



# OILMON

High Voltage Fluid Filled  
Cable Monitoring



The long term cable asset management programme

**MANAGEMENT  
CONSIDERATIONS**

**Environmental &  
Public Profile**

OILMON users  
have experienced

**HUGE REDUCTIONS IN  
OIL LOSSES AND  
REGULATORY FINES**

**Business  
Costs**

OILMON provides real time  
pressure data, eliminating the  
need for routine site visits which  
drives costs down and delivers

**HIGHER PROFITABILITY**

21<sup>st</sup> Century energy demands mean  
that the electricity transmission and  
distribution network capacity is  
pushed hard.

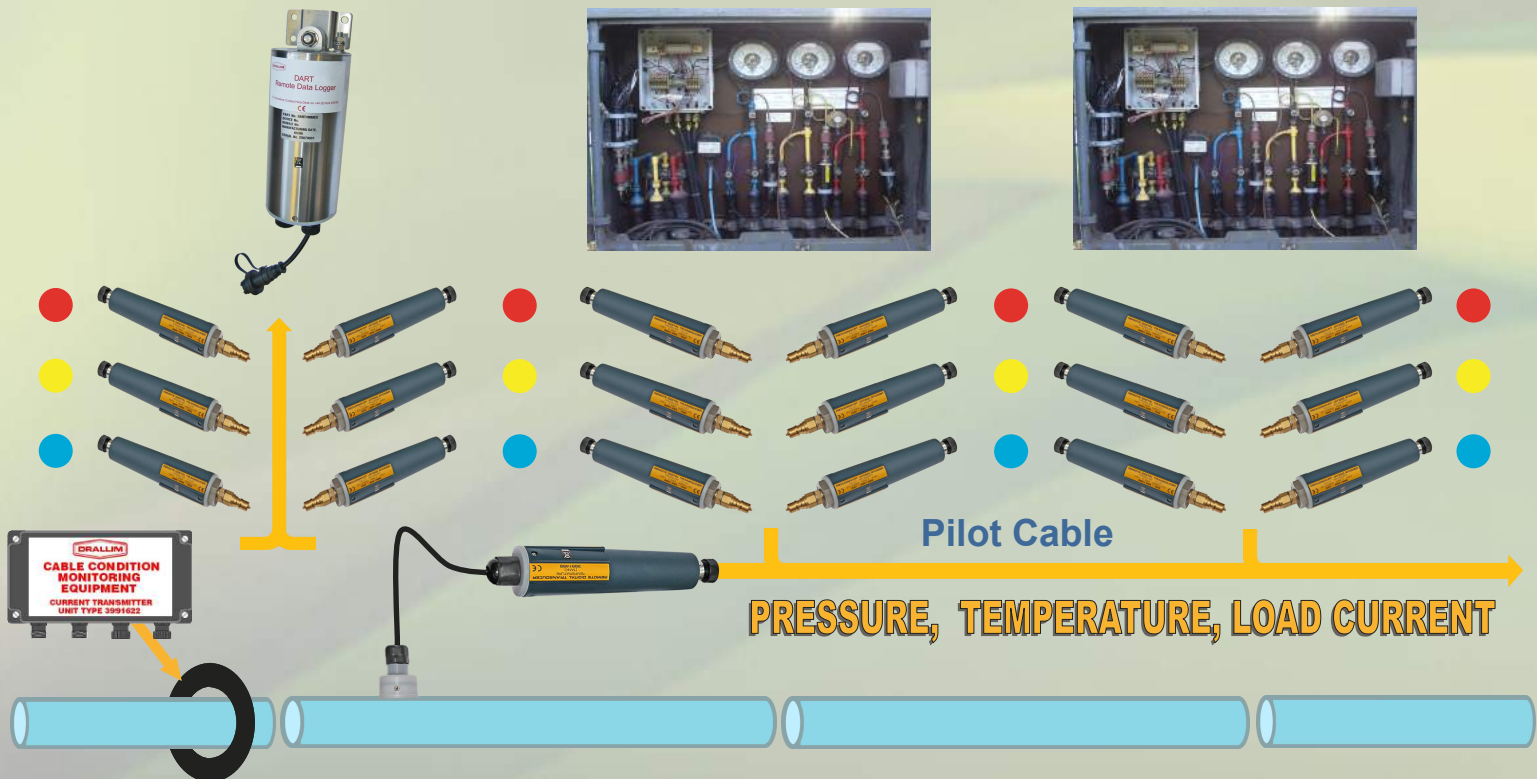
Providers and distributors must make  
best use of their assets. Performance  
analysis enables cost effective  
maintenance schedules to be  
developed.

OILMON equipment can be easily  
retro-fitted to complement or replace  
existing legacy installations.

All asset and ambient measured  
parameters are combined to  
construct a true picture of how the  
cable is coping with strains imposed  
by customer load and the  
environment.

