

Automatic Always-On Multi-Level Leak Detection

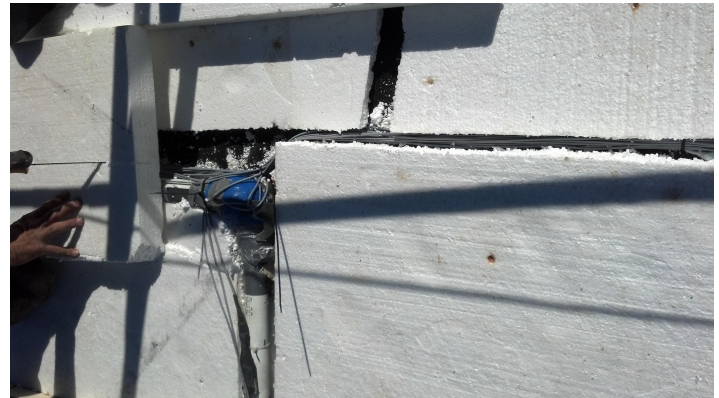
Automatic Leak Detection for Multi-Level Membrane Envelopes

Gaussian™ LST is a leak detection and location system designed exclusively for roofing or waterproofing envelopes which comprise multiple distinct layers of membrane separated by insulation, fabric or other electrically non-conductive building materials, such as the type of envelope used on data centers and over other critical spaces. Gaussian™ LST is also applicable to roofing envelopes in which there is a monolithic vapor barrier on the roof deck that would prevent leakage from the upper membranes from being discovered until the envelope is saturated with water, providing simultaneous leak detection and location for both layers.

The system can also be configured to have a certain resolution for leak location, to monitor the edges of the roofing or waterproofing envelope and to provide early warning of leakage only with location done manually. Budget and administrative considerations often determine how the above options are configured.

Gaussian™ LST at a Glance

- Permanently installed in the roofing envelope
- Monitors multiple layers of membranes including dual-level same-membrane envelopes
- Constant automatic 24/7 monitoring
- Monitors conditions in the completely enclosed roofing envelope including vapor barrier issues.
- Can be configured to monitor leakage at envelope edges and penetrations.
- Significantly reduces cost of location of leakage
- Effective for use under any overburden
- Used with any roofing membrane - even metal roofing details



How it Works

Gaussian™ LST uses different levels of electrical energy and methods of measurement to monitor, create alerts for and distinguish between the distinct levels or layers of waterproofing membranes, no matter what they consist of. The system is configured by combining flat and dipole electrical fields, and by using substrates of varying materials which have varying conductivity so that the electrical impulses generated by the system can be detected and measured to determine when, where and at what level leakage is occurring. Gaussian™ LST can be configured for installation in virtually any adhered or mechanically attached roofing envelope with any type of membrane, including EPDM. The permanent setup includes impulse cables, standard Gaussian™ sensors with leads which are attached to the computer assembly, and felts, grids or intrinsically conductive substrates.