



# Industrial Alcohol Tanks

## Fire Detection in France

Highly flammable substances, such as industrial alcohol, require ATEX-approved fire detection solutions for safe operation. As AP Sensing's Linear Heat Detection solution provides the industry's most complete set of certifications, it was selected to protect industrial alcohol tanks in France.

Active electronics, if not protected by specialized enclosures, are banned from highly explosive ATEX Zone 0 areas in order to prevent the ignition of flammable vapors. The solution? Fiber Optic Linear Heat Detection that has very low power designs and passive sensor cables.



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AP Sensing's N4387A/B Linear Heat Series employs an extremely low-power design. It meets the class 1M certification and with its unique code correlation technique results in an average laser output power of just 17 mW. The instrument is available with an ATEX Zone 0 certification. This rating allows the system to be deployed with a steel armored sensor cable in areas down to Zone 0.

The DTS instrument is generally located in a central control room outside the dangerous ATEX zone. Steel armored sensor cables are deployed over the storage tank area in a loop configuration, providing operational redundancy in the system.



### Steel Sensor Cable

The steel armored sensor cable has a compact design (d=3.8 mm / 29 kg/km) ensuring fast, effective heat detection (flame resistance 750 °C for 2 hours proven by passed IEC 60331-25 test), that does not propagate the flame along the cable (IEC 60332-3). The cable is extremely robust (continuous tensile strength of 1.100 N, short term 1.500 N), designed for harsh, corrosive environments (crush resistance of 960 N/cm) and requires no maintenance after installation.

The DTS system has both ATEX and IECEx approvals for installation in explosive areas.

**Installation details**

