

New "VR" Series Water Alerts....  
Designed for use in Restrooms!

**PREVENT DOWNTIME, DAMAGE  
AND BUSINESS DISRUPTION!**

**CEILING GUARD<sup>®</sup>**



**WATER ALERT<sup>®</sup>**

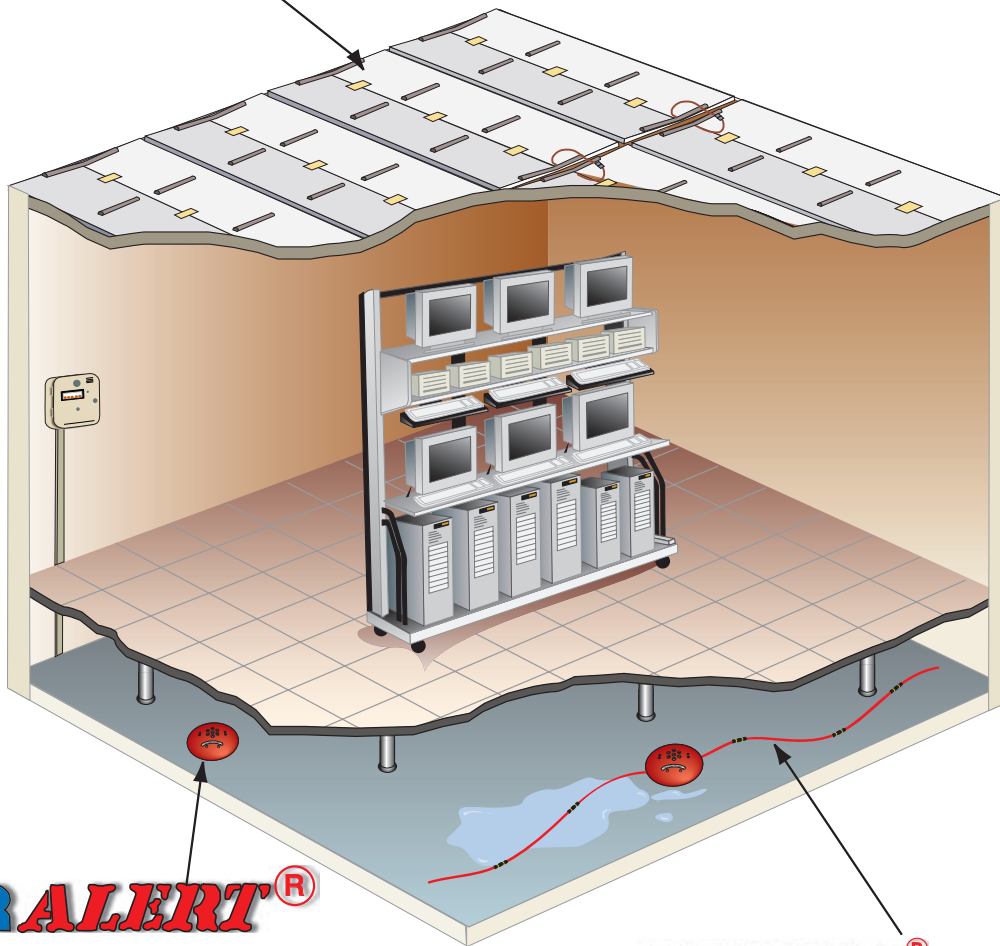
**WATER ALERT<sup>®</sup>  
SENSOR CABLE**

**SYSTEMS INSTALLED IN OVER 21,000 SITES ACROSS THE U.S.!**

**Detect small leaks ...** (condensate water overflow, chiller water leaks, plumbing line cracks, heating/cooling piping leaks, outside seepage, etc.)... **before damage and downtime occur!**

## **CEILING GUARD<sup>®</sup>**

- is a water leak detection system used in suspended ceilings. This system provides early warning of water drips and leaks before damage occurs to the area below.



## **WATER ALERT<sup>®</sup>**

- spot detectors are used in a wide range of applications to prevent damage and downtime from water leaks and spills. Six models available.

## **WATER ALERT<sup>®</sup> SENSOR CABLE**

- is a unique accessory that expands the capability of the WATER ALERT. Guards against undetected water leakage. Used in large areas or perimeter monitoring.

All Dorlen Products



Made in the USA



***NEW! "VR" SERIES Water Alerts-***  
***Vandal Resistant - For use in Restrooms.***  
***See Page 9 for details!***

All products in this catalog are available **DIRECT** from Dorlen Products Inc. This catalog is also available for download in pdf format at **www.wateralert.com**. Engineering specifications are also available for download at our web site. For help in system design, layouts and quotations, please contact Dorlen's technical dept. at 1-414-282-4840 or dorlen@execpc.com. Thank you!

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# **WATER ALERT<sup>®</sup>**

## **WATER LEAK DETECTION SYSTEMS**

### **"SS" Models**

*-6 Models with optional accessories to meet your specific requirements.*

*-Used in a wide range of applications, from computer rooms to mechanical rooms... anywhere undetected leakage can occur.*

*-All units tested 3 times during manufacture, and come with a **5 Year Limited Warranty**. Made in the USA.*

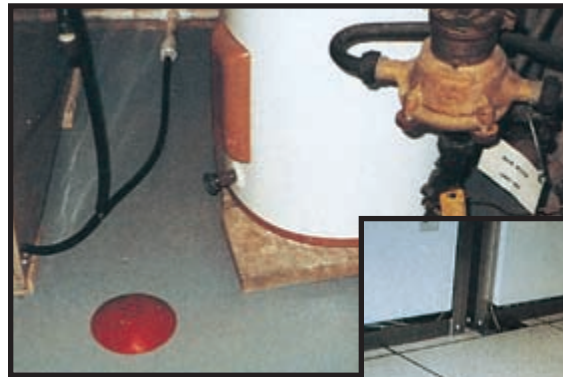
*-**Simple installation** using instructions furnished with all equipment, normally done by maintenance personnel. Typical spacing is one Water Alert for every 300-400 sq. ft.*

*-Water Alert will NOT activate due to high humidity and is not affected if submerged in water for short periods.*

*-Installed in over **21,000** sites across the U.S., Water Alert has proven to be the most rugged, simplest to install and longest lasting water detector available today.*



