

subtv wp 1-5 AC/DC WP

Installation instructions

Wiring: Connect the solenoid wires to the controller. Each cable coming out of the controller is marked with a station number.

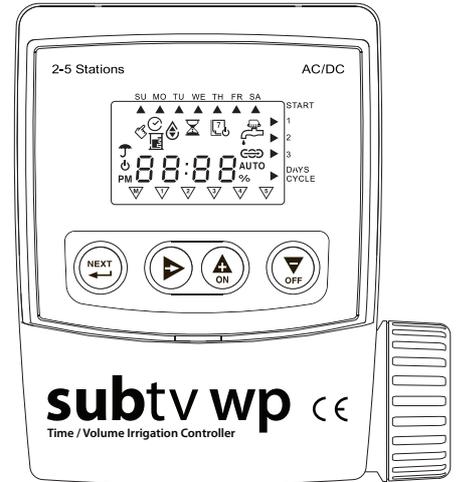
DC Solenoids: Connect the RED wire from solenoid to the RED wire from controller and the BLACK wire from solenoid to the BLACK wire from controller.

AC Solenoids: Connect the two wires from solenoid to the two wires from the controller – There is no significance to polarity.

Water Meter: Connect the two wires from the water meter to the red wires from the controller – There is no significance to polarity.

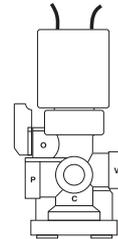
Rain Sensor: In order to connect a normally closed rain sensor, cut the yellow wire loop and connect the cut wires to sensor.

Unused wires should be taped to prevent short circuit. Mount the controller on the wall, using the wall mount bracket, or on the valve using the valve mounting bracket.



9 Volt Valve

This controller may be operated with a 9 Volt latching solenoid. The solenoid can be a "two ways" or a "three ways" solenoid, with two wires in different colors (i.e. red and black). **Only after all wiring is done and checked, connect the alkaline battery!**



Battery Connection

Please make sure that your 9 Volt battery is an ALKALINE battery of good quality. Under normal use, the battery should last for at least one irrigation season. When the battery is connected, the controller performs a self test and if DC operation is detected, it verifies that DC solenoids are in a closed position. Then it sets itself in the 1st setting screen.

Low battery indication will be lit when battery is low. Replace battery.

The Control Panel

The Control buttons

- | | | | | | | | |
|--|--|--|--|--|---|--|--|
| | "NEXT STEP" - Advances to the next programming step. | | "SHIFT" - Advances STATION NUMBER, DAYS or START TIME instance. Changes the focus to another item within current screen. | | Increases numeric data. Sets watering days "ON" or starts MANUAL or SEMI-AUTO irrigation. COPY previous station data. | | Decreases numeric data. Sets watering days "OFF" or shuts down MANUAL or SEMI-AUTO irrigation. COPY previous station data. |
|--|--|--|--|--|---|--|--|

Display icons

- | | | | | | |
|--|----------------------------------|--|---|--|--|
| | Setting Mode | | Manual Irrigation | | Stopped by Rain Sensor |
| | Set Time / Time Mode | | Semi Manual Irrigation | | High Flow [seconds] |
| | Watering Volume/ Volumetric Mode | | Automatic Operation | | Uncontrolled Water Meter Operation [minutes] |
| | Watering Time | | Seasonal Adjustment | | Station Number Icon |
| | Irrigation Days ON/OFF | | Rain OFF - No Watering (static)
Low Battery indicator (blinking) | | |

Programming Steps

Basic Modes Settings

Select DC or AC Operated Solenoid

NOTE: This value can be set only after power-up or full unit reset.

Press  in order to switch between DC and AC solenoid.

Factory Default: If working with an AC adapter, either DC or AC solenoid may be used.

If working with a 9 Volt battery, only DC solenoid option will be available.



Select 24 or 12 Clock Mode

NOTE: This value can be set only after power-up or full unit reset.

Factory default value is a 24 hour clock.

Press  in order to switch between 24 and 12.



Select TIME or VOLUME Operation Mode

NOTE: This value can be set only after power-up or full unit reset.

Press  in order to switch between Time and Volume. The selected method indication (time/volume) will be showed on the operational screens.

Press  in order to move to next settings screen



Basic Modes Settings

Set RAIN SENSOR Usage

Press  in order to switch between with / without sensor



Set MASTER VALVE or Additional Station

Press  in order to switch between Master and an Additional Station.

(Relevant for two or more stations only.)

NOTE: Value set must correspond with valves actual usage.



Basic Methods Settings

Set Multi or Sequential Irrigation Program Method

The following is relevant for two or more stations only.

NOTE: If the value is changed, the irrigation program data will be lost.

Press  in order to switch between Multi (MP) and Sequential (SP).

For SP setting the sequential icon will be lit. For MP setting the icon will not be showed.

Press  in order to move to next settings screen



Current Time & Day

Set Current Time and Current Day

NOTE: Press and hold will advance digits quickly.

Press  or  in order to set current time. In order to set the day of the week press 

NOTE: Press and hold both  &  in order to reset time and day to factory default.

Press  in order to move to next settings screen



Irrigation Program Settings

Irrigation Settings – General Notes

Each irrigation program consists of three parameters for each station:

1. Watering Time / Volume.
2. Watering Days.
3. Program / Station Start Time.

Using the  button, takes you from one step to the next and from one station to the following.

The station icon and the "pointing hand" icon will be blinking throughout all programming steps.

NOTE: For volumetric operation there are additional three parameters – H.F.R., T.O.R., F.U.T.

