



AP Sensing Replaces Competitor's DTS in Meir Traffic Tunnel

Stoke-on-Trent, UK

When a competitor's LHD (Linear Heat Device) could no longer be maintained locally or checked for correct operation, it was decided to replace it with an AP Sensing DTS (Distributed Temperature Sensing) device in the 284m long Meir tunnel. The busy traffic tunnel is located in a heavily trafficked area in Stoke-on-Trent in England.

It was necessary to **maintain the critical safety systems within the tunnel** and therefore to provide a reliable and cost-effective DTS solution. Working together with our regional partner, one of the challenges was to replace the DTS but to **ensure proper operation** using the various sensor cables that were previously installed.



The Meir tunnel, ready for overnight testing

The tunnel already had sensor cable installed from the previous installation, **but the AP Sensing device was still able to work easily with this different gauge**. One AP Sensing Linear Heat Series device with 2 channels was selected in a **double-ended configuration**.

The AP Sensing Linear Heat Series has been approved by VdS for **EN54-22 certification**. By using the DTS Configurator **all of the zone information and alarm schemes could also be transferred to the AP Sensing device**. A heat gun was used during commissioning to verify the start and end zone positions in the tunnel.

To facilitate wiring and to re-use the existing wiring setup, **an I/O connector set was supplied**, extending the relay connections to a more convenient position. The breakout unit can be mounted on a DIN rail and it used spring-loaded electrical terminals for **fast and secure wire connections**. During commissioning it was possible to test each relay using the DTS Configurator.

The AP Sensing DTS is installed in an **IP66 outdoor casing** enclosure, which is smaller and lighter than the previous box, while remaining in the same location.



DTS wall unit fully installed



Meir tunnel: open for safe traffic

The project was completed with a **minimal impact on the tunnel operation** and provides a reliable fire detection system that is fully supportable, while maintaining the previous sensor cable installation. **A valuable infrastructure now remains protected.**