*From the boiler room...*



*to the computer room...*



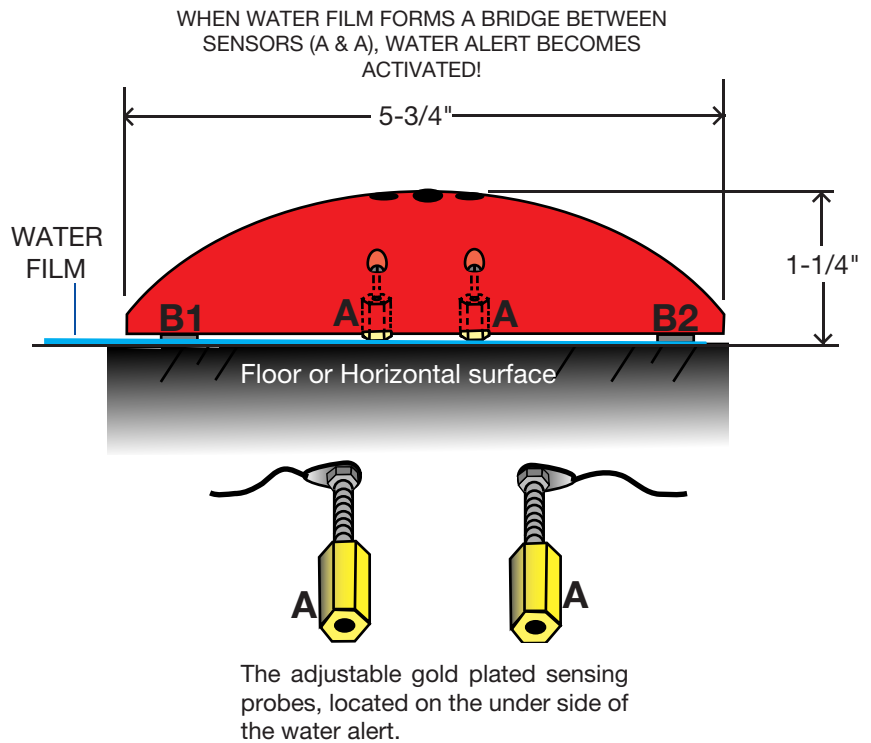
**AVOID THIS SCENE!**

**WATER ALERT will provide early warning of water leakage!**

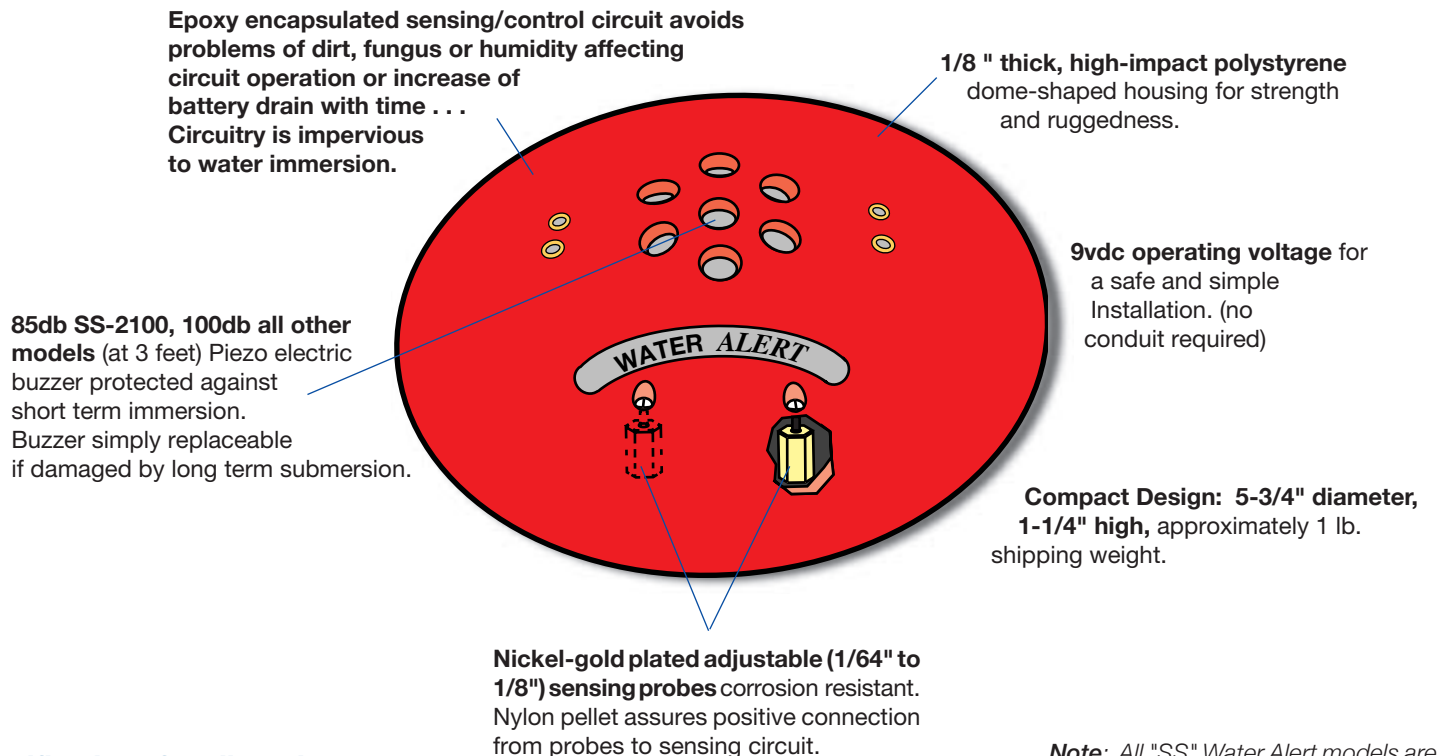
## PRINCIPLE OF OPERATION AND CONSTRUCTION "SS" MODELS.

Water Alert® is activated by liquid\* bridging the adjustable sensors (A & A). The unit can detect water film from zero height, (sensors turned out to make contact with the floor), to 1/8" height, (sensors turned all the way in). The units are factory adjusted to activate with 1/32" water film height which is satisfactory for most applications. The pads B1 and B2 provide a gap between the case and the surface to admit water under the unit for detection. If desired, the self adhesive pad feature may be used by peeling off the thin protective layer from each pad. The self-adhesive pads along with the inherent low convex Water Alert profile minimizes the chance of the unit being inadvertently moved about after being located. Replacement pads are available (no charge) by request from Dorlen Products.

\*Water leakage . . . including solutions of water and ethylene glycol (used in many computer room air conditioning systems).



## CONSTRUCTION



Specifications for all products are available for download at [www.wateralert.com](http://www.wateralert.com)

**Note:** All "SS" Water Alert models are the same physical size. The difference between models is the result of internal circuitry differences.

## **MODEL SS -** Standard Water Alert detector provides audible alarm when activated.

(Model XSS when using optional Sensor Cable)



### Powering options -

- 9v Alkaline Battery (Qty.1)
- PS-3 Power Supply (Pg. 25)
- Voltage Module (Pg. 26)

### Audible alarm -

- 100db @ 3 feet
- 3 day alarm duration (Battery Operation)

### Power draw -

- 25ma @ 9vdc (activated)

- Used in applications where only a local audible alarm is desired.

## **MODEL SS-1 -** Water Alert detector provides local and remote alarms when activated.

(Model XSS-1 when using optional Sensor Cable)



### Powering options -

- 9v Alkaline Battery (Qty.2)
- PS-3 Power Supply (Pg. 25)
- Voltage Module (Pg. 26)

### Audible alarm -

- 85db @ 3 feet
- 1.5 day alarm duration (Battery Operation)

### Remote alarm -

- 85db @3 feet w/ silence switch
- 9/16" Red lamp
- Wall Mounted 6"x3"x2" enclosure
- 50' Cable included

### Power draw -

- 40ma @ 9vdc (activated)

- Used in applications requiring a single detector and remote alarm. Often used in noisy or unattended areas.

## **MODEL SS-2 -** Water Alert detector provides audible alarm when activated.

(Model XSS-2 when using optional Sensor Cable)



### Powering options -

- 9v Alkaline Battery (Qty.2)
- PS-3 Power Supply (Pg. 25)
- Voltage Module (Pg. 26)

### Audible alarm -

- 100db @ 3 feet
- 10 day alarm duration (Battery Operation)

### Power draw -

- 25ma @ 9vdc (activated)

- Used in applications where only a local audible alarm is desired and an extended alarm duration is required. (Battery operation- 10 day).

## MODEL SS-4 -

(Model XSS-4 when using optional Sensor Cable)

Water Alert detector - No audible alarm...Provides isolated dry relay contacts (DPDT) which transfer and hold when activated. Self-resets.



- Used in applications where tie-in to an existing alarm panel is desired (Building Management System, etc.) and no audible alarm is necessary. Also ideal for extremely harsh environments and can control valves, pumps and other electrical equipment.

### Powering options -

- 9v Alkaline Battery (Qty.2)
- PS-3 Power Supply (Pg. 25)
- Voltage Module (Pg. 26)

### Audible alarm -

- None

### Relay contacts -

- DPDT (2- Form C)
- 28 VDC @ 1 amp. MAX.
- (For high power applications see p.26 model PR-WM)

### Power draw -

- 1ma @ 9vdc (activated)

## MODEL SS-5 -

(Model XSS-5 when using optional Sensor Cable)

Water Alert detector provides audible alarm and isolated dry relay contacts (DPDT) which transfer and hold when activated. Self-resets.



- Used in applications where tie-in to an existing alarm panel is desired (Building Management System, etc.). Can also be used to control valves, pumps and other electrical equipment.

### Powering options -

- 9v Alkaline Battery (Qty.2)
- PS-3 Power Supply (Pg. 25)
- Voltage Module (Pg. 26)

### Audible alarm -

- 100db @ 3 feet
- 10 day alarm duration (Battery operation)

### Relay contacts -

- DPDT (2- Form C)
- 28 VDC @1 amp. MAX.
- (For high power applications see p.26 model PR-WM)

### Power draw -

- 25ma @ 9vdc (activated)

## MODEL SS-2100 -

(Model XSS-2100 when using optional Sensor Cable)

Water Alert detector used to tie-into all Dorlen' Series 2100 Monitors



- Used in applications where a Dorlen Series 2100 Monitor / Power Supply is desired.

### Powering options -

- Powered from Monitor (Pg. 11)

### Audible alarm -

- 85db @ 3 feet

### Relay contacts -

- None

### Power draw -

- 20ma @ 9vdc (activated)



# **WATER ALERT® SENSOR CABLE**

*For large areas or perimeter monitoring the Water Alert / Sensor Cable system is your best defense against downtime due to water leaks and floods!*

*By using Water Alerts in combination with Sensor Cable the user can purchase a system specific to their needs, from a simple local audible alarm to a large monitoring system.*

**A UNIQUE ACCESSORY  
EXPANDS THE CAPABILITY OF  
"SS" SERIES WATER ALERT...**



## **FEATURES:**

- Sensors every 3 feet for practical and effective coverage
- 3 Standard lengths to match your requirements
- Local audible alarm - eliminates need for maps
- Adaptable to any "SS" SERIES Water Alert Detector (add "X" prefix to model #)
- Gold plated sensors for max. corrosion resistance
- Cable quickly dries providing no-fuss repeated use
- Up to 72 ft. of Sensor Cable per Water Alert
- Ultra-flexible, low memory cable
- No sensitivity adjustment
- No false activations
- Simple installation
- 5 year warranty



**Water Alert /  
Sensor Cable  
in mechanical  
Room**





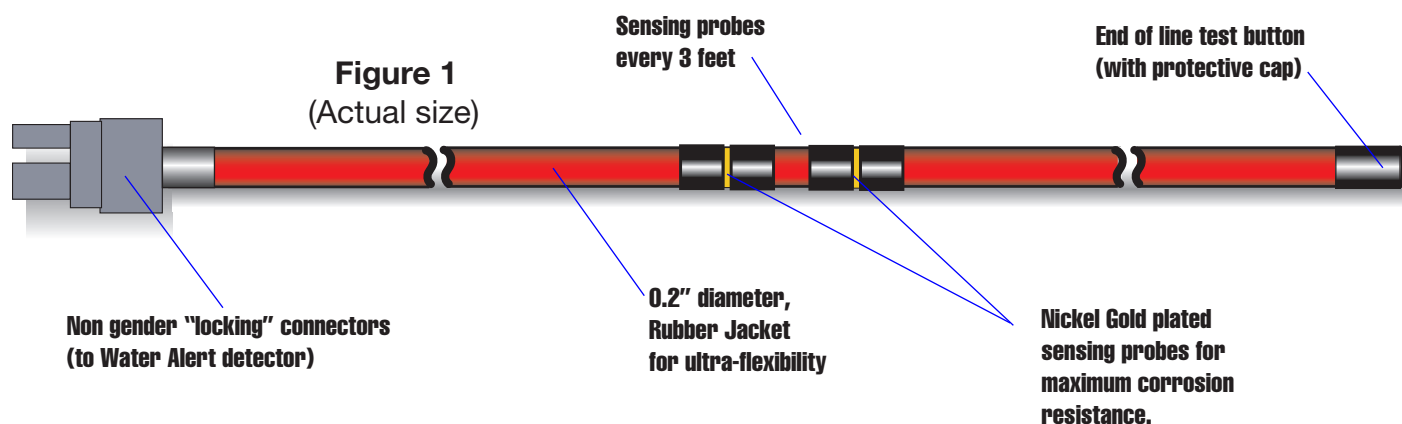
# WATER **ALERT**® SENSOR CABLE

## APPLICATION AREAS

- BELOW ACCESS FLOORING  
(Computer rooms, Data centers)
- BELOW GRATED FLOORING  
(Clean rooms, Semiconductor Mfg.)
- DATA CABLE RACEWAYS/TRAYS
- RECORDS STORAGE, ARCHIVE AREAS
- VALUABLE MATERIAL STORAGE AREAS
- MECHANICAL / ELECTRICAL ROOMS
- UNATTENDED & DIFFICULT ACCESS AREAS

## PRINCIPLE OF OPERATION AND CONSTRUCTION

The Sensor Cable is a multi-conductor wire with embedded gold plated sensors every 3 feet. These sensors act as extensions of the sensing probes contained within the Water Alert detector. Should any of the sensors come in contact with water the Water Alert will activate. Only 1/16" of water is necessary for detection. The Sensor Cable comes in three standard lengths **12, 24 and 36 feet**. One or Two Sensor Cables can be connected to any Water Alert. These connections are made with a non-gender, locking connector for a fast and durable installation. If desired, the cable may be kept in place along the floor with adhesive clips (included). **Figure 1** below shows the construction of WATER ALERT SENSOR CABLE.



