

SERIES 2100 - *WM-20(T)* & *WM-40(T)*

Installation and Operation Instructions

WATER ALERT[®] LEAK DETECTION SYSTEMS



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MADE IN USA

SECTION 1: PRE-TEST & MONITOR SETUP

CHOOSING A LOCATION FOR THE MONITOR

The location of the Monitor depends on many factors such as physical space, electrical requirements and whether or not the Monitor needs to be in a 24 hour manned environment. Wherever the Monitor is to be located, all models need 120VAC power. The WM-20(T), WM-40(T) need to be hardwired into 120VAC power. NOTE: ALL SERIES 2100 MONITORS DRAW A MAXIMUM OF 0.1 AMPS.

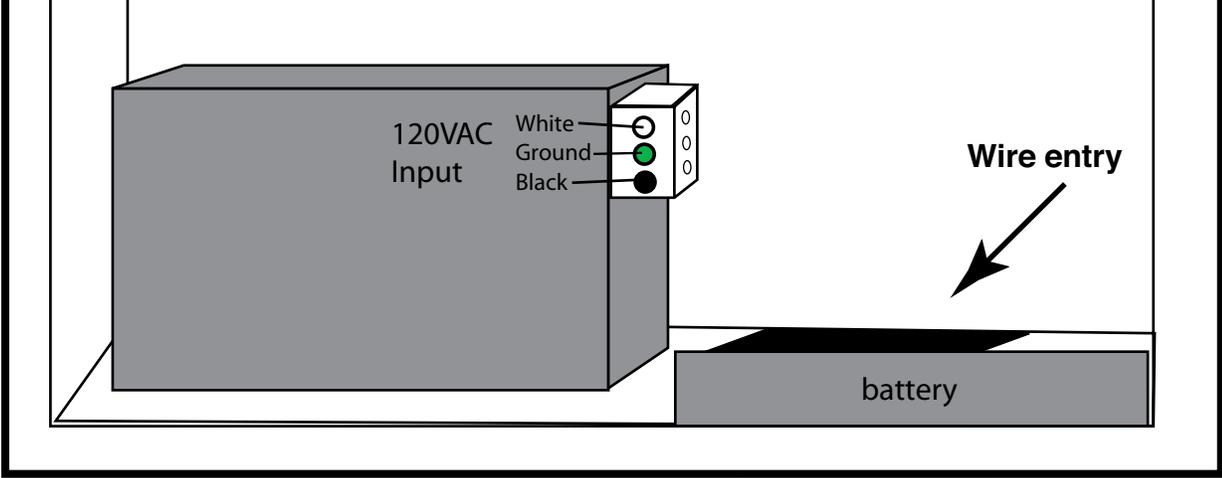
PRE-TESTING

Before mounting the Monitor panel, it is advisable that the system be powered and tested. This is to insure that all electronics are working properly and that the installer is completely familiar with how the system operates before proceeding. Unpack the Monitor and detectors; ONE detector has a sample cable for the pre-test (Wall mount units also have a AC line cord for the pre-test). See page 4 for information on connecting the detectors and page 6 for guidelines on testing the system. When the test is complete, disconnect the detector and put it aside - for now, leave the sample cable/detector combination in the state it was in when shipped.

