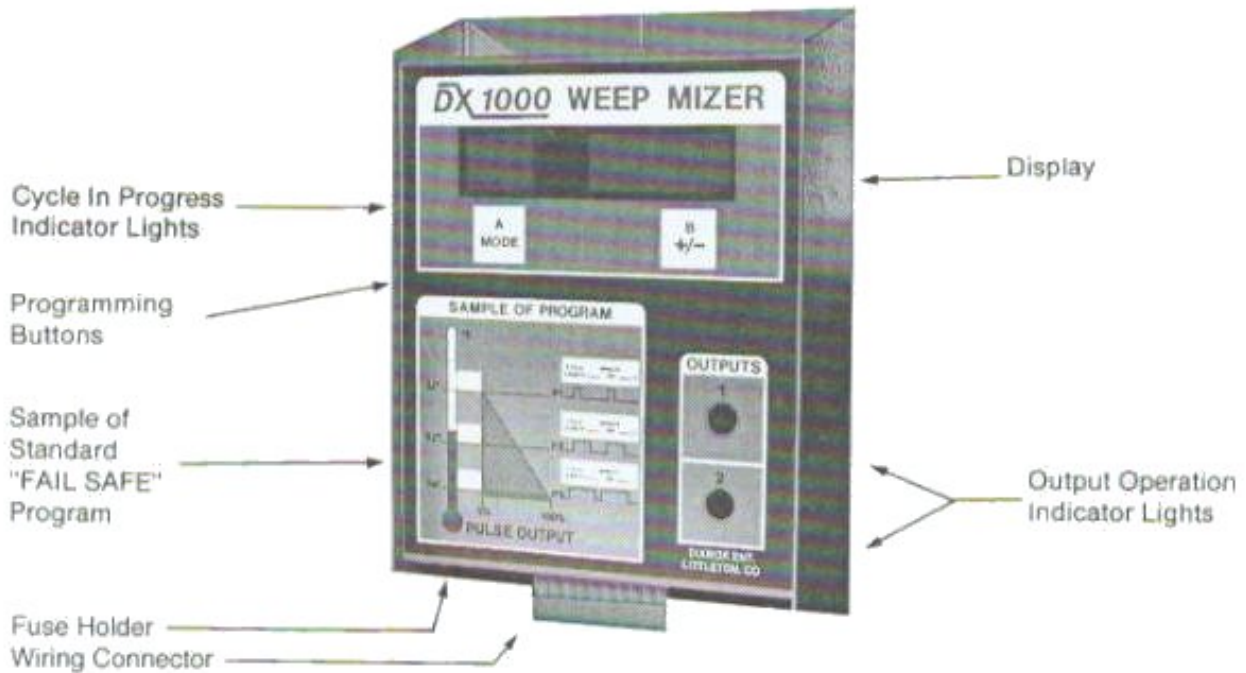


INSTALLATION AND OPERATING INSTRUCTIONS



SPECIFICATIONS

NORMAL DISPLAY	Outside Temperature (coldest of sensors)
POWER REQUIRED	120 volt wall outlet
OUTPUT VOLTAGE	24 or 120 Depending on Input
OUTPUT 1 OPERATION	Cycles Weep System Solenoid Valve
OUTPUT 2 OPERATION	On or Off on Rise or Fall of Temperature
OUTPUT 1 CYCLE LENGTH	Adjustable in 30 second increments
SENSOR LENGTH	25 foot standard; any length optional
MEMORY RETENTION	Long life lithium battery included
MAXIMUM OUTPUT LOAD	3 AMPS
FUSE (PROTECTS OUTPUT CIRCUIT)	5 amp maximum
WARRANTY	2 year limited

INTRODUCTION

The DX1000 WEEP MIZER is a microprocessor controlled system which will automatically cycle your existing normally open solenoid valve (normally closed optional), depending on outside temperature. When it starts it only runs water for a few seconds and as the temperature drops it automatically stays on longer and longer until it finally stays on 100% of the time. This is all controlled by the settings you program into the unit, or you may use the built in program. You may wish to install sensors in two locations and the WEEP MIZER will automatically operate from the coldest one. The WEEP MIZER also has a secondary output which can turn any function on or off, inside or outside, depending on rise or fall of temperature.

The WEEP MIZER comes to you preprogrammed with what we call the "FAIL SAFE" program. This is the program we used for development and testing in the Denver area with excellent results and weep water savings of 65%. We recommend that you use this program which operates as follows: At 35° F, automatic operation begins and the cycle in progress indicator lights begin to flash on and off.