The low voltage system is simple to install and is normally carried out by maintenance personnel with instructions furnished. Once installed, the system will provide years of maintenance free operation, guarding 24 hrs. a day against damaging water leakage.

\* Not for use with "VR" Series Water Alert detectors.

*Water Alert Sensor Cable **does not absorb, trap or wick moisture** into the cable for detection unlike coaxial or helical type detection cables. This leads to excessive dry-out periods, contamination by dissolved particles and mold and mildew forming, requiring the cable to be uninstalled and cleaned or replaced. This is one reason why our cable has the lowest maintenance and longest warranty available.*

MODEL #	LENGTH	SENSORS PER CABLE
<b>SC-12</b>	12'	4
<b>SC-24</b>	24'	8
<b>SC-36</b>	36'	12

# **NEW! "VR" SERIES-** **Vandal Resistant with "Wash Down" Mode.**

## **WATER ALERT<sup>®</sup>** **WATER LEAK DETECTION SYSTEMS** **"VR" Models**

*-2 Models with optional accessories to meet your specific requirements.*

*- Specifically designed for use in public and employee restrooms. (or any other areas such as laboratories and clean rooms that require frequent cleaning).*

*- Vandal and corrosion resistant design.*

*- "WashDown" mode enables the area to be cleaned, without activating the Water Alert.*

*-All units tested 3 times during manufacture, and come with a **5 Year Limited Warranty**. Made in the USA.*

*-Simple installation using instructions furnished with all equipment, normally done by maintenance personnel.*

*- In wall or surface conduit wire entry.*



### **MODEL VR-4 -**

Water Alert detector provides isolated dry relay contacts (DPDT) which transfer and hold when activated. Self-resets.

#### Powering options -

- 12 to 24 Volts AC or DC  
(Power Supply available -  
Model [PS-4](#) see Pg. 25)

#### Audible alarm -

- None

#### Relay contacts -

- DPDT ( 2- Form C-Low Voltage )
- 28 VDC@ 1 amp. MAX.

*(For high power applications  
see Pg. 26 model [PR-WM](#))*

#### Power draw -

- 25mA @ 24VAC.

### **MODEL VR-2100 -**

Water Alert detector used to tie-into all Dorlen Series 2100 Monitors

#### Powering options -

- Powered from Series 2100 monitor. (Pg. 11)

#### Audible alarm -

- None

#### Relay contacts -

- None

#### Test feature-

- Yes

#### Power draw -

- 20mA @ 9vdc.



## PRINCIPLE OF OPERATION AND CONSTRUCTION "VR" MODELS.

The VR Series is activated by water or any conductive fluid bridging the sensors (A & A). Upon activation the external L.E.D. indicator (B) will light RED. Once the liquid is removed, the VR Water Alert will self re-set. The VR Series is also equipped with a "Wash Down Mode". This feature allows the area to be cleaned with water without activating the Water Alert. The Wash Down Mode can be adjusted from 15 minutes to 2 hours. During this time the sensing circuit in the VR Water Alert is disabled. Once the Wash Down Mode times-out, the VR Water Alert will automatically resume sensing liquid. To activate the Wash Down Mode, the cleaning personnel simply pushes the external piezo switch (C). This switch has no moving parts and is touch sensitive. The external L.E.D. (B) will light Green, indication the VR Water Alert is now in Wash Down Mode.



Vandal Resistant  
cover screws  
(Stainless steel)

Extra heavy duty  
Powder coated  
aluminum housing

### External View

A  
B  
A  
C  
Water Sensing Probes  
(Stainless steel)

External L.E.D.  
indicator

Wash Down Mode  
Piezo Switch  
(Stainless steel)

Wire entry hole for  
"surface conduit"  
wire routing.  
(Conduit kit available-  
See Page 28.)

### Internal View

Wire entry hole for "in wall" wire routing - All  
hardware included.

Wash Down Mode  
duration adjustment  
15 Min to 2 Hours.

Epoxy encapsulated  
electronic circuit.

Power ON  
L.E.D. indicator.

Wire connection termi-  
nal block.  
(Model VR-4 Shown)

Unit dimentions-  
4.5"W x 2.25"H x 2.5"D  
Weight- 1Lb.

Patent Pending





## ***General Description***

The Series 2100 is an early warning leak detection system utilizing the latest line of Dorlen Products remote monitors and compatible SS-2100 / VR-2100 Water Alert detectors. All Series 2100 Monitors monitor, power and test the connected Water Alerts. The easily installed system is made up of only 3 separate components- 1 Monitor (7 models available), up to 40 Water Alert detectors, and Dorlen type "D" interconnect cable. Each system is characterized by the monitor used. When one or more Water Alert detects water leakage it will activate and signal the monitor. The monitor will then activate providing an audible alarm, red flashing lamp, LED indication of activated Water Alert(s) and transfer a dual set of isolated relay contacts. The Water Alerts may be located up to 2500 feet from the monitor. Monitors are available in both shelf and wall mount configuration.

## ***Features common to all SERIES 2100 Monitors -***

- Monitors will **monitor and power** the connected Water Alerts (Water Alert Model SS-2100 or VR-2100).
- Upon Water Alert activation, monitors sound **audible alarm, flashing red lamp** and **LED indication** of which Water Alert has activated.
- Monitors are equipped with automatic **internal battery back-up** in case of line power failure, system will remain monitoring for up to 4 days without AC power... Battery self recharges upon AC return.
- **Test Capability.** This feature enables the user to test the attached detectors while at the Monitor location. By simply selecting an individual detector and pressing the TEST push button, that detector will activate, activating the monitor. This test verifies all wiring is intact, Water Alert circuitry is operating properly and the Monitor has received the Water Alert signal. This test simulates a water leak and serves as a way to "exercise" the system...thereby insuring that the system is operating properly.
- Monitors are equipped with **2-SPDT isolated relay contacts** which will transfer upon any Water Alert activation for customer use in signaling existing security panels or other equipment. (Relays rated at 1 amp, 28VDC). Optional independent relays SPST for each channel available (ILR option...see price list).
- **Extremely simple installation...** Normally carried out by company maintenance personnel with instructions furnished. ALL hardware included.
- **Ultra-reliable performance;** All products come with a **5 year Warranty...**prices shown on attached price list.

*For help in system design, layouts or quotations, please contact  
Dorlen's technical dept. at 1-414-282-4840 or [dorlen@execpc.com](mailto:dorlen@execpc.com)*

# WATER ALERT<sup>®</sup> SERIES 2100 - Monitored Systems



Series 2100 Wall Mounted monitor.

Screw type terminal connections on all monitors to terminate "D" Cable.

Dorlen type "D" cable (see p.28). 3 conductor #22 AWG, Stranded w/vinyl jacket. (Also available in Plenum) 2500' max. distance between each Water Alert and the Series 2100 monitor. (9vdc)

SS-2100 or VR-2100 Water Alert detector (SS-2100 shown)

Optional Sensor Cable, an accessory to any "SS" Series Water Alert detector. See p.7-8.

*This table summarizes the Series 2100 product line.*

Series 2100 Monitor Model#	CHANNELS Max. # of Water Alerts	MAX. COVERAGE AREA		MOUNTING	TEST CAPABILITY FROM MONITOR	PHOTO AND SPECIFICATIONS	DETECTOR MODEL#
		Water Alerts	Water Alerts w/ Sensor Cable				
<b>SM-6(T)</b>	6	2400 Sq. Ft.	3300 Sq. Ft.	Shelf Mount	Manual Test (push button) ↓ Automatic Test	P.13	<b>SS-2100 or VR-2100</b> ↓
<b>SM-12(T)</b>	12	4800 Sq. Ft.	6600 Sq. Ft.	↓		P.13	
<b>WM-6(T)</b>	6	2400 Sq. Ft.	3300 Sq. Ft.	Wall Mount		P.14	
<b>WM-12(T)</b>	12	4800 Sq. Ft.	6600 Sq. Ft.	↓		P.14	
<b>WM-20(T)</b>	20	8000 Sq. Ft.	11,000 Sq. Ft.	Wall Mount	↓	P.15	
<b>WM-40(T)</b>	40	16,000 Sq. Ft.	22,000 Sq. Ft.	↓		P.15	
<b>SM-12(AT)</b>	12	4800 Sq. Ft.	6600 Sq. Ft.	Shelf Mount	Automatic Test	P.16	↓

## **MODEL SM-6(T) and SM-12(T)**



Monitors, powers and tests **6 / 12** SS-2100 or VR-2100 Water Alert detectors.

- Shelf or Rack mounted
- Test feature
- Visual and audible alarms
- DPDT Relay contact outputs
- Battery back-up
- 5 Year Limited Warranty
- Made in the USA

The SM-6(T) and SM-12(T) are used to monitor areas 2400 to 6600 Sq. Ft.. The monitors are shelf or rack mounted for simple installation. All hardware, installation/maintenance manuals and warranty are included with the monitor.

