DETECT OIL LEAKS AND SPILLS...FAST!

AVOID OPERATIONS SHUT-DOWN
• REDUCE ENVIRONMENTAL RISKS
• MINIMIZE COSTLY CLEAN-UP
• MONITOR OFF-SITE EQUIPMENT

Dorlen Products
**PRINCIPLE OF OPERATION**

Oil Alert is activated by liquid* reaching the sensing module, which is 1/32” from the surface. The pads B1 and B2 provide a gap between the case and the surface to admit liquid under the unit for detection. Once a leak has been detected, the Sensing Module simply unplugs and a new sensor installed. Two Sensing Modules are furnished with each detector. Replacement modules available in two packs.

* Liquid leakage including clean or dirty oil (lubricating, diesel, fuel, cutting, general industrial), solvents, water etc. (conductive or non-conductive)

**FEATURES AND SPECIFICATIONS**

- Two-9 volt alkaline batteries required- lasts 1 year monitoring (not included)...may also be operated with Dorlen power supply or voltage module. (See page 5)
- Rapid activation time 30-60 seconds typical for clean oil, 1-2 minutes for dirty oil.
- 3 Models available to meet your specific requirements.
- Made in the USA.
- All units tested 3 times during manufacture.
- Test button within detector verifies operation.
- Designed for indoor use...operates from 25 F to 125 F...Relative humidity 10% to 90%.
- “On-off” buzzer signaling distinguishes from background noise.
- 5 Year Warranty and individual serial number printed on all units.

**Note:** The Sensing Module (SM) must be replaced after detection of liquid (simply insert new module into retainer). Two Sensing Modules are furnished with each unit. Replacement modules available in two packs.
Signal duration conservatively specified: Rated duration applies after one year monitoring.

1/8th" thick high-impact polystyrene dome shaped housing for strength and ruggedness.

Loud Piezo electric buzzer

Sensing Module: Replaceable, protected module will not be affected by dirt and dust like delicate “prism” type sensors.

Epoxy encapsulated circuitry eliminates dirt, fungus, or humidity problems

**CAUTION:** Contact Dorlen for explosive environment applications.

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**OIL ALERT MODELS**

**OA:** Provides 3 day audible alarm (when battery operated) - Lowest cost - **Ideal for local indication of leakage.** Simply install 2-9V Alkaline batteries and locate in potential danger areas where an early warning is desired. 100db alarm.

**OA-5:** Provides 3 day (when battery operated) audible alarm and isolated relay contacts (DPDT) rated 1amp at 28VDC Max. which transfer and hold when activated - **Ideal to tie into existing security panel or control panel.** 100 db. alarm. Can also be used with RA-WM Remote Alarm and PR-WM Power Relay (see pg.5).

**OA-2100:** Provides output leads to signal **SERIES 2100 Monitor** (see pg.3), and 85 db. alarm.

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**POWER OPTIONS**

The OA and OA-5 can both be powered by 9v alkaline batteries, PS-3 power supply or by customer power with Voltage Module. OA-2100 is powered from the Series 2100 Monitor.

**9v Batteries:** 2 required per detector, Alkaline type only.

**PS-3:** Power supply available from Dorlen. Will eliminate need for batteries in detectors. (see page 5)

**Voltage Module:** Will convert your 12 thru 24v AC or DC to 9vdc to power detector. One voltage Module per detector is required. (see pg. 5)
SERIES 2100  
Remote Monitored System

General Description

The Series 2100 is an early warning leak detection system utilizing the latest line of Dorlen Products remote monitors and compatible OA-2100 Oil Alert detectors. All Series 2100 Monitors Monitor and Power the connected OA-2100 Oil Alerts.

The easily installed system is made up of only 3 separate components, 1 Monitor (4 models available), up to 12 Oil Alert detectors, and Dorlen type “F” interconnect cable. Each system is characterized by the monitor used.

When one or more Oil Alert detects liquid leakage it will activate its internal audible alarm and signal the monitor. The monitor will then activate providing an audible alarm, red flashing lamp, LED indication of activated Oil Alert(s) and transfer a dual set of isolated relay contacts. The Oil Alerts may be located up to 2500 feet from the monitor. Monitors are available in both shelf or wall mount configuration.

The below table summarizes the Series 2100 product line.

- Monitors will **monitor and power** the connected Oil Alerts (Oil Alert Model OA-2100).

- Upon Oil Alert activation, monitors sound **audible alarm, flashing red lamp** and **LED indication** of which Oil 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.

- Monitors are equipped with **2- SPDT isolated relay contacts** which will transfer upon any Oil Alert activation for customer use in signaling existing security panels or other equipment. (Relays rated at 1 amp,28VDC).

- **Extremely simple installation**...Normally carried out by company maintenance personnel with instructions furnished. ALL hardware included.

- **Ultra-reliable performance**; All Monitors come with a **5 year Warranty**...prices shown on attached price list.

- **Everything needed** to make your system functional and easy to install.

### Series 2100 Monitor Model# |
<table>
<thead>
<tr>
<th>CHANNELS</th>
<th>MOUNTING</th>
<th>DETECTOR MODEL#</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM-6</td>
<td>6</td>
<td>Shelf Mount</td>
</tr>
<tr>
<td>SM-12</td>
<td>12</td>
<td>Wall Mount</td>
</tr>
<tr>
<td>WM-6</td>
<td>6</td>
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<tr>
<td>WM-12</td>
<td>12</td>
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</tbody>
</table>
SERIES 2100
Remote Monitored Systems

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

SHELF MOUNTS
Input: UL Listed wall adaptor
Dimensions / Wt. 6 channel: 8.5"Wx9.5"Dx2.5"H / 7lbs
Dimensions / Wt. 12 channel: 17"Wx12"Dx3.5H / 20lbs

WALL MOUNTS
3 Conductor #22 AWG, stranded, shielded, color coded w/vinyl jacket .175" O.D.