Temperature	Cycle Length	% of Cycle Water Runs
AT 35° F	1 minute	10% or 6 seconds
25	1 minute	50% or 30 seconds
15	1 minute	90% or 54 seconds
14		100% or full on

As you can see we are using a 1 minute cycle as standard and for every degree the temperature drops the water stays on approximately 2 seconds longer. At 1 degree below the coldest setting the water turns on 100% and the cycle in progress indicator lights stop flashing since there is no longer a timed cycle in progress.

cycle in progress indicator lights stop flashing since there is no longer a timed cycle in progress.

FAMILIARIZATION AND CHECKOUT

You do not need to have any sensors or valves hooked up for this checkout. Simply plug your WEEP MIZER into a convenient 120 volt wall outlet. As you go through the checkout if you wait more than 20 seconds without pushing a button the unit will automatically reset itself to the normal operating mode. Observe the front panel and you will see a red area near the top, this is the display. Directly beneath the display are two white areas marked A MODE and B ±, these are the programming buttons we later refer to as A and B. Directly beneath the A button is an area marked SAMPLE OF PROGRAM. This shows how the "FAIL SAFE" program operates. Below the B button are two output indicator lights which show when the outputs are turned on. REMEMBER, with a normally open solenoid valve the power must be removed to allow the valve to open and let water flow.

Plug the power cord into an outlet and the display will show a manufacturing code which tells us all we need to know about when the unit was built and etc. Then the display will read ° F -22°. Since there is no sensor attached this represents an open circuit; if a sensor was hooked up the display would show sensor temperature. There are 5 modes in the WEEP MIZER, each very helpful to you, and they are LOG, PROGRAM, OUTPUT 1, OUTPUT 2, and CLEAR.

PUSH	DISPLAY SHOWS	WHICH REPRESENTS
A	?_ Log	Mode in which useful data is stored
A	?_ Prog	Mode in which all programming is done
A	?_ Out1	Manual operation for output 1
A	?_ Out2	Manual operation for output 2
A	?_ Clr	Mode used to clear data in log

Now lets examine each mode individually;

A	?_ Log	Data storage mode
B	LO -22°	Lowest temperature since last cleared
A	HI -22°	Highest temperature since last cleared
A	ON 0000	Hours water has run since last cleared
A	If 38°	Normal average turn on temperature
A	If 0000	Hours below turn on temperature

NOTE: You can adjust the If temp. setting with B button (only thing adjustable in log mode except to clear it all)

NOW WHEN ° F -22 APPEARS

A twice	?_ Prog	Programming mode
B	At 35°	System turn on temperature or P1
B again	At 36°	This is how you change the program, push B to raise numbers, hold in B to lower the numbers. Reset to 35°.
A	By 25°	Middle set point or P2
A	To 15°	Coldest set point or P3
A	P1 01:00	Indicates 1 minute cycle length for P1
A	P1 10%	% of cycle water flows
A	P2 01:00	1 minute cycle length for P2
A	P2 50%	% of cycle water flows
A	P3 01:00	1 minute cycle length for P3
A	P3 90%	% of cycle water flows
A	LL -22°	Low Limit setting for output 2
A	HL 113°	High Limit setting for output 2

You have now seen all of the parameters used to make the WEEP MIZER work automatically. You can change any of the preceding settings by simply following the above steps until you get to the correct point and then change it by using the B button. Each push of B button raises the number one increment. Hold B in and the number rapidly decreases. The LOW Limit and HI Limit settings are for output 2 only and should not be changed at this time.

The next two Modes are identical in operation, Output 1, which controls your solenoid and Output 2, which will turn any secondary function on or off at a preset temperature. When display shows ° F -22° push button A 3 times and display will show ?_ Out1. Push B and it will show IS Off which means there is no power going to the valve. Water would be flowing if you were using a normally open valve, it would not be flowing if you were using a normally closed valve. In either case when output indicator light is on the power out is turned on. This mode will not reset itself so that you may do your maintenance without system turning back on unexpectedly. Push A to return to automatic operation.