*See pages 11 and 12 for a general description and detailed features of all Series 2100 Monitors.*

Rear View SM-6(T) and SM12(T)



### **SM-6(T) AND SM-12(T) SPECIFICATIONS**

Monitor Input Voltage/Current: 115VAC 10%, 60Hz, .2Amp max.

Monitor Output Voltage: 9VDC (To detectors)

Monitor Audible Alarm: 85db at 3 feet

Input: UL Listed wall adaptor

Dimensions / Wt. SM-6(T): 8.5"Wx9.5"Dx2.5"H / 7lbs

Dimensions / Wt. SM-12(T): 17"Wx12"Dx3.5H / 20lbs

Construction: All aluminum, textured oven baked finish

Panel- off white, Housing- blue.

Screw type terminal strip wire connection.

Warranty: 5 Year Limited



## **MODEL WM-6(T) and WM-12(T)**



Monitors, powers and tests **6 / 12** SS-2100 or VR-2100 Water Alert detectors.

- Wall mounted
- Test feature
- Visual and audible alarms
- DPDT Relay contact outputs
- Battery back-up
- Key Reset switch
- 5 Year Limited Warranty
- Made in the USA

The WM-6(T) and WM-12(T) are used to monitor areas 2400 to 6600 Sq. Ft.. The monitors are surface wall mounted for simple installation. All hardware, including a 5 ft. length of wire duct, installation/maintenance manuals and warranty are included with the monitor.

*See pages 11 and 12 for a general description and detailed features of all Series 2100 Monitors.*

### **WM-6(T) AND WM-12(T) SPECIFICATIONS**

Monitor Input Voltage/Current: 115VAC 10%, 60Hz, .2Amp max.  
Monitor Output Voltage: 9VDC (To detectors)  
Monitor Audible Alarm: 85db at 3 feet

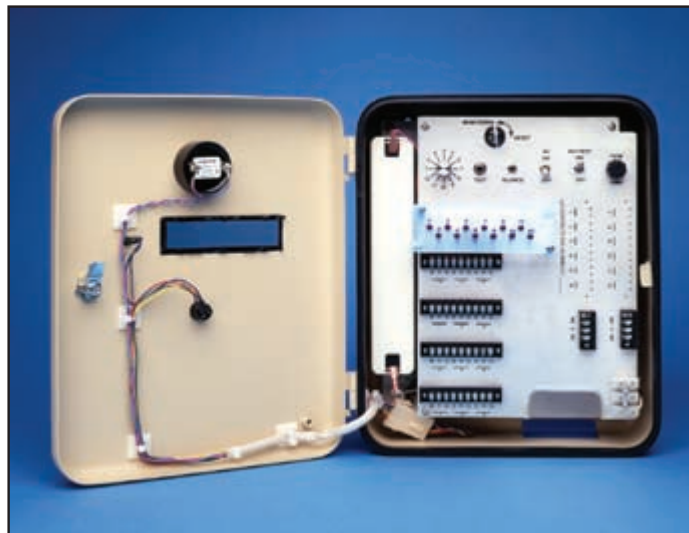
Input: UL listed input transformer, Terminal strip hard wired.

Dimensions: 10"Wx5"Dx12"H  
Weight: 20lbs.

Construction: NEMA 4 steel, Oven baked textured beige finish.  
Screw type terminal strip wire connection.

Warranty: 5 Year Limited

Internal View - WM-12(T)



## **MODEL WM-20(T) and WM-40(T)**



Monitors, powers and tests **20 / 40** SS-2100 or VR-2100 Water Alert detectors.

- Wall mounted
- Test feature
- Visual and audible alarms
- DPDT Relay contact outputs
- Battery back-up
- 5 Year limited Warranty
- Made in the USA

The WM-20(T) and WM-40(T) are used to monitor areas 8000 to 22,000 Sq. Ft.. The monitors are surface wall mounted for simple installation. All hardware, including a 5 ft. length of wire duct, installation/maintenance manuals and warranty are included with the monitor.

*See pages 11 and 12 for a general description and detailed features of all Series 2100 Monitors.*

### **WM-20(T) AND WM-40(T) SPECIFICATIONS**

Monitor Input Voltage/Current: 115VAC 10%, 60Hz, .2Amp max.  
Monitor Output Voltage: 9VDC (To detectors)  
Monitor Audible Alarm: 85db at 3 feet

Dimensions / Wt. WM-20(T): 20"Wx4.75"Dx15.5"H / 35lbs.  
Dimensions / Wt. WM-40(T): 20"Wx4.75"Dx24"H / 50 lbs.

Construction: 16 Gauge NEMA 12 Slimline enclosure, textured oven baked finish, off white.  
Screw type terminal strip wire connection.

Surface wall mount - no need for wall cut-out. Surface wire duct included.

Warranty: 5 Year Limited

Internal View WM-20(T)



## **MODEL SM-12(AT)\***



Monitors, powers and auto-tests **12** SS-2100 or VR-2100 Water Alert detectors.

- Shelf mounted.
- AUTOMATIC TEST feature
- Visual and audible alarms
- Relay contact outputs
- Battery back-up
- 5 Year limited Warranty
- Made in the USA

**Monitor/Power Supply Provides Remote Indication of Water/Liquid Leakage Plus Capability of PERIODIC AUTOMATIC TESTING of the Individual Water Detectors from the SM-12(AT) Location . . . Especially Suitable for Large Critical Installations where manual testing is undesirable.**

See pages 11 and 12 for a general description and detailed features of all Series 2100 Monitors

The SM-12(AT) **can monitor and power up to 12 Water Alerts** and will provide an alarm signal (red flashing LED's, audible buzzer, and relay outputs) if any sensor is activated. In addition, the unit **will automatically scan test all the connected detectors at preset time intervals**. The periodic scan test sends a test signal out to each detector in sequence. The Test Scan can be set for Weekly, Daily or Repetitive intervals. Capable of Manual Scan Initiate also. The System can be operated with less than 12 detectors. A sensing circuit in each Water Alert receives the test signal and electronically switches in simulated water conductivity across its sensing probes. A properly working Water Alert will send back a return signal. **Any Water Alert which does not properly respond to the scan signal will be indicated.** Each test scan of the SM-12(AT) assures that: all system wiring is intact and that the water sensing and send back circuit of all Water Alerts are operating properly. **This scan test automatically "exercises" the total system...which goes beyond other supervised systems.** Provides separate isolated relay contacts for customer use if water is detected or if any Water Alert fails the scan test. Any detector sensing water will transfer the "Water Alert Activated" latch relay (SPDT). (This relay will not transfer as a consequence of the scan test) . . . Any detector failing the scan test will transfer the "Scan Fail" latch relay (SPDT). Relay contacts are brought out to marked rear panel terminal strips. Contact rating 1 amp, 28vdc resistive.

***Specifications for all products are available for download at [www.wateralert.com](http://www.wateralert.com)***

\*Formerly RI-2(AT)



# CEILING GUARD<sup>®</sup>

## WATER LEAKAGE SENSING SYSTEM

*Dorlen Products' Ceiling Guard system is your best defence to guard against water leakage coming from above your ceiling. Whether its a leaky roof, pipe leaks or above floor flooding, Ceiling Guard will provide early warning of the potential disaster, aiding in rapid response!*



## INTRODUCTION

The Dorlen Products' Ceiling Guard Water Leakage Sensing System is used to sense small amounts of water/liquid leakage above 2'x4' or 2'x2' suspended acoustical ceiling tiles. The system is made up of low profile (1/2" ht.) "troughed" sensing trays which contain small sensing contacts. These trays are fastened to the top side of the conventional drop-in ceiling tiles and are interconnected to form zones of protection...The zones, in turn, are terminated in a Dorlen **WATER ALERT<sup>®</sup>** detector.

The system is designed to detect and provide indication of small amounts of leakage *before* the leakage accumulates to the point of leaking through, or along the edges of the tiles to the area below. Installing Ceiling Guard provides a very high degree of protection against leakage from concealed piping and the roof or floors above the suspended ceiling.

Installation is very simple, while individual panel removability and overall ceiling appearance is retained. Ceiling Guard can be used with new or existing suspended ceilings. Ceiling Guard is an extension of, and works in conjunction with Dorlen's Water Alert<sup>®</sup> detectors.



