

# SMARTEX® MX

## Maximum Leak Protection

### Permanent Roof Membrane Monitoring

Smartex® MX provides the most comprehensive leak protection and detection system available. When roofing integrity and investment protection is imperative, Smartex® MX is the right choice for watertight monitoring 24 hours a day, 7 days a week.

Progeo's Smartex® MX is the automatic "always-on" leak detection system suitable for all types of roofing construction. This system is permanently installed under the roofing membrane. The MX system monitors the entire roof and signals when a leak is detected. In addition to immediate detection, the sensor array is mapped to the building's roof layout making it possible to pinpoint the location of the leak at the same time.



### Smartex® MX At a Glance

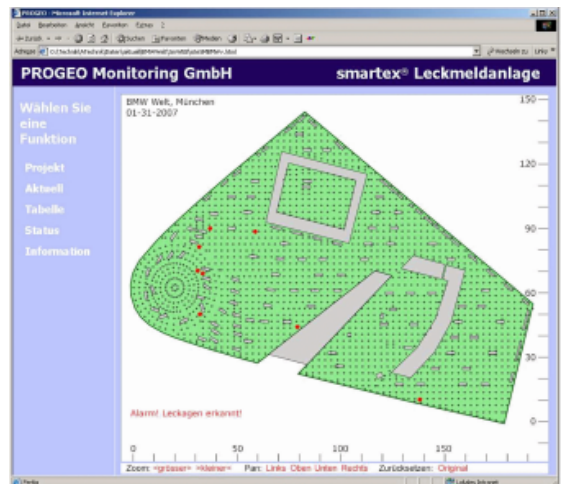
- Permanently installed beneath the roofing membrane
- Provides 24/7 monitoring of roofing membrane
- Detects leaks as soon as they occur
- Communicates status of roof condition continuously
- Minimizes the risk of damage
- Reduces the cost of repair
- Protects building contents



### How Smartex® MX Works

Smartex® MX consists of an array of sensor modules and a conductive layer of felt which are connected to the system computer. A signal current is generated and measured in the sensor grid. Computer generated status reports describe the condition of the roof, day and night, as the system computer controls the functions of the entire installation.

If water penetrates the membrane because damage has occurred, the electrical signal is able to flow through the penetration in the membrane which triggers an alarm. Notification can be sent via email to the systems administrator. A layout of the roof showing the location of the leak can also be viewed on Progeo's website. Remediation can be immediate, eliminating the possibility of long term damage to the roof and the building structure.



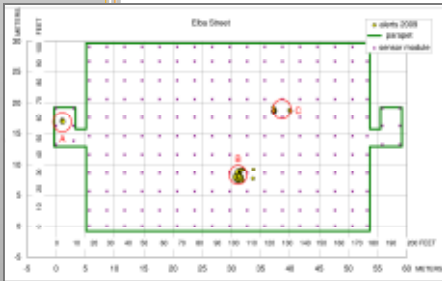
*During construction of the BMW World Center in Munich, dozens of areas where damage had occurred were pinpointed by Smartex® MX and repaired before acceptance by the owner.*

# Smartex® MX For Maximum Leak Protection

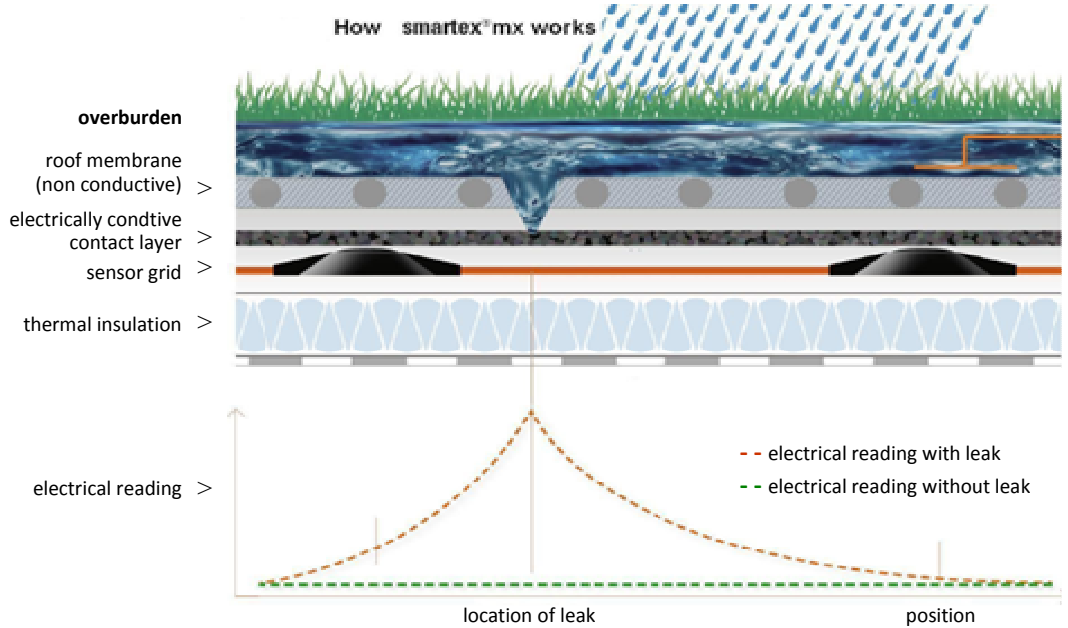
Smartex® MX consists of the following elements:

- Progeo's electrically conductive felt is installed underneath the roofing membrane. It is specially manufactured to provide an evenly conductive electrical grid so leaks in the roofing and waterproofing membrane can be located precisely.
- An array of sensors are custom installed to fit the layout of each individual roof section. Sensors in the MX system are integrated computer chips called "smart" sensors. Each chip is polled by the computer and reports its own condition, as well as any conductive and electrical activity detected.
- The specially designed system computer is installed on site and sends electrical pulses to the surface of the roofing or waterproofing membrane. When a pulse is recognized by the sensor, it reports the event to the computer which then evaluates the strength of the signal and its duration. Depending upon system configuration, an alarm is triggered when a leak has occurred.

Civitan Medical Building  
Duke University



MX sensor grid and leakage detected over 2 week period



SMARTEX® SYSTEMS	TYPE OF MONITORING		LEAK LOCATION		TYPE OF WATERPROOFING			TYPE OF BALLAST		
	Permanent (Always On)	Intermittent Testing	Automatic	Manual Diagnostic	Bituminous	Single-Ply	Coating	Exposed Membrane	Green Roof or Gravel	IRMA/PRMA Pavers/Paved
<b>NEW CONSTRUCTION &amp; REROOFING AND WATERPROOFING</b>										
MX	✓		✓			✓		✓	✓	✓
IS	✓		✓		✓	✓		✓	✓	✓
LP		✓		✓	✓	✓	✓	✓	✓	✓
VM		✓		✓	✓	✓	✓	✓	✓	✓
<b>EXISTING CONSTRUCTION</b>										
LP		✓		✓	✓	✓	✓	✓		
VM		✓		✓	✓	✓	✓	✓	✓	✓



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Quality - made in Germany

Smartex® leak detection components are manufactured according to ISO 9001 and the DQS certified management system