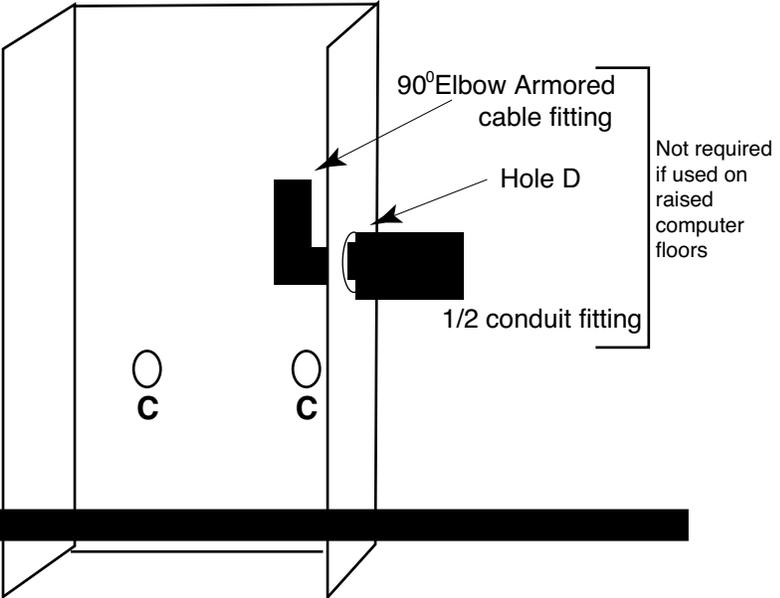
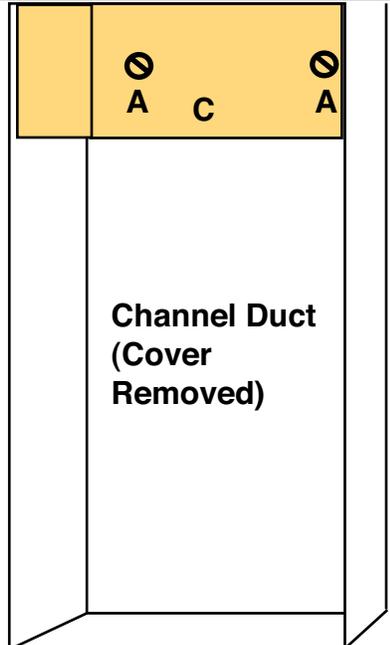
MOUNTING THE MONITOR

Mounting procedure:

1. Using the supplied masonry and/or plaster/wood hardware, mount the enclosure in the designated location. The cabinet itself can be used to mark mounting holes.
2. Install the surface wire duct (5 ft. Section) to the duct opening connector on the bottom right of the monitor- (duct cover must be removed).
Loosen screws A-A, and slide wire duct onto duct connector (C). Tighten screws A-A and install supplied screws for holes C-C (Taped on channel duct) SEE Page 2.
3. Run 3 conductor armored (BX) cable for 120VAC power (provided) through the newly installed surface duct and into the monitor enclosure. Follow the wiring instructions on the next page.



MONITOR



**DRG. A-9833
 120VAC WIRING**

Raised floor installation
 Channel duct penetrates floor ~ 2" (Armored cable runs to Junction box Below Raised floor, 120VAC)

Concrete floor installation
 Channel duct stops above floor ~1" (Armored cable runs to elbow supplied, Hole D, 1/2 conduit entry 120VAC)

SS-2100 WATER ALERT DETECTOR RUNS

Each SS-2100 detector is connected to the monitor panel by means of a single, low voltage cable (Dorlen Type D). The detector "home-run" cable starts at a SS-2100 detector and terminates at the monitor panel - see Page 5.

There are several different ways to run the subfloor wires to the location of the Monitor. Wire drops, conduit, surface duct material (provided) and other methods are all feasible.

SECTION 2: SYSTEM TEST VERIFICATION

This System Test Verification section assumes that the ,detector hook-up, home-run wiring and connections to the Monitor has been completed.