*Top view of 2x4 Ceiling Guard Sensing Tray*



*Top view of 2x2 Ceiling Guard Sensing Tray*



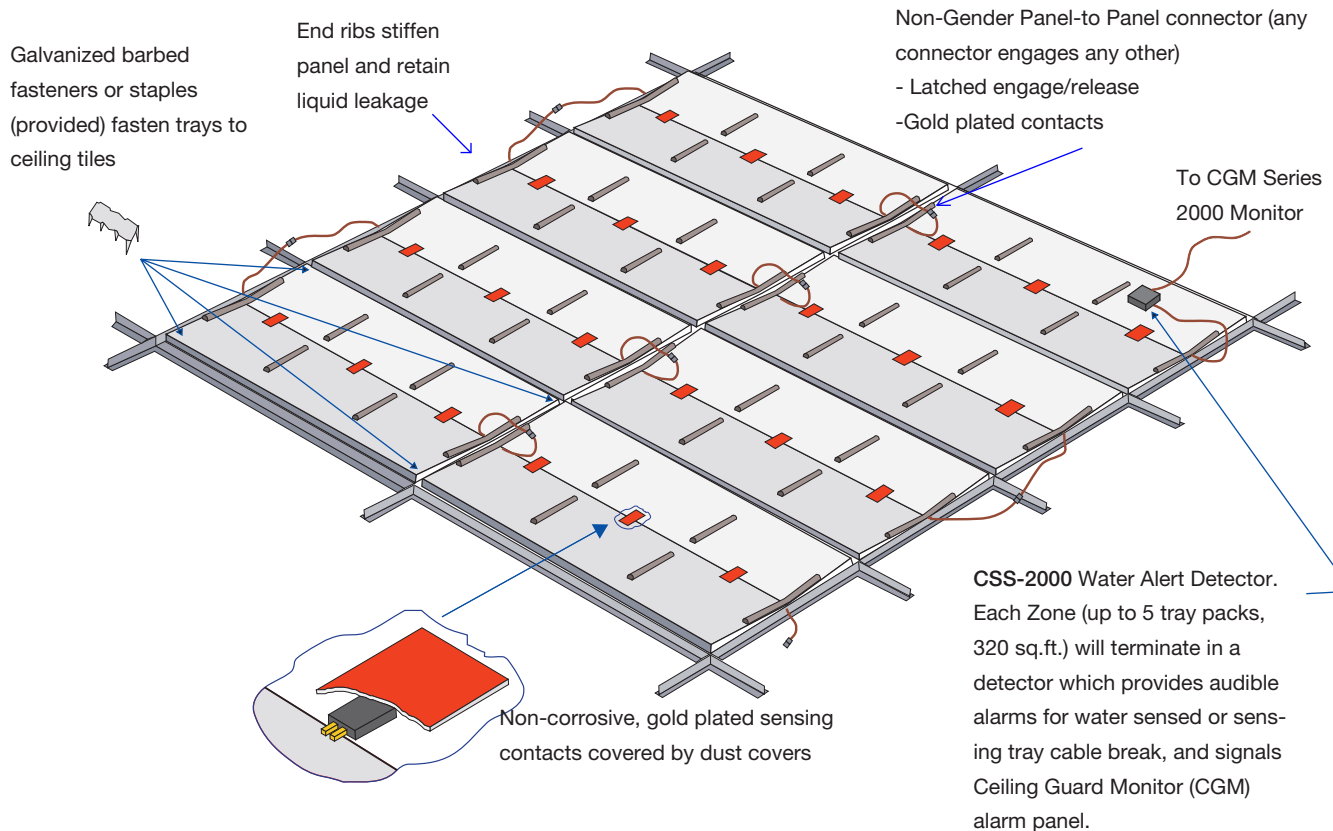
# CEILING GUARD<sup>®</sup>

## SERIES 2000 - Ceiling and Ceiling/Floor - Monitored Systems

### PRINCIPLE OF OPERATION

Each Ceiling Guard sensing tray contains small sensing contacts. The sensing contacts are parallel connected together on the underside of the sensing tray. The ends of the tray have panel-to-panel connectors which are engaged to adjacent trays during installation. If all trays in an array or zone are dry, a very high electrical resistance exists across the sensing contacts. Should any tray come in contact with water, the electrical resistance changes abruptly. This resistance change is detected at the end of the connection by a Dorlen Water Alert Detector. In most cases the Water Alert is Dorlen's Model CSS-2000 (See Series 2000 description pgs. 19-24.)

The flame retardant plastic sensing trays making up Ceiling Guard are sized to cover either the conventional 2'x4' or 2'x2' ceiling tiles. The smallest amount of water leakage into any sensing tray quickly finds its way to a sensing contact located in the trough of the tray thereby activating the associated detector.



### TYPICAL ABOVE CEILING VIEW

# CEILING GUARD®

## SERIES 2000 - Ceiling and Ceiling/Floor - Monitored Systems

### General Description

The Series 2000 is an early warning leak detection system utilizing the latest line of Dorlen Products "CGM" monitors and compatible CSS-2000 / SS-2000 Water Alert detectors. All Series 2000 Monitors monitor, power and test the connected Water Alerts. The easily installed system is made up of only 4 separate components- 1 Monitor (4 models available), up to 40 Water Alert detectors, Ceiling Guard Sensing Trays and Dorlen type "E" interconnect cable. When one or more Water Alert detects water leakage it will activate and signal the monitor. The monitor will then activate providing an audible alarm, red flashing lamp, LED indication of activated Water Alert(s) and transfer a set of isolated relay contacts (SPDT). The Water Alerts may be located up to 2500 feet from the monitor. Monitors are available in both shelf or wall mount configuration.

### Features common to all SERIES 2000 "CGM" Monitors -

- A single low voltage cable (.15" OD) from each CSS-2000 ceiling detector (or SS-2000 floor detector) to a Ceiling Guard Monitor panel simplifies wiring.
- Both the CSS-2000 and SS-2000 detectors are powered from the CGM' monitor thereby eliminating need for batteries within the detectors.
- The detectors are testable from the CGM' location. Simple push button test verifies that: A.) leakage detection circuitry is working properly and B.) zone supervision circuitry is working properly. This test also verifies proper operation during initial installation and at any later date to "exercise the system."
- The CGM' monitor provides isolated dry relay contact output (SPDT) if leak is detected...2nd relay output if zone wiring is disrupted (supervision). Relays are rated 28VDC. Max. at 1 amp.
- A momentary or intermittent water leak is latched into the CGM' monitor until manually reset.
- CGM' monitor provides visual and audible alarms with LED indication of activating detectors. (water leak sensed or tray system wiring disrupted)
- Rechargeable battery back-up...2 day monitoring without AC power...Battery recharges upon AC line return.
- CGM-6(T) and CGM-12(T) are shelf mount type enclosures. CGM-20(T) and CGM-40(T) are wall mount type.
- 5 Year limited warranty. Made in the USA.

*For help in system design, layouts or quotations, please contact Dorlen's technical dept. at 1-414-282-4840 or [dorlen@execpc.com](mailto:dorlen@execpc.com)*



CSS-2000 Ceiling  
Water Alert Detector

**CSS-2000**-For use with Ceiling Guard sensing trays, in terminating zone. Provides audible alarm for water leak sensed and zone wiring break (supervised). Requires Dorlen Type "E" cable (5 conductor #24 w/shield) for tie into CGM.

**SS-2000**-For use on floors, provides audible alarm. Requires Dorlen type "D" cable, (3 cond. #22) for tie into CGM Monitor.

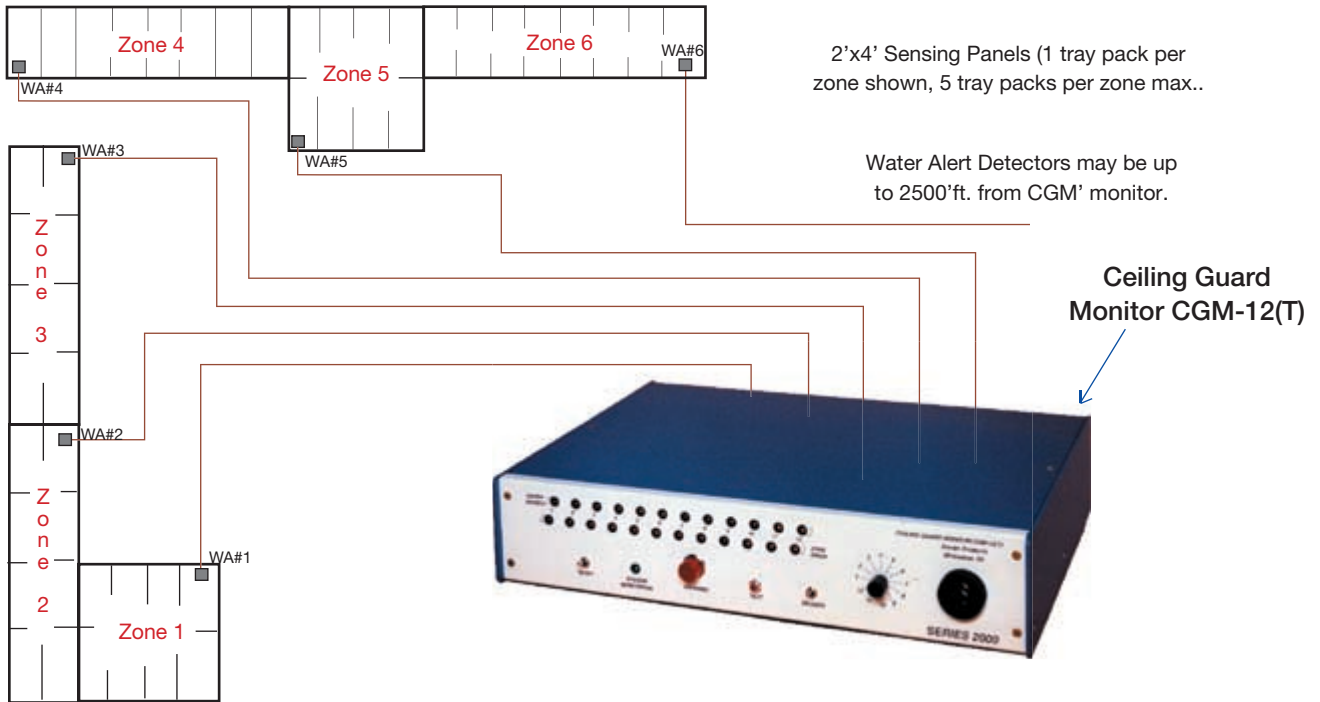


SS-2000 Floor  
Water Alert Detector



# CEILING GUARD<sup>®</sup>

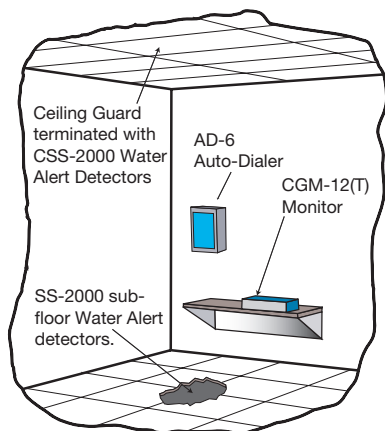
## SERIES 2000 - Ceiling and Ceiling/Floor - Monitored Systems



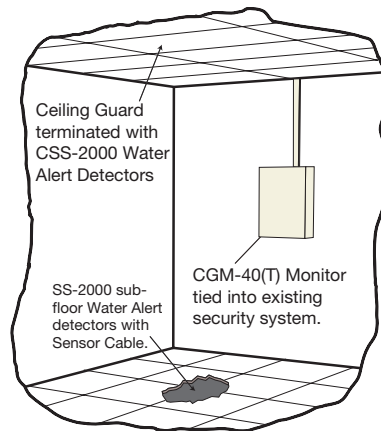
Top view of typical ceiling plan, 6 Zone. ( 1 tray pack per Zone shown, 5 tray packs per Zone maximum.)