**Wireless Location**

**Pilot Connected Locations**



*Helping you to improve your business efficiency*

### Maintenance planning

OILMON's algorithm provides advanced 'slow leak' warning facilitating planned preventive maintenance, instead of costly out of hours disaster response helping to deliver

**IMPROVED EFFICIENCY**

### Replacement Strategy

OILMON's historic data helps managers to prioritise asset replacement and repair, thereby Enabling

**CAPITAL COST PLANNING**

### 3rd Party Incidents

The OILMON system enables cable damage caused by others or due to earth movement to be quickly detected and actioned, leading to

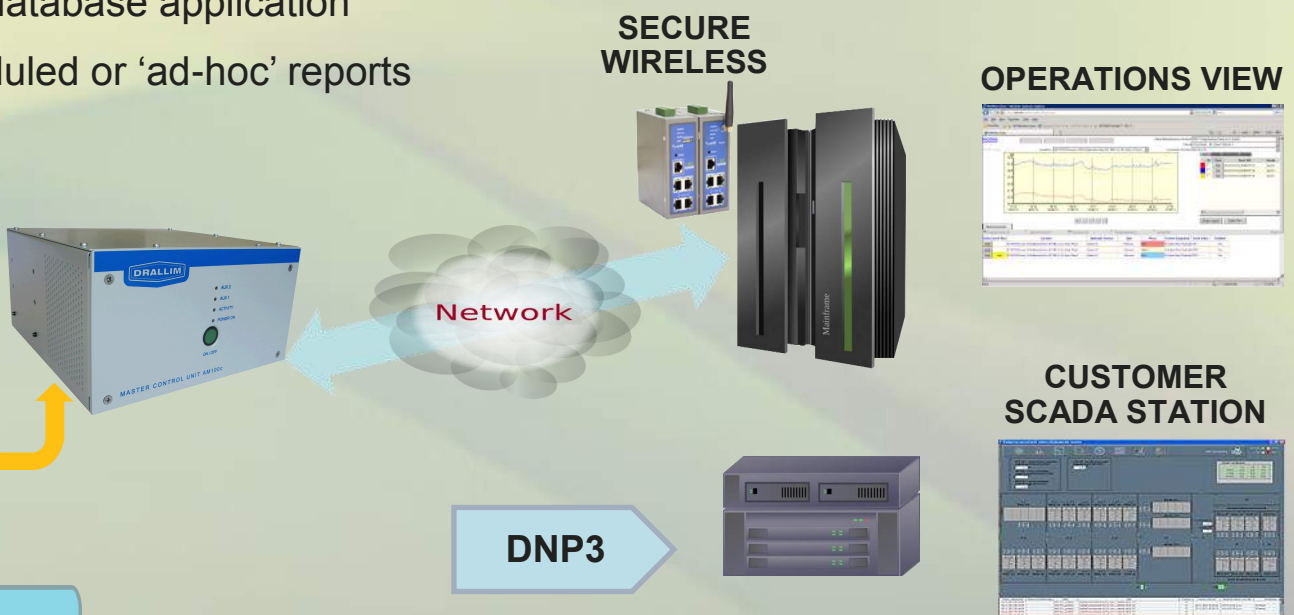
**REDUCED COSTS AND ENHANCED PUBLIC PROFILE**

### System features

- ◆ Designed for HV environments
- ◆ High measurement accuracy
- ◆ -20 to 55°C operation range
- ◆ >200 measurement points/RTU
- ◆ Autonomous RTU operation
- ◆ Data logging at RTU and server
- ◆ Direct DNP3 connectivity option
- ◆ Wireless or pilot connected RTU
- ◆ Continuous alarm checking
- ◆ Leak detection algorithm
- ◆ Web database application
- ◆ Scheduled or 'ad-hoc' reports

### Performance Indicators

- ◆ Reduced cable oil usage
- ◆ Manual gauge reading eliminated
- ◆ Daily pressure data available
- ◆ Advanced leak trend warning
- ◆ Avoidance of major incidents
- ◆ Visibility of cable loading effect
- ◆ Tank pressure optimisation
- ◆ Improved maintenance efficiency
- ◆ Years of historic data records
- ◆ Improved Environmental profile

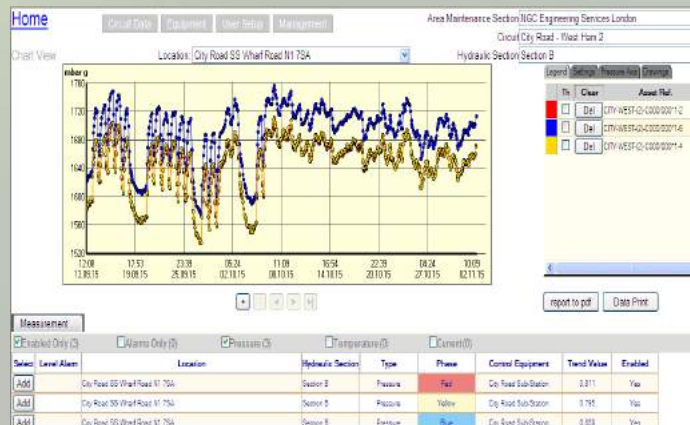


# WebView

WebView provides Internet access to your asset performance data. You can view data graphs of recent and past events with the simple use of a web browser. Information such as 'falling' and 'low' alarms and algorithm detected slow oil leaks are highlighted. You can create reports and archive reading history.

