

AUTOMATED TRANSIT NEEDS EVEN SMARTER FIRE DETECTION

When the Doha Metro needed an industrial fire-safety system that could keep up with its world-class rapid-transit system, only one choice could meet the stringent requirements: Honeywell.

Case Study

Several companies were competing for the project, but Honeywell Industrial Fire Solutions was the only provider that met the two key requirements: UL/FM-certified and SIL2 approved fire suppression, combined in one product.



Honeywell

DOHA METRO FIRE SAFETY

The Doha Metro is an ambitious rapid-transit system that began operations in 2019, integrating Qatar's capital city of Doha into the nation's larger rail network. To protect its best-in-class automated rail system, Qatar Rail expects equally world-class fire safety – which made a Honeywell industrial fire system the clear choice.

THE CHALLENGE

Maintain metro-system operations and safety with the highest levels of assurance.

Reliable, real-time fire detection in tunnels, stations, and other demanding environments.

Fast, accurate, structured alerts of abnormal events to give staff more time to respond.

Rigorous specifications, including SIL2 and UL/FM certification.

Approximately 600 panels needed in less than 6 months

THE SOLUTION

The Doha Metro system operates three lines and 37 stations, mostly underground, with plans to expand to four lines and about 100 stations. To maintain safety and efficiency, the high-speed network relies on an intelligent Train Management System – which in turn requires real-time fire status while it automates the busy tunnel network.

So Qatar Rail had rigorous requirements: The fire-safety system must be both TUV-approved for "safety and integrity level 2" (SIL2) and UL/FM-certified. It also must be adaptable and resilient, with capabilities such as redundant CPUs and power supplies, and hot-swappable components. And the fire-safety system must integrate seamlessly with the Train Management System using a reliable communication protocol.

Few if any systems could meet all these requirements, but Honeywell was invited to propose a solution – and after extensive reviews, the Honeywell HS-81 family of industrial fire panels proved to be the perfect fit.

The next challenge, however, was a fast-track timeline: Could Honeywell and the installation partners manufacture and install approximately 600 panels in less than six months? Thanks to a high level of engineering precision and close coordination among all stakeholders, the answer was yes.



THE BENEFITS

- Highly reliable system for reporting flame, smoke, and temperature, as well as fire suppression, public address, sounders and beacons
- One fire-suppression panel per technical and service room throughout the underground system
- Each fire panel is a modular system with redundant CPUs and power supplies, and hot-swappable components
- Always operational: Zero down time for maintenance

KEY TECHNOLOGIES

- Honeywell HS-81 Compact Fire Detection Panels
- Honeywell HS-81 Compact Gas Suppression / Releasing Panels

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