### **SERIES 2000 COMBINED CEILING / SUB-FLOOR MONITORING**

Because often times there is a water leak threat from above the ceiling as well as below the raised floor, many users make up “combined” systems. Two typical combined ceiling/sub-floor monitoring systems are shown in figure below.



Series 2000 with Dial-out (AD-6)



Large Series 2000 system

# CEILING GUARD®

## SERIES 2000 - Ceiling and Ceiling/Floor - Monitored Systems



CGM-6(T)



CGM-12(T)



CGM-20(T)



CGM-40(T)

CGM-6(T)	Monitors and powers up to 6 CSS-2000 or SS-2000 Water Alert detectors. Includes Test feature, audible and visual alarms, and isolated relay contacts for water leak sensed or sensing tray cable break. Shelf mounted. 17"W x 12"D x 3.5"H. 8 Lbs.
CGM-12(T)	Monitors and powers up to 12 CSS-2000 or SS-2000 Water Alert detectors. Includes Test feature, audible and visual alarms, and isolated relay contacts for water leak sensed or sensing tray cable break. Shelf mounted. 17"W x 12"D x 3.5"H. 8 Lbs.
CGM-20(T)	Monitors and powers up to 20 CSS-2000 or SS-2000 Water Alert detectors. Includes Test feature, audible and visual alarms, and isolated relay contacts for water leak sensed or sensing tray cable break. Wall mounted. 20"W x 15.5"H x 4.75"D. 25 Lbs.
CGM-40(T)	Monitors and powers up to 40 CSS-2000 or SS-2000 Water Alert detectors. Includes Test feature, audible and visual alarms, and isolated relay contacts for water leak sensed or sensing tray cable break. Wall mounted. 20"W x 24"H x 4.75"D. 35 Lbs.

**NOTE:** For small areas (less than 1000 sq. ft., typical) a monitor may not be desired. Contact Dorlen for a data sheet on non-monitored Ceiling Guard systems.



CGM-40(T) Internal view

**SHELF MOUNT** - Units plug into 120VAC outlet(.1 amp). Detector wiring connects to rear panel marked screw-type terminal strips. Rugged attractive enclosure with textured oven baked finish. **UL listed line cord adaptor.**

**WALL MOUNTS** - Unit hard-wired or plug into 120VAC wall outlet (.5 amp max.). Detector wiring connects to interior marked screw type terminal blocks. Pre-punched mounting holes and surface wiring duct and opening provided. 16 gauge NEMA 12 slimline enclosure with textured polyester powder finish. Key lock optional.

Surface wiring duct channel and trim kit provided for detector wiring drop from ceiling.

Surface wall mount - no need for wall cut-out.

# CEILING GUARD<sup>®</sup>

## SERIES 2000 - Ceiling and Ceiling/Floor - Monitored Systems

### HOW CEILING GUARD IS INSTALLED:

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#### GENERAL

Installation Instructions are furnished with the particular type of equipment that is ordered. An overview of the general installation procedure follows.

Each Ceiling Guard Tray Pack is comprised of eight 2' x 4' trays (CG24) or sixteen 2'x 2' trays (CG22). The trays come with prewired sensing contacts and panel-to-panel connectors. Galvanized barbed fasteners for affixing the trays to the users ceiling tiles are furnished.

Upon receipt of Ceiling Guard Tray Packs and the associated detectors and monitor(s), the user removes the ceiling tiles from the suspended grid, (assuming an existing ceiling), fastens the individual trays to the ceiling tiles, re-installs the panels and interconnects panels according to the Installation Instructions furnished. Up to five tray packs may be interconnected to form a zone. One end of the zone will terminate in a CSS-2000 Water Alert. All CSS-2000 and SS-2000 Water Alerts will tie into the CGM Monitor.

There are a few special considerations to be observed relative to installation as described in the following paragraphs.

#### SPECIAL CONSIDERATIONS

A drop-in ceiling does not consist of strictly 2'x 4' or 2'x 2' tiles but rather there normally are "trimmed down" tiles along one or more sides of the room. Also, there are "lay-in" lamp fixtures, Heating/AC diffuser outlets, and sometimes sprinkler heads, halon heads and/or smoke detectors.

In the case of lay-in lamp fixtures, the installer fastens strips of plastic sheet (provided) to the sloping edge(s) of the lamp fixture by means of duct tape. This is done prior to installing the adjacent sensing panel. The sensing panel is installed under the plastic sheet. This arrangement has the effect of diverting leaking water from above the lamp fixture to the adjacent sensing tray. (See Pictorials p.23). Heating/AC diffuser outlets may be handled similarly. Trimmed down ceiling tiles are handled in two ways. If the dimensions of the trimmed tile are significant (greater than 13"), the sensing tray is trimmed to fit the reduced size ceiling tile. The trimmed tray is then fastened to the trimmed ceiling tile.

If the ceiling tile is trimmed to a narrow strip (less than 13"), duct tape is used to affix a strip of plastic sheet to the wall so as to divert leakage into an adjacent tray.

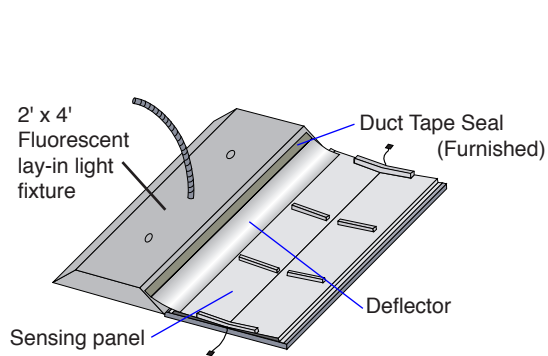
Where sprinkler-heads or smoke detectors exist; piping, conduit, junction boxes, etc. may pass through the existing ceiling tile. In these situations the installer makes appropriate cut-outs in the sensing tray to allow the obstruction to pass thru the sensing tray. From the adjacent panel opening, rubber sealer (furnished) is used to seal the obstruction to the sensing tray. (Page 23.)



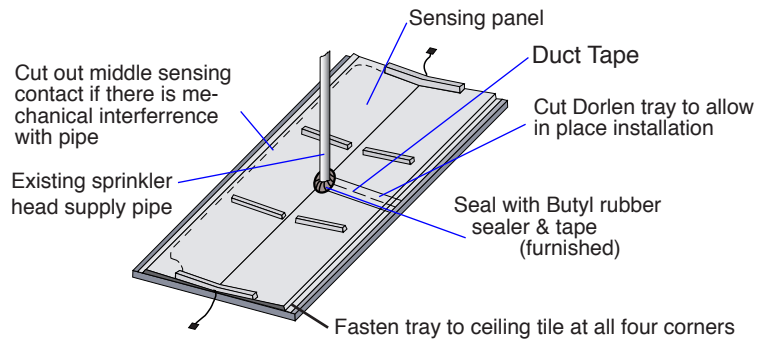
View of 1500 sq. ft. computer room after Ceiling Guard installed.

# CEILING GUARD®

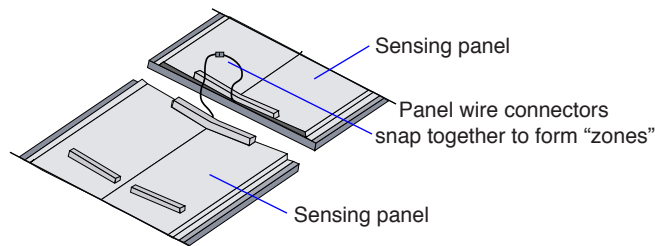
## SERIES 2000 - Ceiling and Ceiling/Floor - Monitored Systems



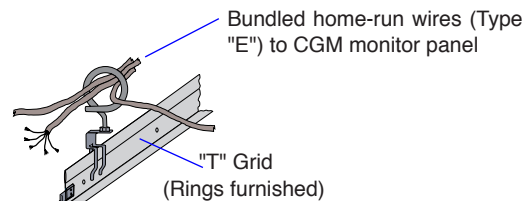
**FLUORESCENT LIGHT CG INSTALLATION**



**SPRINKLER HEAD CG INSTALLATION**



**PANEL-TO-PANEL INTERCONNECT**



**BRIDAL RING WIRING**

### ***Required materials:***

If you have 2' x 4' tiles, Model CG24 is the proper Tray Pack to order. If you have 2' x 2' tiles, Model CG22 is the proper Tray Pack to order. Prior to ordering, verify that your ceiling is or will be (new construction) made up of either 2' x 4' or 2' x 2' removable ceiling tiles, i.e.....the tiles are supported in a suspended grid system and can be removed by lifting and dropping out of the suspended grid.

#### **COMPLETE COVERAGE-**

By count, or using a ceiling plan, (sketch one up if necessary), determine how many tiles require sensing trays to protect the room below.

#### **PARTIAL COVERAGE-**

By count, or using a ceiling plan/equipment location diagram (sketch up if necessary), determine how many tiles require sensing trays to protect the equipment below.

In taking the count in either of the two above situations, the existing tiles along the border of the room may be narrower than the standard size. Count these as full tiles. If the tiles contain sprinkler heads or smoke detectors, include these in your tile count. Do not count lay-in 2' x 4' (2' x 2') lamp fixtures or A/C Heating diffusers.

#### **TRAY PACK COUNT-**

In the case of 2' x 4' tiles, divide the panel count taken above by 8 to determine how many CG24 Tray Packs are required.

In the case of 2' x 2' tiles, divide the panel count taken above by 16 to determine how many CG22 Tray Packs are required.