2500’ max.distance between Oil Alerts and Series 2100 Monitor
Dorlen type "F" Cable
3 conductor #22 AWG

Wire nut connections at each OA-2100 Oil Alert
Clamp type terminal wire connections on monitor

SERIES 2100 SPECIFICATIONS

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

SHELF MOUNTS
Input: UL Listed wall adaptor
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Dimensions / Wt. 12 channel: 17"Wx12"Dx3.5H / 20lbs

WALL MOUNTS
Input: UL Listed input transformer, Terminal strip hard wired
Dimensions / Wt. 6 & 12 channel: 10"Wx5"Dx12"H / 20lbs

"F" CABLE
3 Conductor #22 AWG, stranded, shielded, color coded w/vinyl jacket .175" O.D.

OIL~ALERT
LIQUID LEAK DETECTOR

COMMON APPLICATION AREAS:

Wind Turbines
Machining Centers
Hydraulic Equipment
Stand-by Equipment monitoring
Coolant Oil Piping
Elevator Pits
Oil Storage Locations
Hydraulic Piping
Remote Site Monitoring
Unattended/Obscured Areas
OPTIONS AND ACCESSORIES

**PS-3**
Power Supply:

DC power supply eliminates batteries in Oil Alert detectors - ideal for large installations where accessibility to Oil Alert is inconvenient or battery operation is not acceptable. Operates up to 24 Oil Alert detectors, wiring instructions furnished. Internal self-recharging battery provides back up power to system in event of line power failure or power cord removal. **UL Listed** input transformer. Flashing LED indicating power to Oil Alerts. Large screw-type terminal blocks at rear of enclosure for convenient wiring. Connection to Oil Alerts is made by means of wire nuts. Short circuit, overload and over voltage protected. Rugged attractive enclosure 8-1/2"W x 9-1/2"D x 2-1/2"H.

**VM-1**
Voltage Module:

Rather than battery power it may be desirable to power Oil 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 application. The Voltage Module snaps into the Oil Alert and will convert your voltage to 9vdc as required.

**SM-2**
Sensing Modules:

Two pack of replacement Oil Alert Sensing Modules.

**9V BATTERY**

Industrial type, non-rechargeable, 9V Alkaline battery.

**RA-WM**
Remote Alarm:

Used for additional remote indication of liquid leakage. Compatible with OA-5 Oil Alert Detectors. Unit is surface wall mounted. Dimensions- 6”H x 3”W x 2”D. **UL Listed** input transformer. Input- Normally Open Contact from OA-5. 10mm LED indicator and 85db Audible Alarm w/silence switch.

**PR-WM**
Power Relay:

Used to control high powered equipment such as pumps, motors and solenoids from an OA-5 Oil Alert Detector. Unit is surface wall mounted in a NEMA 4x nonmetallic encloser. Dimensions- 5.5” H x 3” W x 2.6” D. Unit will power up to 2 Oil Alert detectors Model OA-5. **UL Listed** input transformer. Input:- Normally Open Contact from OA-5. Output: SPDT Relay Contact (Form C) Rated - 120VAC @ 20 Amps. Large screw-type terminal blocks inside enclosure for convenient wiring. Connection to Oil Alerts is made by means of wire nuts. Power ON LED, Relay Activated LED.

**WIRE AND CABLE**

**TYPE “F” cable**: Signal/Power wire - 3 conductor, stranded, shielded, #22 AWG. with vinyl jacket. 0.175” O.D. For use with all Series 2100 systems.

**TYPE “B” cable**: Signal/Power wire - 2 conductor twisted pair, stranded #22 AWG. with vinyl jacket. For use in PS-3 power runs and RA-WM signal runs less than 500’.

**POWER WIRE #18**: Power wire - 2 conductor twisted pair, stranded #18AWG. with vinyl jacket. 0.226” O.D. For PS-3 power runs and RA-WM signal runs between 500’ and 2500’.
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 Product 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.
A SMALL SAMPLING OF Oil-Alert™ USERS:

Alcan Ingot  
American Rural Cellular Inc.  
Boeing Commercial Airplane  
Boise Cascade Corp.  
Colts Plastics Co.  
CXY Chemicals  
Delphi Automotive Systems  
Dynex Rivett Corp.  
IBM Corp.  
James River Power Station  
Janssen Pharmaceutical  
Johnson Controls  
Long Island Lighting Co.  
Los Alamos Nat. Lab  
Maytag Herrin Laundry  
Mercy Medical Ctr. Redding  
Molders Choice Inc.  
Moog Aircraft  
Motorola  
NSK Corp.  
Plasma Physics Lab  
Revlon Inc.  
Siebe Environmental Controls  
Squibb Manufacturing Inc.  
St. Lukes Hospital  
Tufts University  
Valspar Corp.  
Viacom International  
Wells Aluminum Corp.  
Westinghouse Electric Corp.

HOW TO ORDER

Orders may be placed by phone, fax or mail on your company order form. Please verify pricing if your price list is not of the current year.

TERMS-
Net 30 (Subject to credit approval) - FOB Milwaukee, WI. - Shipping prepaid and added to invoice. Orders normally shipped UPS ground. 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
www.oil-alert.com

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