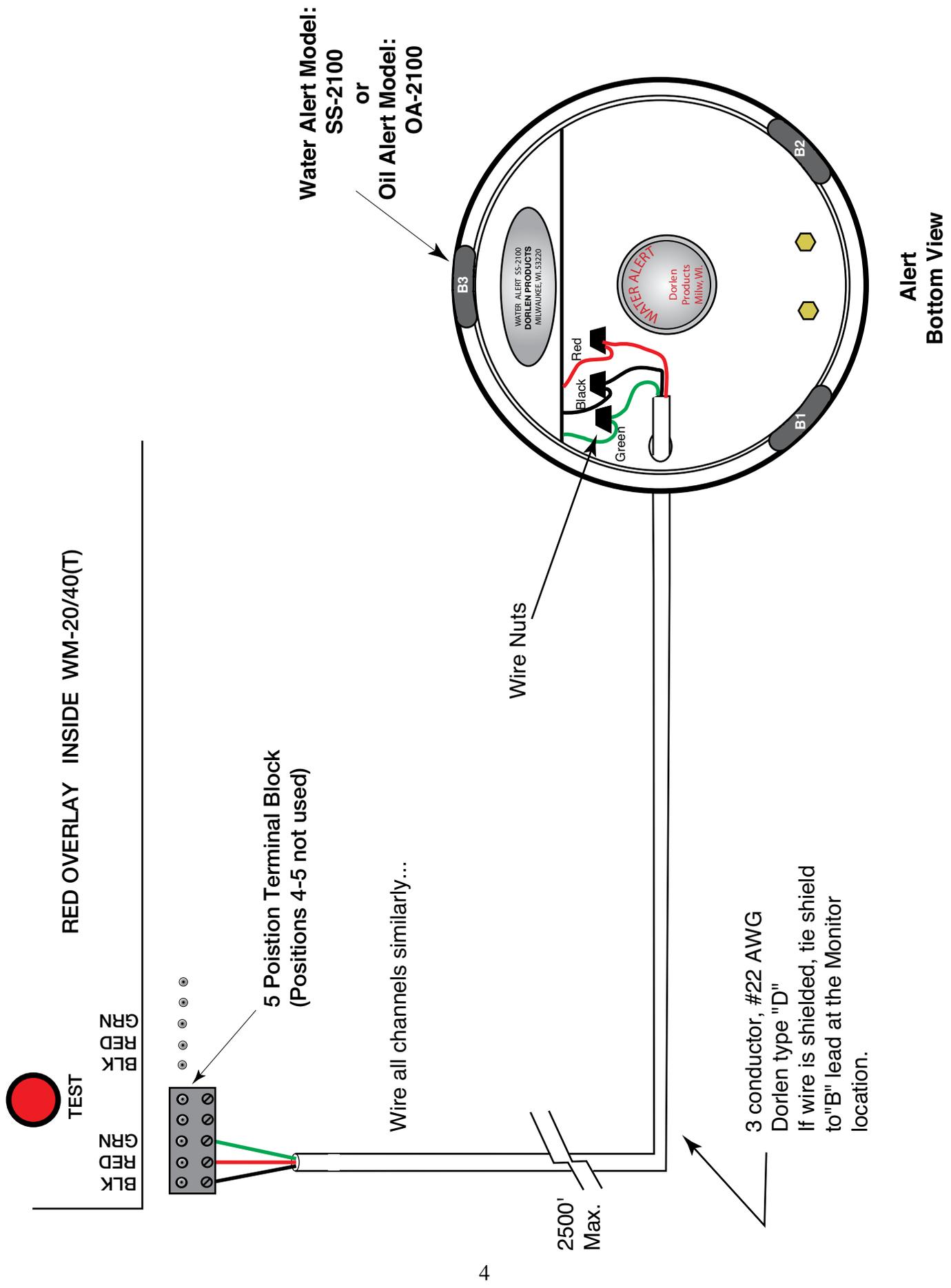
DESCRIPTION OF SERIES 2100 MONITORS

1. Provides power to connected SS-2100 Water Alert detectors.
2. Individual LED indication by zone of water leakage [WATER SENSED]
3. Provides zone selectable test signal to detectors. Verifies functions of Water Leakage Sensed Wiring.
4. Upon any leakage detect condition, monitor provides contact closure (DPDT) for connection to existing security panel..
5. Unit provides LED display , audible alarm, SILENCE switch, TEST push button(s), RESET switch and RELAY DEFEAT switch [WM-20(T) / WM-40(T) only].
6. System has rechargeable battery back-up...Provides 2 days of monitoring in the event of AC line failure...Battery recharges upon AC line return.

DESCRIPTION OF SS-2100 DETECTOR

1. Continually monitors floor/surface for water leakage. Internal buzzer sounds upon leakage detection and signal provided to connected Monitor Panel.
2. Detector is testable from Dorlen Monitor Panel.
3. SS-2100 features:
 - a. Powered from Dorlen Monitor Panel
 - b. Housed in compact molded housing
 - c. Solid State Piezo-Electric buzzer
 - d. Encapsulated circuitry, unaffected by moisture, dirt, humidity, long term operation, etc.
 - e. Wire Nut connections to Monitor Panel Cable ("D" Cable).

Wiring of SS -2100 Water Alerts and O A-2100 Oil Alerts to W M-20/40(T) SE RIES 2100 Monitor.



Water Alert Model:
SS-2100
or
Oil Alert Model:
OA-2100

**Alert
Bottom View**

MONITOR OPERATION - WM-20/40(T)

FRONT PANEL - WALL MOUNT

When the system is monitoring, the green "**System Monitoring**" LED will continually flash. Should AC power fail, the system will continue to monitor for a minimum of two days on the internal rechargeable battery. When AC line power returns, the batteries will automatically recharge (6 hours typical full recharge time).