The final mode is used only to clear all the data stored in the log. With display showing ° F -22° push A button 5 times. Display will show ?_ Clr. Since there is no useful information in the log yet we can clear it without losing

The final mode is used only to clear all the data stored in the log. With display showing "F -22" push A button 5 times. Display will show ?_Clr. Since there is no useful information in the log yet we can clear it without losing anything important. Push and hold B button and display will show ?_SURE and then DONE. You have now reset the log to zero and erased all data stored.

PROGRAMMING

If you do not wish to use the built in "FAIL SAFE" program and want to change to your own special settings simply go through the preceding checkout procedure until you get to the part you want to change. The A button gets you from mode to mode and the B button changes the settings in the Mode.

Output 1 is strictly to control your weep system as it cycles on and off and opens and closes your solenoid valve. Output 2 can control any other function you want to turn on or off depending on rise or fall of temperature. In some cases you will need to have output 2 turn a relay on and off. If you are controlling something with a different voltage than output 1 or if the load is more than 2 amps, you must use a relay. If you use output 2 keep in mind that as long as the temperature stays between the Hi limit and Low limit settings output 2 will be off. If the temperature goes above the Hi limit or below the Low limit output 2 will turn on. Due to the fact that temperature changes are sporadic and this would cause false switching of output 2 we have programmed it to eliminate this problem. For example, if output 2 is set to turn on at 32° and the temperature falls to 32° output 2 will turn on and remain on until the temperature goes back up to 33° thereby eliminating false short sporadic cycling of output 2 and whatever you are controlling. For output 1 once a cycle begins it will not shut off until at least 1 complete cycle has timed out.

If you feel you fully understand how the WEEP MIZER works proceed to the INSTALLATION section. If you have doubts go through the checkout procedure again and experiment. If you want to you can hook up a sensor to the unit and use an ice cube to cool it down and simulate outside temperature. To warm it up put your finger on the silver part of the sensor. It is best to make sure you fully understand how every thing works before installation because it is much easier when the unit and the sensor are on a bench side by side than it is to run back and forth and up and down a ladder to check things out.

REMEMBER THAT YOUR WEEP MIZER IS A MINI COMPUTER AND A COMPUTER IS ONLY AS GOOD AS THE INFORMATION YOU PUT INTO IT. IF YOU DON'T PUT THE RIGHT INFORMATION INTO IT YOU WILL GET THE WRONG RESULTS. AFTER YOU ARE DONE WITH THE CHECKOUT AND READY FOR INSTALLATION GO THROUGH IT ONE MORE TIME TO VERIFY EVERY THING IS SET THE WAY YOU WANT IT TO BE.

INSTALLATION

Pick a location on your wall that is near a 120 volt wall outlet and easily accessible, and satisfactory to get the sensor to where you want it to be located. When mounting sensor keep in mind that it will not work properly if mounted directly to the pump room wall due to the heat that leaks through the walls. Also we have had a number of occasions where it would pick up reflective heat from a building next door or from the roof with the sun shining on it. Also if there are any vents or cracks in the wall you are likely to get a false reading. We highly recommend mounting the sensor on an angle bracket at least 3 inches from the wall on the north side of your building.

CAUTION: REMOVE POWER PLUG FROM OUTLET BEFORE PROCEEDING.

The green connector is designed so that it can only be plugged in one way, however there is always the possibility that it may be done wrong so be sure when you install it the screwheads are away from you. If by any chance you plug it in backwards it will damage unit beyond repair and void the warranty. It is very obvious when one has been plugged in backwards. BE CAREFUL.

The sensors are sealed against normal rain and etc. but must not be submersed in water. If you wish to control something inside your pump room you need to mount a sensor there and wire it into sensor 3 position. It will then control output 2 independent of any other sensors. If you have sensors wired into both #1 and #2 slots output 1 will be controlled by the coldest of those two sensors.