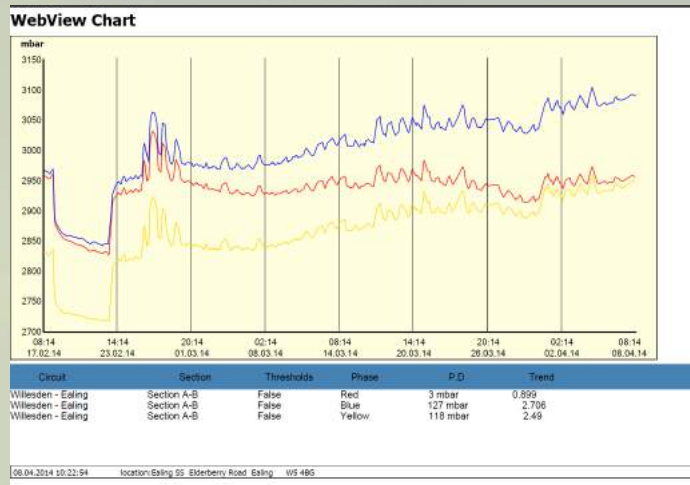
## Predictive Monitoring

Comparative pressure calculations enable leaky cables to be identified. Leak detection sensitivity is configurable. Preventive measures can be taken weeks in advance of potential cable insulation breakdown.



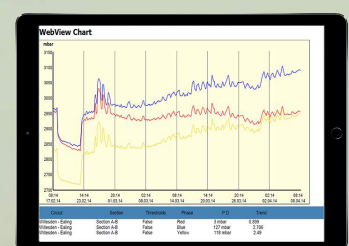
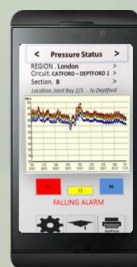
## Cable Pumping Records

Once a problem cable section has been identified, PFT techniques can be used to locate the leak. This graph illustrates a PFT loading procedure where oil is removed from tanks and replaced with a locating agent and then re-pressurised.



## Status Delivery

OILMON offers a range of alarm and performance report methods for the timely delivery of critical alarms and validated incident records.



# Products Summary

## Control Equipment

Used to collect data from monitoring transducers and relay it to the system server. Responsible for alarm management.

### Master Control Unit (RTU)

- ◆ Sub-Station located
- ◆ Mix of transducers
- ◆ 8 transducer ports
- ◆ 15km range
- ◆ 40 alarm mapped SCADA Contacts
- ◆ PSTN or LAN Comms



### Wireless Control Unit (DART)

- ◆ Field Installed
- ◆ GPRS/Wi-Fi
- ◆ 110vac/240Vac or rechargeable Battery



### Wireless SCADA Interface

- ◆ Substation Located
- ◆ GPRS/Wi-Fi
- ◆ Low/Falling Alarm Reporting

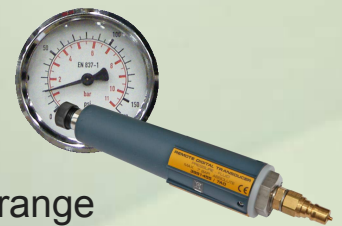


## Transducers

A range of specially constructed and calibrated low power ultra stable instruments suitable for use in harsh environments.

### Pressure

- ◆ Cable Oil
- ◆ Atmospheric
- ◆ 0.1% Accuracy over operational range



### Temperature

- ◆ Cable
- ◆ Ground
- ◆ Ambient



### Contact Monitor

- ◆ Kiosk Security
- ◆ Fluid Level
- ◆ 3 VFC's
- ◆ Server assigned functionality

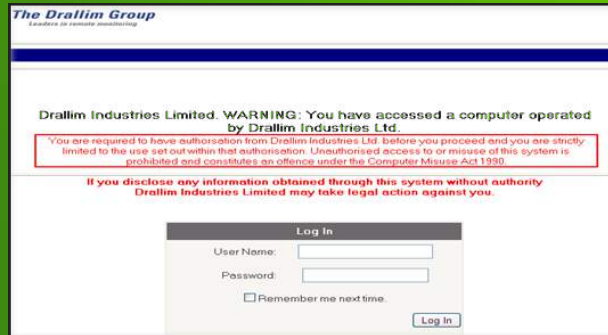


### Load Current

- ◆ 20mA i/p
- ◆ ISTAT Compatible
- ◆ Scalable Output



# Drallim Services



## Server Hosting and System Management

Drallim provide secure server hosting services to ease customers' burden of internal systems integration. A cost effective equipment maintenance and reporting service is also provided, customised to individual requirements. This includes comprehensive scheduled reports and incident alerts.



## Asset Protection

Installation and commissioning services can be supplied by National Grid Competent Person and BESC certified engineers.



## Equipment Installation

A range of equipment protection and energy saving products designed for electricity utilities are available.



## Drallim Industries Limited

Millwood House | Drury Lane | Ponswood Industrial Estate | St. Leonards on Sea

East Sussex | TN38 9BA | UK

P +44 (0)1424 205140 | F +44 (0)1424 202140 | sales@drallim.com | www.drallim.com