Programming Steps

Irrigation program Volumetric Parameters Volumetric Mode Only

NOTE: Setting one of the limit parameters "OFF", may end with an un-controlled watering in case of a damaged pipe or wire disconnection. It is NOT recommended to set the value to "OFF".

Set High Flow Rate (H.F.R.) Limit

H.F.R. defines the minimal time gap between two water meter pulses. Any shorter time measurement will indicate a high flow. Press   buttons in order to set the H.F.R. value. In order to move to the T.O.R. setting press .



Factory Default:
60 seconds

Set Timer Override (T.O.R.) Limit

T.O.R. defines the maximal time allowed between 2 water meter pulses. Any longer time measurement will indicate water meter malfunctioning. Press   buttons in order to set the T.O.R. value. In order to move to the F.U.T. setting press .



Factory Default:
10 minutes

Set Fill-Up Time (F.U.T.)

F.U.T. defines the time it takes to fill up the system piping. During this time, water is running free and the unit will not detect high flow condition. Press   buttons in order to set the F.U.T. value. In order to get back to the H.F.R. setting press .



Factory Default:
6 minutes

Press  in order to move to next settings screen

Irrigation Program Common Parameters For All Irrigation Modes

1 Watering Time / Volume

NOTE: It is necessary to set time/volume other than "0" in order to operate automatically. Press on  to increase watering time/volume or on  to decrease time/volume. Press on  to program the next station.



Factory Default:
OFF (No watering)

NOTE: This button enables you to quickly navigate to desired station program

Press  in order to program watering days

2 Watering Days

NOTE: It is necessary to set at least one watering day in order to operate automatically. For watering days, you may select Days of the Week or Days Cycle.

1st screen – Days of the Week:

Press on  to set a particular day as irrigation day or  to skip the day. The cursor will advance to the next day. To set irrigation days cycle, press on  till screen shows "0 0".

2nd screen – Days Cycle:

Press  to increase the cycle by one day or  to decrease it by one day. You can select from 1 - every day, to 30 - once every 30 days. Screen shows cycle on the right and remaining days till next irrigation on the left.

► DAYS
CYCLE



Factory Default:
All Days OFF

Press  in order to program watering start times

3 Program / Station Start Time

NOTE: It is necessary to set at least one start time in order to operate automatically. You can program up to 3 start times for each station (MP) or for each program (SP).

Press on  to increase or  to decrease the start time. Press on  to program the next start time for the station (MP) or for the sequence (SP)*. Press on  to switch to the watering time/volume setting of next station.

* Relevant for two or more stations only



► START X
Factory Default:
All Starts OFF

Press  in order to move to manual watering screen

Operational Screens

Manual Mode Manual Watering Screens

NOTE: To get to the MANUAL screen from any stage, press  and hold the button for 2 seconds. Two MANUAL operation modes are available, each has its own screen:

1. **Manual** - Manual start per station.
2. **Sequential** - Manual start per sequence. Relevant for two or more stations only.

Common for both screens:

Press  or  to open and close the station or the sequence.

- An open station icon will be lit. A remaining irrigation countdown will be shown.
- If you leave a station ON, it will automatically be closed according to the programmed time/volume.
- If no time/volume is set, the unit will do a two minutes/pulses irrigation.
- A closed station icon will blink. Current time will be displayed.

Press  to select next station. Selected station's icon will blink.

After three minutes, the controller will change to AUTO screen.

Manual Screen: Press  to select sequential screen (Relevant for two or more stations only).

Sequential Screen: Press  to advance to AUTO RUN screen.



Single station Start



Sequence Start

Press  in order to move to AUTO screen

Auto Mode Auto Screens

This screen shows current time and day as well as an opened station indication and its remaining irrigation time or volume. Controller will always show AUTO screen after three inactive minutes.

All active alerts will override this screen data. Press both  &  in order to cancel an alert.

In order to stop irrigation (Rain-OFF) or to resume it, Press both  & .

AUTO

Automatic Operation

Press  in order to move to WATER BUDGET screen

Water Budget Seasonal Adjustment

When you wish to increase or decrease watering time/volume for ALL programmed stations, you can do it by using the percentage scaling adjustment. This method saves the need to go through your detailed irrigation program. It might be useful during weather changes. Watering scaling is within the range of 10% - 200%, in 10% steps.

%

Factory default
100%

Press  in order to move to Settings screens

Alerts

Common for All Alerts

- **“Sticky” alert screen** – Upon active alert, controller displays the alert type. While alert is active, you will not be able to change screens till you cancel it. While trying to do this, a graphic response of blinking icons will be showed, but the screen will not change
- **Cancel an alert** – is done by pressing both  &  for 2 seconds.
NOTE: Watering will not take place till you cancel an alert (!)
- **Simultaneous Alerts** – if more than one alert is active, screen will move between the active alerts. For each alert, the alert type and causing station icon will be showed.

Controller’s Reaction to Alerts

Type	Display	Watering Suspend	Remarks
Low Battery	“AL:bt”	ALL stations (!)	 “OFF” icon is lit
Over Current	“AL:Cr”	Generating STATION ONLY	 station # icon is illuminated
High Flow	“AL:HF”	Generating STATION ONLY	 station # icon is lit
Timer Override	“AL:tr”	ALL stations (!)	 -  controller will cancel this alert at midnight

Buttons

Buttons Combination	Function	Remarks
 Short press	Go to Next screen	Cyclic activity
 2 sec. press	Go to MANUAL screen	Quick jump
 10 sec. press	Unit RESET	Programmed data will be lost
 & 	Rain-OFF in/out	2 sec. press at AUTO-Run screen
 & 	Set factory default value	In all setting screens
 & 	Cancel an Alert	2 sec. press during active alert

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