE TIMER

## 2510 Valve Wiring



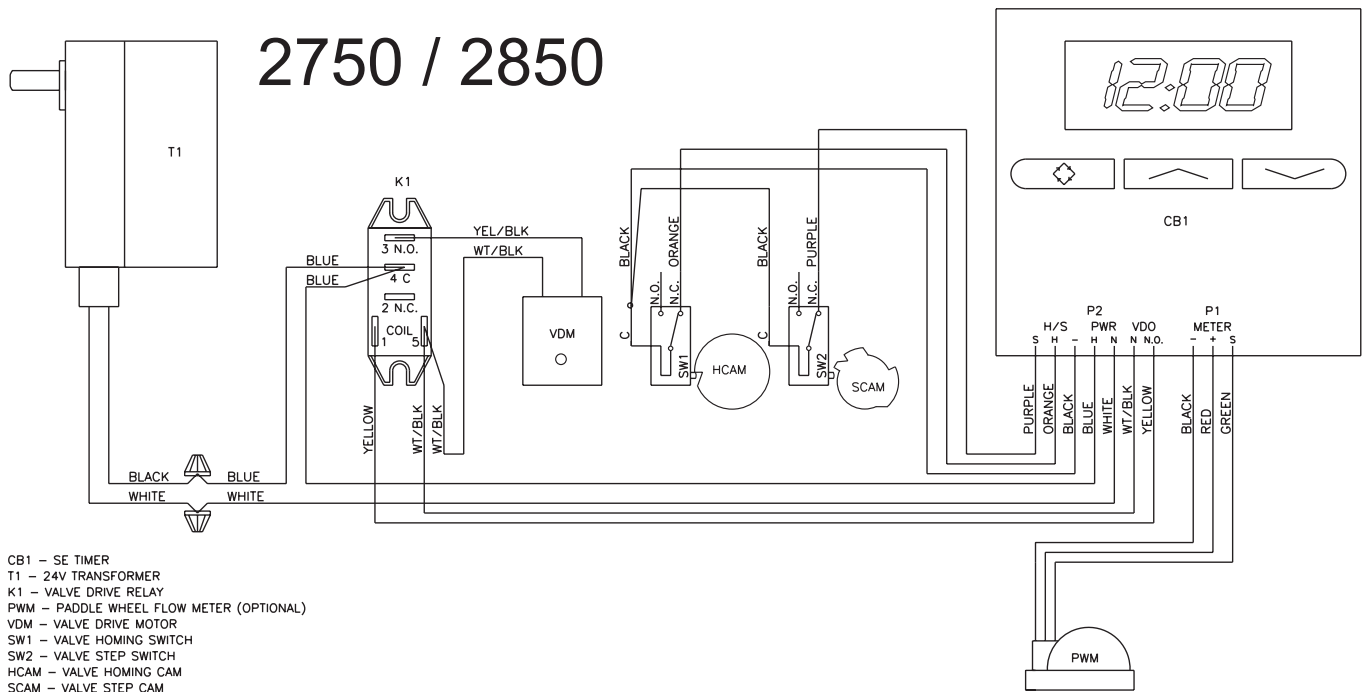
- CB1 - SE TIMER
- T1 - 24V TRANSFORMER
- K1 - VALVE DRIVE RELAY
- TM - 3/4" TURBINE FLOW METER (OPTIONAL)
- VDM - VALVE DRIVE MOTOR
- SW1 - VALVE HOMING SWITCH
- SW2 - VALVE STEP SWITCH
- HCAM - VALVE HOMING CAM
- SCAM - VALVE STEP CAM

NOTE:  
 DEPENDING ON APPLICATION, VALVE STEP CAM APPEARANCE WILL VARY.  
 REGARDLESS OF CAM TYPE USED, WIRING TO SWITCHES SW1 AND SW2 WILL REMAIN AS SHOWN.

**40528**  
 ET033-0

# SE TIMER

## 2750 / 2850 Valve Wiring



- CB1 - SE TIMER
- T1 - 24V TRANSFORMER
- K1 - VALVE DRIVE RELAY
- PWM - PADDLE WHEEL FLOW METER (OPTIONAL)
- VDM - VALVE DRIVE MOTOR
- SW1 - VALVE HOMING SWITCH
- SW2 - VALVE STEP SWITCH
- HCAM - VALVE HOMING CAM
- SCAM - VALVE STEP CAM