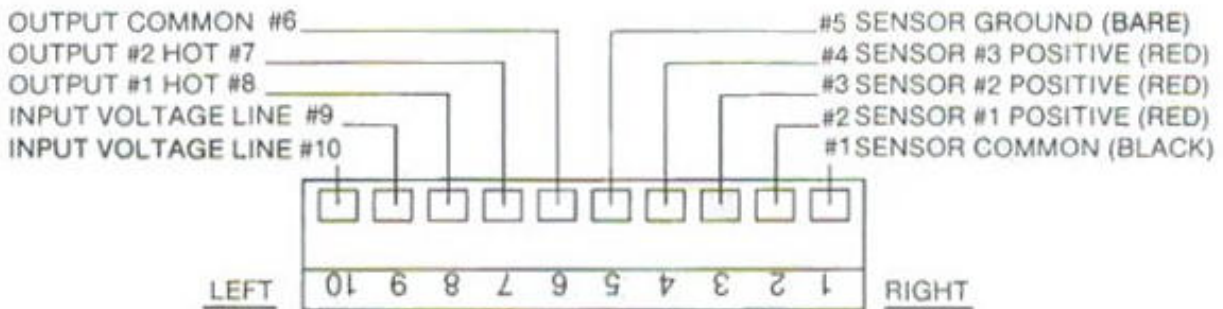
When installing the wires into the connector be very careful not to strip too much insulation from wire, ¼ inch maximum. Also be sure that all strands of the wire are fully in the proper slot and not shorted to the wire next to it.

MINIMUM 18 GAUGE WIRE MUST BE USED FOR ALL POWER.
 WHATEVER VOLTAGE YOU PUT INTO 9 and 10 WILL DETERMINE OUTPUT VOLTAGE.
 PINS 6 and 10 ARE INTERNALLY CONNECTED AND SHOULD BE NEUTRAL ON 120 volt.
 ALL BLACK SENSOR WIRES MUST BE IN SLOT 1
 ALL BARE SENSOR WIRES MUST BE IN SLOT 5
 RED SENSOR WIRES GO INTO THEIR APPROPRIATE SLOTS.

AFTER INITIAL INSTALLATION MOMENTARILY UNPLUG FROM WALL OUTLET TO RESET UNIT.

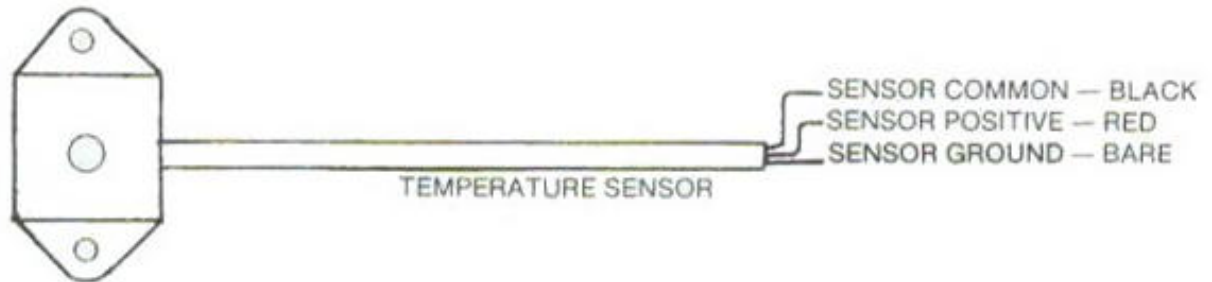
WEEP MIZER WIRING

REMOVE GREEN WIRING CONNECTOR BY PULLING DOWN ON IT.
INSTALL WIRING AS SHOWN IN DIAGRAM.
BE SURE ALL CONNECTIONS ARE PROPER AND TIGHT.



CAUTION:

PLUG MUST BE INSTALLED AS SHOWN.
VERIFY THAT CONNECTOR IS INSTALLED CORRECTLY WITH SCREW HEADS
AWAY FROM YOU BEFORE PLUGGING INTO WALL OUTLET!!



REMEMBER: WHEN POWER IS FIRST APPLIED TO WEEP MIZER THE DISPLAY WILL SHOW MANUFACTURING CODE, THEN °F (temperature of sensor). IF DISPLAY SHOWS ?? data, PRESS A BUTTON SEVERAL TIMES UNTIL DISPLAY SHOWS SENSOR TEMPERATURE.

HELPFUL HINTS: If you want to turn either output on or off to do your normal maintenance simply push button A until OUT 1 or OUT 2 is displayed, then push B until it is either on or off, whichever you prefer. Output will remain in this position as long as you want. This is the only time unit will not reset itself after 30 seconds. When you want to go back to automatic operation simply push button A one time. WEEP MIZER will reset to wherever it should be according to temperature of sensors.

IF YOU HAVE ANY PROBLEMS OR QUESTIONS THAT YOUR DISTRIBUTOR CANNOT ANSWER PLEASE DO NOT HESITATE TO CALL NICK OR MORRIS AT:

DIXMOR
enterprises

enterprises

5755 S. Gallup Street

Littleton, CO 80120

303/794-1387

Fax 303/794-0597