#### **DETECTORS-**

Each ceiling guard "zone" will terminate in a CSS-2000 detector, zone size may vary, but a maximum of 5 tray packs must be followed. If SS-2000 floor detectors are required, a good rule of thumb is 1 detector for 300sq. ft..

#### **CGM' MONITOR-**

The CGM' Monitor selected should have a zone capacity (channels) equal to or exceeding the detector count taken above (CSS-2000 and SS-2000) . Only a single detector only can be connected to a given zone (channel) input.



# CEILING GUARD<sup>®</sup>

## SERIES 2000 - Ceiling and Ceiling/Floor - Monitored Systems

### ADVANTAGES OF CEILING GUARD:

Dorlen Products conceived and developed the Water Alert leakage detection system in 1975. Since that time, tens of thousands of units have been installed and much experience has been gained. Based on this experience, various techniques have been tested and evaluated by Dorlen Products to arrive at the most **practical** and **reliable** approach to use in acoustical tile ceiling applications. The result of this effort has been the patented Ceiling Guard system. The foremost advantages of Ceiling Guard are:

- The Ceiling Guard System is **low in cost**. The avoidance of a single spill over critical equipment could well pay for the system many times over.
- The system is **low voltage** and easy to install...can be installed by maintenance type personnel.
- The troughed trays, by guiding the leakage to the sensing contacts, provide a very **high degree of protection**. The tray end ribs being "closed" serve to trap the leakage water further insuring detection of minute amounts of leakage.
- The **flame-retardant -PVC** plastic trays affixed to the top of the tiles present a low profile (only 1/2" above the tile). This low profile avoids interference with piping, ductwork, conduit, "T" grid suspension wires, etc.
- **Simple removability** of individual panels is retained after the system is installed.
- The **overall appearance** of the ceiling is **unaffected**.
- The system **will not activate due to high humidity**.
- **5 Year Limited Warranty**.



12,000 sq. ft. Data Center...Complete Coverage with Ceiling Guard.



University Rare Book Library...Ceiling Guard coverage over all bookshelves.

# ACCESSORIES / OPTIONS

## WATER ALERT POWER SUPPLY, MODEL PS-3

DC power supply eliminates batteries in "SS" Series Water Alert detectors - ideal for large installations where accessibility to Water Alert is inconvenient or battery operation is not acceptable. Output- 9vdc

### FEATURES

- Operates up to 24 Water Alert detectors, wiring instructions furnished.
- Internal self-recharging battery provides back up power to system in event of line failure or power cord removal.
- **UL Listed** input transformer.
- Flashing LED indicating power to Water Alerts.
- Large screw-type terminal blocks at rear of enclosure for convenient wiring. Connection to Water Alerts is made by means of wire nuts.
- Short circuit, overload and over voltage protected.
- Rugged, attractive enclosure 8.5" W x 9.5" D x 2.5" H.



PS-3 w/ Model SS Water Alert

## WATER ALERT POWER SUPPLY, MODEL PS-4

DC power supply for VR-4 Water Alert detectors. Output - 12vdc

### FEATURES

- Operates up to 24 Water Alert detectors, Model VR-4. Wiring instructions furnished.
- Internal self-recharging battery provides back up power to system in event of line failure or power cord removal.
- **UL Listed** input transformer.
- Flashing LED indicating power to Water Alerts.
- Large screw-type terminal blocks at rear of enclosure for convenient wiring. Connection to Water Alerts is made by means of wire nuts.
- Short circuit, overload and over voltage protected.
- Rugged, attractive enclosure 8.5" W x 9.5" D x 2.5" H.



PS-4 w/ Model VR-4 Water Alert

# ACCESSORIES / OPTIONS

## VOLTAGE MODULE MODEL VM-1

Rather than battery power it may be desirable to power "SS" Series Water Alerts with your 12 or 24V AC or DC (or any voltage in between). A Voltage Module will be required for each detector in this

The Voltage Module accepts 12-24v AC or DC to power "SS" Series Water Alert Detectors

application. The Voltage Module snaps into the Water Alert and will convert your voltage to 9VDC as required.



## POWER RELAY / POWER SUPPLY MODEL PR-WM

### FEATURES

- Unit is surface wall mounted in a NEMA 4x nonmetallic enclosure. Dimensions- 5.5" H x 3" W x 2.6" D
- Unit will power up to 2 Water Alert detectors Model SS-4, SS-5 and VR-4.
- **UL Listed** input transformer.
- Input: Normally Open Contact (from SS-4, SS-5 and VR-4)
- Output: SPDT Relay Contact (Form C) Rated - 120VAC @ 20 Amps.
- Large screw-type terminal blocks inside enclosure for convenient wiring. Connection to Water Alerts is made by means of wire nuts.
- Power ON LED, Relay Activated LED.

Used to control high powered equipment such as pumps, motors and solenoids from a SS-4, SS-5 and VR-4 Water Alert Detectors.



## REMOTE ALARM MODEL RA-WM

### FEATURES

- Unit is surface wall mounted. dimensions- 6"H x 3"W x 2"D
- **UL Listed** input transformer.
- Input: Normally Open Contact
- 10mm LED indicator
- 85db Audible Alarm w/silence switch

Used for additional indication of water leakage. Compatible with all Series 2100 monitors and SS-4, SS-5 and VR-4 Water Alert Detectors.



# ACCESSORIES / OPTIONS

## AUTO-DIALER MODEL AD-6

**Provides Off-Premise Indication of Water/Liquid Leakage and other Emergency Conditions.**

The AD-6 is a new state-of-the-art automatic telephone dialer and annunciator that is designed for use with various alarm devices. The AD-6 automatically dials a sequence of user programmed phone numbers (maximum of eight) and provides a custom voice message indicating the emergency condition which exists at the dialer location (building, small business, office, computer room, etc.)

Applications include private, commercial, institutional and industrial situations - providing a warning, especially at night, that an emergency situation exists, and allowing the called party to take immediate action to prevent or minimize damage or financial loss.

The AD-6 Auto-Dialer is compatible with a number of Water Alert combinations and also standard alarm devices which provide contact opening or closure. The remote devices are connected to the AD-6 by means of low voltage pairs of wire. Three individual inputs are available to monitor groups of contact operating devices. As example, the #1 input may be used to monitor a group of Water Alerts or Dorlen Remote Monitor, #2 input standard intrusion devices (normally closed contacts open) and #3 fire-detecting devices (normally open contacts close). Alternatively, three different zones of Water Alert groups may be used to activate the three inputs for dialer operation dedicated exclusively to water leakage detection. High and low temperature limits can also be programmed into the AD-6 (single temperature sensor included).

Upon activation of any of the three monitored inputs, the AD-6 will locally announce the Alert Condition for 30 seconds. If the "Alarm Cancel" switch is not pressed (i.e.; personnel are not present) the AD-6 will commence the dial-out, calling each of eight numbers sequentially. The first party answering the dial-out acknowledges receipt of the Alert Condition message by entering an acknowledgment code. This terminates the dial-out for this condition. The AD-6 will call continuously in the above fashion waiting one minute between each number dialed until acknowledged.



AD-6 Auto-Dialer

- Simple Installation

Connect alarm devices to marked AD-6 internal terminal strip.

Plug AD-6 UL Listed adaptor into 120VAC wall outlet.

Open door and program the phone numbers to be called via the small internal key pad.

Close door and plug AD-6 miniature plug into existing RJ-11 telephone jack and verify operation per instructions.

- May be used directly with Dorlen Water Alert models SS-4, SS-5, VR-4 or any Dorlen remote monitor, Series 2100 or Series 2000.

- Dialer announces both locally and over the telephone line which "Alert Condition" is activated, i.e. #1, #2 or #3 ... Will also dial out if a temperature limit is reached, AC power is lost (after 5 minutes delay) or if battery is low. Works with rotary or touch tone service.

- Dialer may be called from any off-premise location. The dialer will answer and state status of the three Alert Conditions, temperature existing at dialer, AC power (on or off) and battery condition (OK or low).

- Easily programmed using internal keyboard. Tamper resistant ... cannot change dial-out phone numbers with password protection if desired.

- Rechargeable back-up battery included. Backs up dialer for 15 hours should AC line fail. Upon AC power return, battery automatically recharges.

- Protected against high electrical noise ambient (heavy electrical machinery, etc.)

- Rugged, attractive "Wall Mount" enclosure, 7.25" W x 4.5" D x 11.25" H. Weight: 8 lbs. **UL Listed line cord adaptor - FCC approved.**

- Complete instructions furnished. The AD-6 comes with a **5 Year Limited Warranty.**



# ACCESSORIES / OPTIONS

## ELECTRIC ACTUATED VALVES

Used to shut off water supply once water leakage has been detected. For use with Model SS-4, SS-5, VR-4 or any Series 2100 monitor. PR-WM Power Relay also required (see page 26).

- Normally open valve
- 400 PSI Max.
- 1/2" to 2" sizes available
- 110 to 120VAC operation
- Full port design
- Triple stem seal design
- NTP Threaded Ends to ANSI B2.1
- Permanently Lubricated
- Thermal overload protection
- 35 F to 135 F operation
- ISO 5211 Mounting

Valves are manufactured by DuraValve Inc.. Dorlen Products Is an authorized re-seller. Valves are covered by a 1 year warranty from DuraValve Inc.

Size	Model#
1/2"	<b>EAV-1/2</b>
3/4"	<b>EAV-3/4</b>
1"	<b>EAV-1</b>
1 1/4"	<b>EAV-1-1/4</b>
1-1/2"	<b>EAV-1-1/2</b>
2"	<b>EAV-2</b>



## CONDUIT KIT- MODEL VR-KIT (For VR series Water Alert)

Used with VR-4 and VR-2100 for surface conduit wire routing.

The kit includes 25 feet of non-metallic corrosion proof 3/8" conduit, a 90 degree water tight conduit fitting, 4 stainless steel conduit straps and 8 stainless steel strap screws.

Also included is a 1/8 inch masonry drill bit. The Stainless steel strap screws are also tamper resistant.



