

## Case Study 4: Data Centres

### Installation: Floodline Leak Detection System

Data Centres, Exchanges and Switch Centres provide a critical service relied upon by millions of subscribers in their day to day business and life. Continuity of service is not only essential to users but also vital in terms of revenue to their operators. The owners, operators and designers of these high-tech installations are naturally concerned to protect themselves from all potential damage and water leakage detection is now part of the standard monitoring and alarm package.

Andel's Floodline leak detection systems are chosen as the best, most reliable and cost-effective option by many of the world's most prestigious "blue-chip" organisations. In the UK companies such as BT, HSBC, Orange, Global Switch, ICM Group, Airbus Industries, Norwich Union, GSK, National Grid and many others are regular end users of Floodline systems.

Data or communications centres are built to the latest designs employing up to the minute features and technologies. Mile upon mile of data, network and power cable is installed under raised access floors where it can be organised and routed safely out of sight. The problem is that this void also contains water service pipes feeding A/C units, toilets, kitchens etc. The unsightly cables and pipes may be hidden from view – but so are the problems!

Leak detection equipment is installed in floor voids to monitor chilled water pipes and condensate drains for the A/C and fan coil units, hot and cold water for the toilets, vending and tea areas etc.

Special detection cable or pad and point sensors are installed in a design or pattern to provide the best coverage. Pipe-joints and connections are particularly sensitive so sensors are clipped to the floor directly around the 'footprint' of each unit or beneath the whole length of pipe work. Point sensors can be targeted at specific items or areas. In the event of a leak being detected an early warning is given BEFORE damage can occur.

Where pipes run at high level or there are roof valley gutters and down pipes, drip trays are suspended below pipes and gutters with leak detection cable running the entire length or point sensors installed at a low end.

The leak detection system will be zoned to allow quick and accurate location of the leak. Each A/C unit is allocated a separate 'Zone' and runs of water pipe are sub-divided into a number of 'Zones' usually 5-10m in length to help isolate the leak to a convenient length.

Point sensors are installed in plant rooms with solid floors to monitor for a build-up or 'pooling' of water from leaking equipment, water tanks, booster sets and pumps etc.

Other areas of concern are toilets, tea points, vending machines, water fountains, kitchens and also services risers.

All areas are monitored either by individual local Floodline Control Panels or a centrally located Floodline Control Panel. Options include small, stand-alone systems or larger multi-zone control panels. All Floodline systems provide connections for the BMS or other remote monitoring via volt-free contacts or RS232/485 communication protocols.



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