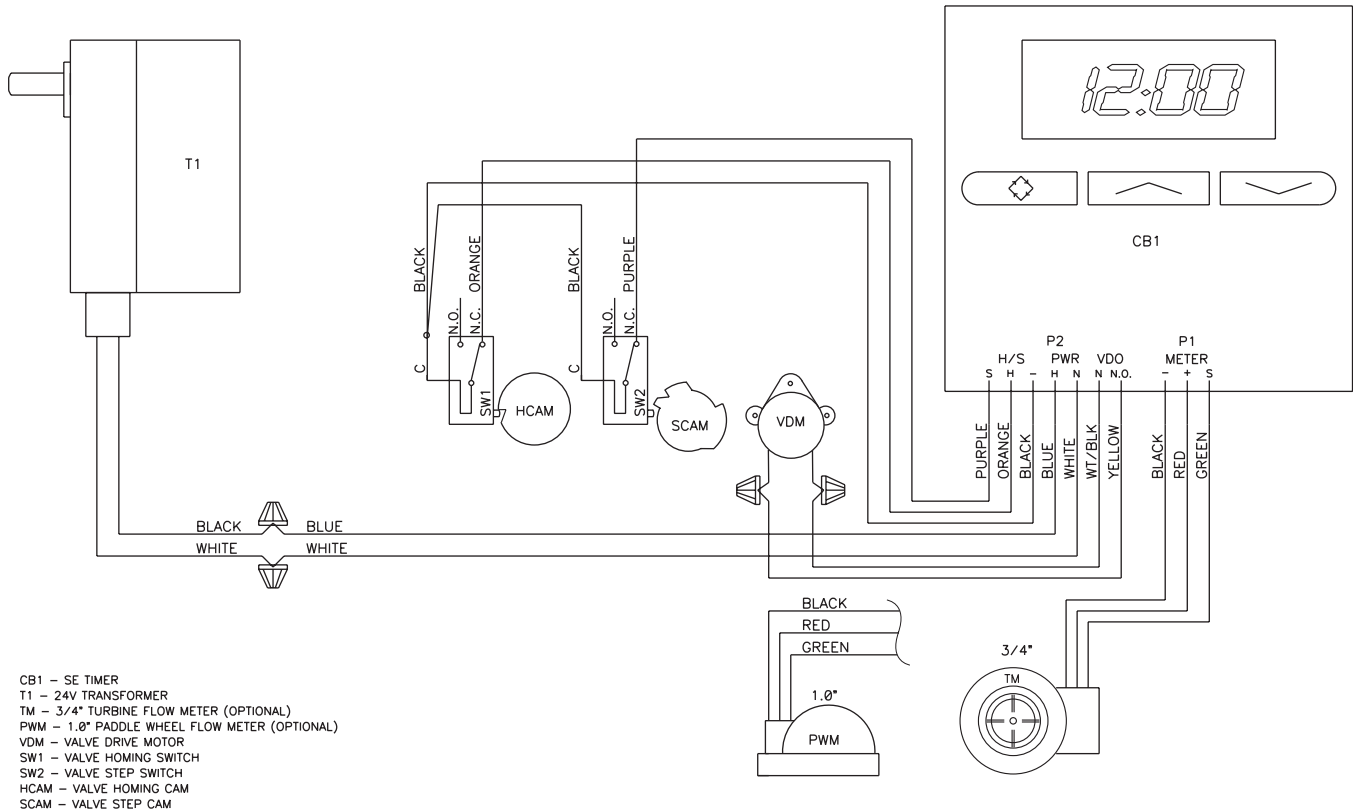
NOTE:  
 DEPENDING ON APPLICATION, VALVE STEP CAM APPEARANCE WILL VARY.  
 REGARDLESS OF CAM TYPE USED, WIRING TO SWITCHES SW1 AND SW2 WILL REMAIN AS SHOWN.

40529

ET034-0

# SE TIMER

## 9000 / 9100 / 9500 Valve Wiring



- CB1 - SE TIMER
- T1 - 24V TRANSFORMER
- TM - 3/4" TURBINE FLOW METER (OPTIONAL)
- PWM - 1.0" PADDLE WHEEL FLOW METER (OPTIONAL)
- VDM - VALVE DRIVE MOTOR
- SW1 - VALVE HOMING SWITCH
- SW2 - VALVE STEP SWITCH
- HCAM - VALVE HOMING CAM
- SCAM - VALVE STEP CAM

NOTE:  
 DEPENDING ON APPLICATION, VALVE STEP CAM APPEARANCE WILL VARY.  
 REGARDLESS OF CAM TYPE USED, WIRING TO SWITCHES SW1 AND SW2 WILL REMAIN AS SHOWN.

40530  
 ET035-0

**SE TIMER**

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*Notes*

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