



CONNECT AND PROTECT

**MINERAL INSULATED WIRING
CABLE SYSTEM**

For Airport Applications



PYROTENAX

nVENT PYROTENAX

Mineral Insulated Wiring Cable System

Airports present unique safety challenges as aviation fuel is pumped from storage facilities to planes in close proximity to high volumes of passengers and personnel. Safety systems take priority in the design of airports, as real life airport fires have all-too-vividly demonstrated the severity of panic and confusion that can be created by smoke and loss of power. Accordingly, the circuits feeding fire pumps, emergency equipment and fire alarm system notification circuits are all-important and must maintain integrity throughout a fire. nVent offers a complete range of Mineral Insulated Wiring Cable System, the Ultimate Fire Survival Cable to meet these requirements.

Advantages

nVent PYROTENAX MI Cable consists of solid copper conductors embedded in a highly compacted, inorganic mineral powder insulant, all contained within a copper sheath.

This construction is completely non-flammable and destruction of the cable by fire only occurs in the extreme situation when the cable is subjected to temperatures at or above the melting point of copper (1083°C).

The cable is mechanically tough and can withstand considerable amounts of mechanical abuse such as hammering, bending and twisting, all without electrical failure.



Airport Applications

- **Fire Alarm**
Almost all fire alarm code stipulates that in voice evacuation fire alarm systems, the wiring for the notification circuits shall be fire rated. Fire alarm wiring designed to meet the survivability requirement for notification circuits is required.
- **Emergency Lighting**
When normal power is disrupted in a fire, the chances of safe egress or fire fighting in the dark go down dramatically. Emergency lighting provides the back-up for the normal lighting.
- **Emergency Power Supply**
Emergency generators are brought into play when regular power fails, and are the backbone of the systems that provide time for a safe evacuation of occupants, and power to operate the life safety and fire fighting systems.
- **Smoke Venting Fans**
Smoke is the major threat because of loss of visibility and air to breathe, and fans to remove smoke are of crucial importance.
- **Pressurizing Fans and Smoke Dampers**
For stairwells and other areas of safe refuge, pressurization fans and smoke dampers provide a positive pressure to maintain a smoke free area of safe refuge with clean air for breathing, and visibility for egress.
- **Fire Pumps**
Perhaps the most important fire fighting piece of equipment, the fire pump ensures water pressure for the sprinkler system. Mechanically tough, fire-rated wiring is needed for this critical circuit.
- **Power Feeders**
The space savings achievable using Mineral Insulated Wiring Cable System versus conduit and wire are huge - up to 80% space saving. In addition, the ease with which they can be pulled into difficult runs with tight corners gives them an overwhelming advantage.
- **Low EMI**
Electromagnetic fields from high electrical currents in equipment, bus-duct or feeders can cause interference in PC screens and sensitive electronic equipment located adjacent to the source of the EMI.
- **Hazardous**
Hazardous conditions can exist in places where volatile fuels are handled and pumped routinely. Mineral Insulated Wiring Cable System cable fittings are designed to meet the explosion and flame path requirements, and pre-terminated Mineral Insulated Wiring Cable System cable is used in these locations, particularly where they can replace bulky and rigid wire in conduit and conduit seal-offs.



Construction Characteristics

- ▶ High Operating Temperatures
- ▶ Great Mechanical Strength
- ▶ Pliable
- ▶ Wiring Cable and Conduit Combined
- ▶ Small Overall Diameter
- ▶ Inherent Flameproof Barrier
- ▶ High Degree of Electrical Screening
- ▶ Radiation Resistant
- ▶ High Corrosion Resistance
- ▶ Integral Earth Continuity
- ▶ Zero Energy
- ▶ Non-Ageing
- ▶ Competitive Installed Cost

Tested, Passed & Approved

Fire Performance BS 6387: 1994 Performance Requirements Tests



Resistance to Fire
950°C for 3 hours -
Category C



Resistance to Fire
with Water Spray
650°C - Category W



Resistance to Fire with
Mechanical Shock
950°C - Category Z

Beyond the Standard...

Pyrotenax Mineral Insulated Wiring Cable System meets one of the stringent tests 8434-2 that requires one single cable sample to be exposed to 930°C temperature and mechanical shocks for 60 minutes, followed by exposure to fire, mechanical shocks and water sprays for another 60 minutes.

... the ultimate fire survival cable

Installations Worldwide

- Bahrain International Airport, Bahrain ●●●●●●●●
- Birmingham Airport, United Kingdom ●●●●●●●●
- Brussels International Airport, Belgium ●●●●●●●●
- Changi Airport, Singapore ●●●●●●●●
- Paris-Charles de Gaulle Airport, Paris ●●●●●●●●
- Hong Kong International Airport, Hong Kong ●●●●●●●●
- Dubai International Airport, U.A.E ●●●●●●●●
- Dublin Airport, Ireland ●●●●●●●●
- Frankfurt Airport, Germany ●●●●●●●●
- London Heathrow International Airport, United Kingdom ●●●●●●●●
- Kai Tak Airport, Hong Kong ●●●●●●●●
- Kuala Lumpur International Airport, Malaysia ●●●●●●●●
- Kuwait International Airport, Kuwait ●●●●●●●●
- Macau International Airport, Macau ●●●●●●●●
- Manchester Airport, United Kingdom ●●●●●●●●
- Muscat International Airport, Oman ●●●●●●●●
- Narita International Airport, Tokyo ●●●●●●●●
- Newcastle International Airport, United Kingdom ●●●●●●●●
- King Khaled International Airport, Riyadh, KSA ●●●●●●●●
- Amsterdam Airport Schiphol, Amsterdam ●●●●●●●●
- London Stanstead Airport, United Kingdom ●●●●●●●●
- Stuttgart Airport, Germany ●●●●●●●●

Key

- Fire Protection
- Emergency Lighting
- Fuel Bunkers
- Security Systems
- Exit Signs
- Advertising Boards
- Warning Lights
- Fire Alarms
- Illuminated Signs
- Parking Areas
- Standby Battery Supplies to Essential Services
- Escalator Power Supplies
- Cargo Handling Systems
- Sub Mains - Normal & Emergency
- Ventilation / Smoke Extraction
- Public Address / Voice Alarm
- Door Security Systems

Quality Certification:



LPCB approved to BS 8434-2.

United Kingdom

Tel 0800 969 013
Fax 0800 968 624
salesthermalUK@nvent.com

Ireland

Tel 1800 654 241
Fax 1800 654 240
salesIE@nvent.com

South East Asia

Tel +86 21 2412 1688
Fax +86 21 5426 3167
cn.thermal.info@nvent.com

Australia

Tel +61 2 9751 8585

India - Noida

Tel +91 120 464 9500
Fax +91 120 464 9548
NTMinfome@nvent.com

India - Mumbai

Tel +91 22 6775 8800/01
Fax +91 22 6775 8997
NTMinfome@nvent.com

UAE

Tel +971 4 823 8666
Fax +971 4 887 0458
NTMinfome@nvent.com

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