Should any zone detect water, the red "**Water Sensed**" lamp will flash.

Alarm condition will cause the audible buzzer on the front panel to activate (unless the adjacent switch is in the "**Silence**" position).

INTERNAL CONTROLS - WALL MOUNT

The red plastic overlays should have marker pen zone locations indicated. Associated with each zone is a red LED (below the overlay) which indicate, by zone, "**Water Sense**". There is also a red recessed "**Test**" push-button associated with adjacent groups of TWO zones.

At the bottom of the enclosure is the Master Control Box. From left to right, these items are:

Fuse #1, 1/2 amp 120 VAC side of line

Fuse #2, 2 amp Low voltage side of circuit

"AC" Supplies AC power to system (apply before "BATT")

"BATT" Applies Battery back-up power to system

"RESET" If, as a result of the push-button "TEST" or an actual alarm condition) the system is activated, the reset switch will reset the system. If the alarm condition still exists, the system will reactivate.

"RELAY DEFEAT" When testing the system by means of the red push button, it may be desirable not to activate the relays. If this is the case, depress and hold the "RELAY DEFEAT" switch on the left side of the Master Control panel. As long as the switch is depressed, the relays will remain in their LAST state and they will transfer to the monitors CURRENT state (activated or not) when the switch is let go.

"RELAYS" There are double-pole-double-throw isolated relays which indicate "WATER SENSE" which are common to all channels. The LED's associated with each relay indicate when the relay is activated (i.e., alarm condition). These DPDT contacts are rated 28V at 1 amp resistive (200V MAX).

Before applying AC power, visually check the wiring connection at each orange connector against the color coding indicated on the red panel overlays. Correct any wiring errors...be sure the uninsulated shield wire connects to the black connection only.

POWER ON -

Apply AC power to the system by switching the "AC" switch to on. The green front panel System Monitoring" LED should indicate (flashing)...If any other front panel lights or internal LED's indicate depress the "**Reset**" switch.

Connect the back-up battery after AC power is applied by means of the "BATT-ON" switch. No change in any indication should occur.

MANUAL TEST-

Push and hold the recessed red "**Test**" **push-button** for at least 1 second:

If an SS-2100 Water Alert detector is connected to the zone, the Water Sense LED should light.

The momentary Test push-button operation causes the zone alarm to latch. This is desirable because a momentary or intermittent water leak is then "latched" until manually reset. Since many small leaks occur at night when water pressure is high, the latch feature aids in early detection. Proceed with the manual testing across each row. The relays will also activate and latch during the test procedure unless the "RELAY DEFEAT" is held depressed during the test procedure.

NOTE: Pushing the Test push-button sends a signal to the SS-2100 detectors. A properly working detector will send back signals to the monitor. The 2 detectors in the zone that is being tested will alarm while the Test push button is depressed.

Note that if NO detector is connected to a particular zone, NO LED's or buzzers should activate for that zone.

If any zone connected to a SS-2100 fails to respond properly to the manual test, check the wiring at the associated terminal strip and if necessary, the wire nut connections in the SS-2100 detector.

After all zones are tested and proper results obtained, the system is properly monitoring. If proper results are not achieved, call Dorlen Products, toll-free 1-800-533-6392 for technical assistance.

SECTION 3: MAINTENANCE AND TROUBLESHOOTING

Once the system is installed and tested per these instructions, One may want to retest the system after a few months or at some routine schedule to verify proper system operation. In the unlikely event that the system fails to perform properly, please refer to Trouble shooting below.

TROUBLE SHOOTING

If a particular channel fails to respond to the "Manual Test" or "System Monitoring" green LED fails to flash, proceed as follows:

1. Verify Monitor is getting 120VAC power.
2. Verify that all wires connected to the terminal strips are tightly connected and no loose wire strands exist.
3. Remove AC power and switch the battery switch to "OFF". Check that the wire nut connections inside the SS-2100 detector of the defective channel are intact.
4. Check the two fuses located on the Monitor Control Box.
5. If the above does not indicate cause of problem, call Dorlen Products at 1-800-533-6392 for assistance.

If you have installation questions, call **toll free** 1-800-533-6392

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