## CABLE AND WIRE

<b>TYPE "B" CABLE</b>	Signal/Power wire - 2 conductor twisted pair, stranded #22 AWG. with vinyl jacket. 0.165" O.D. For use in Water Alert to AD-6 signal, PS-3 and PS-4 power runs less than 500'.
<b>TYPE "D" CABLE</b>	Signal/Power wire - 3 conductor, color coded, stranded #22 AWG. with vinyl jacket. 0.164" O.D. For use with all Series 2100 systems. (SS-2100 or VR-2100 Water Alert to Series 2100 Monitor.)
<b>TYPE "E" CABLE</b>	Signal/Power wire - 5 conductor, color coded, stranded #24 AWG. with vinyl jacket. 0.150" O.D. For use with all Series 2000 Ceiling Gurad systems. (CSS-2000 to CGM)
<b>TYPE "G" CABLE</b>	Signal/Power wire - 6 conductor, color coded, stranded #24 AWG. with vinyl jacket. 0.150" O.D. For use with VR-4 Water Alerts.
<b>POWER WIRE #18</b>	Power wire - 2 conductor twisted pair, stranded #18AWG. with vinyl jacket. 0.226" O.D. For PS-3 and PS-4 power runs between 500' and 2500'.
NOTE: Plenum rated cable and wire available; see price list.	

**DORLEN PRODUCTS, INC. FIVE YEAR LIMITED WARRANTY  
AND TERMS AND CONDITIONS OF PRODUCT SALE**

**Limited Warranty**

Dorlen Products, Inc. ("Seller") warrants its products to be free from defects in materials and workmanship under normal use and service for five (5) years from the date of original purchase. Seller agrees to repair or replace, at its option without charge to the original purchaser, any Dorlen Products that does not conform to this Limited Warranty. Seller shall not have any obligations under this Limited Warranty, or otherwise, if the Dorlen Product has been altered, or has been improperly installed, maintained or used, or has been repaired by persons other than Seller. Improper use or modifications of any Dorlen Product voids this warranty. 9 Volt alkaline and internal 12volt batteries and any other batteries are not covered by this warranty. DuraValves are not covered by this warranty. For warranty service, return your Dorlen Product, shipped pre-paid to Seller. Please include all company information and return address.

**THIS IS SELLER'S SOLE WARRANTY. THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, WHICH EXTEND BEYOND THIS LIMITED WARRANTY. IN NO EVENT WILL DORLEN PRODUCTS, INC. BE LIABLE TO PURCHASER OR ANYONE ELSE FOR CONSEQUENTIAL DAMAGES, INCIDENTAL DAMAGES, PROPERTY DAMAGES, WATER DAMAGES, LOSS OR DAMAGE OF ELECTRONIC DATA OR COMPUTER STORED MEDIA, LABOR OR REPAIR COSTS, LOST PROFITS, BUSINESS INTERRUPTION DAMAGES, COMPENSATORY DAMAGES, PUNITIVE DAMAGES, OR OTHER LOSSES OR DAMAGES OF ANY KIND OR DESCRIPTION RESULTING FROM PURCHASE, INSTALLATION, USE, OR FAILURE OF ANY DORLEN PRODUCT. THIS EXCLUSION OF ANY OTHER WARRANTY AND EXCLUSION OF LIABILITY FOR DAMAGES APPLIES TO ALL EVENTS AND OCCURRENCES, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY SELLER'S OWN NEGLIGENCE, FAULT OR BREACH OF PRODUCT WARRANTY.**

**PRODUCT PERFORMANCE:** All Dorlen Products are carefully manufactured, inspected and tested prior to shipment by Seller and are expected to perform as warranted. However, Seller has no control over actual installation and use of Dorlen Products. Seller does not inspect the Purchaser's use, installation or maintenance of Dorlen Products. Seller does not warrant or represent that all products it sells will always perform exactly as expected and will never fail. Product purchaser understands that there are installations, events and circumstances where properly manufactured Dorlen Products may fail to detect potentially damaging environmental conditions, including water leakage or moisture, or may fail to provide an alarm, due to technical limitations of the customer's installation and product use which are beyond the control of Seller. The Seller does not provide insurance for Purchasers and does not guarantee that there will never be occasions under which the product user may sustain losses, water damage or injury following purchase, installation or use of a Dorlen Product. **SELLER SHALL HAVE NO LIABILITY WHATSOEVER FOR PROPERTY DAMAGES, INJURY OR LOSS BASED ON ANY CLAIM THAT DORLEN PRODUCT(S) FAILED TO GIVE WARNING OR ALARM. IN ANY CIRCUMSTANCES OR JURISDICTIONS WHERE SELLER MAY NONETHELESS BE HELD LIABLE FOR LOSSES OR DAMAGES ARISING OUT OF PURCHASE, USE OR INSTALLATION OF A DORLEN PRODUCT, IN THAT EVENT, SELLER'S MAXIMUM LIABILITY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE OF THE DORLEN PRODUCT(S), OR \$500, WHICHEVER AMOUNT IS GREATER. THE PRODUCT(S) PURCHASER, AND ANY SUCCESSORS OR ASSIGNS INCLUDING INSURERS PAYING LOSSES OR DAMAGES, DO HEREBY RELEASE AND DISCHARGE DORLEN PRODUCTS, INC. AND SELLER FOR ANY AND ALL DAMAGES, LIABILITIES AND OBLIGATIONS IN EXCESS OF THIS STATED LIMITATION OF DAMAGES.**

**INDEMNIFICATION:** Purchaser agrees to this Limited Warranty, and the exclusions of liability and limitations of damages stated herein and acknowledges that the price paid for Seller's product includes these Terms and Conditions of Product Sale. In the event that a lawsuit is filed or any claim is made against Dorlen Products, Inc. or its officers and employees demanding payment for damages, injuries, losses, or cost rising out of Purchaser's installation or use of a Dorlen Product, Purchaser agrees to fully indemnify, defend and hold harmless Seller upon such lawsuit or claim, including Seller's attorney fees and legal costs, regardless of whether the claimed damages are caused by Seller's own negligence or fault, or otherwise.

**RETURN POLICY:** All returns are subject to a 10% restocking fee. No returns after 60 days of shipment date.

**PURCHASER'S ACCEPTANCE OF TERMS AND CONDITIONS:** By ordering and using Sellers product(s), the Purchaser irrevocably accepts Seller's Limited Warranty and these Terms and Conditions, without modification. Any contrary, inconsistent, or competing Terms and Conditions stated in customer's Purchase Order and/or purchasing documents are expressly rejected and not accepted by Dorlen Products, Inc. By keeping your purchased Dorlen Product(s) for ten (10) days or longer after product delivery, the Purchaser acknowledges, agrees to, and fully accepts this Limited Warranty and all stated Terms and Conditions of product sale including the Product Performance and Indemnification provisions.

**Previously Manufactured Products** - This catalog describes the latest line of Dorlen Water Alert detectors and monitors. It is recommended these products be used for new installations. However, if you are expanding an existing installation and require any previously manufactured product these are available... Please request pricing on the specific product(s).

Dorlen's systems are extremely reliable, easy to install and have a 5 year limited warranty.  
We are the leader in water leak detection and have been in business for over 30 years...

***Over 21,000 sites in the U.S. have Water Alert systems installed!***

*For help in system design, layouts or quotations, please contact Dorlen's technical dept. at 1-414-282-4840 or [dorlen@execpc.com](mailto:dorlen@execpc.com).*



***PREVENT DOWNTIME AND DAMAGE!!***

### **HOW TO ORDER**

Orders may be placed by phone, fax, or mail (to address below) on your company order form.

#### **ALL PRICES:**

FOB MILWAUKEE, WI  
(Shipping prepaid and added to invoice)  
Orders normally shipped UPS

**TERMS:** Net 30, subject to credit approval.  
WE ALSO ACCEPT CREDIT CARD ORDERS!



**NOTE:** Instructions, Wiring Diagrams (if applicable) and Warranty included with all equipment shipped.

## **Dorlen Products**

6615 West Layton Avenue, Milwaukee, WI. 53220  
Phone: 414-282-4840 Fax: 414-282-5670 E-Mail: [Dorlen@execpc.com](mailto:Dorlen@execpc.com)

***[www.watalert.com](http://www.watalert.com)***

## A small sampling of **WATERALERT®** users:

Agilent Technologies	Indiana State Archives	Texaco
Allied Signal	International Paper	Texas Instruments
Allen Bradley	IBM	Smithsonian Institute
American Airlines Flight Academy	Intel	Sharp Electric
American Express	Johnson & Johnson	Sears Roebuck & Co.
Brookdale Hospital Medical Center	Lockheed Martin	Tampa Electric Co.
Boeing	Lucent Technologies	University of Michigan
Brookhaven National Lab.	Motorola	US General Service Administration
Citibank, N.A.	Maine State Archives	University of Wisconsin
Ford Motor Company	Naval Weapons Support Center	US Library of Congress
Federal Reserve Bank-Boston	New Hampshire - Vermont	US Customs
General Motors	Hospitalization Service	USS Mississippi
Great Lakes Data Center	Ohio College Library	Westinghouse
Harrah's Hotels & Casinos	Pennsylvania Hospital	Vaco Products Co.
Hewlett Packard	Puget Sound Naval Shipyard	Quadgraphics
Harris Semi-conductor	Raytheon	Youngstown Sheet & Tube

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Brethren Mutual Insurance Co.	Los Angeles Dept. of Airports	Provident Mutual Insurance Co.
Campbell County Hospital	Marine Corp Logistics Base, GA	Rank Video of America
Central Blood Bank of Pittsburgh	Medical Action Industries	Searle Pharmaceutical
Cleveland Museum of Art	Medtronic	Siemens
Data Scope Corporation	Menard Inc.	St. Joseph's Hospital, Atlanta
E.I. DuPont	Naval Research Lab	U.S. Postal Service
E. J. Brach Corp.	Naval Supply Depot, Guam	University of Miami
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