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Improve safety for large buildings with approved Category 3 Control fire performance cables

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Insight from Stuart Dover, General Manager, AEI Cables Ltd

The importance of understanding the revised Code of Practice for Category 3 Control fire performance cables which reduce harmful smoke, toxic gases and flame spread in the event of a real fire cannot be stressed enough.

These cables maintain the circuit integrity of a building – providing power for essential services and fire-fighting systems – for fire and rescue services to carry out a safe evacuation in the case of life safety.

AEI Cables has won widespread support for our initiative highlighting the need for only using approved cabling for the range of critical applications of Category 3 Control fire performance cables.

Sharon Hodgson, Labour MP for Washington and Sunderland West, is supporting the initiative while other industry organisations have also expressed support including Electrical Safety First and national fire safety membership body The Institution of Fire Prevention Officers (IFPO).

The applications of Category 3 Control fire performance cables apply to evacuation alarms for the disabled in care homes, emergency voice communications systems and voice alarm systems in relevant buildings including tall buildings, office spaces, hospitals, shopping malls and stadia.

Circuit integrity

The revised Code of Practice for Category 3 Control fire performance cables under BS 8519: 2020 – which covers how to select and install fire-resistant power and control cable systems – makes various amendments and requires a full understanding for those in the supply chain. The standard clearly references and clarifies the products and levels of performance that should be used.

The new Code is intended to inform and guide designers, contractors, fire engineers, regulators and enforcers including building control bodies, fire authorities, Health and Safety inspectors and equipment suppliers and manufacturers.

It is worth examining the standard itself. Indeed, BS 8519:2020 makes reference to the recommendations of BS 9999and BS 9991, with regard to the design and installation of the electrical distribution systems for life safety and fire-fighting equipment.

It also makes reference to three categories of circuits required to maintain their circuit integrity under defined fire conditions for varying fire survival times of 30 minutes, 60 minutes and 120 minutes.

Appropriate cable tests are identified for each cable category derived from applicable British Standards, assessing cable performance under conditions of fire as might be expected in an a real fire incident.

Critical systems

BS 8519:2020 also aims to ensure that the level of circuit fire integrity is not compromised by other components of the whole electrical distribution system, including cable glands, terminations, joints and cable support systems.

The revised standard supersedes BS 8519:2010 and includes added recognition of other critical systems, other than life safety or fire-fighting applications; added information on uninterruptable power supplies and further detailed recommendations for the design and selection of the cable enclosure support systems. There are also recommendations for internal and external fire stopping to maintain the switch room fire compartmentation and the need to cater for the thermal expansion of the cable protective enclosure.

It is primarily intended for use in buildings which, due to their size, height, form or use, require the installation of life safety and fire-fighting systems, for example sprinkler pumps, wet riser pumps, smoke control systems, fire-fighting and evacuation lifts or other systems as required by a fire engineering strategy.

International standards

AEI Cables' Firetec Enhanced cabling has been approved and certified by LPCB to BS8519 (Annex B), Category 3 Control in addition to Category 2 Control.The BS Code of Practice under BS8519 contains six categories of cables, three for power cables and three for control cables each covering survival times of 30, 60 or 120 minutes.

Using the very latest in technology and science, the Firetec Total Fire Solutions range offers Mineral Insulated Cabling (MIC), Firetec Enhanced fire performance cabling, accessories and technical support from the AEI Cables distribution facility at Washington, Tyne and Wear.

All AEI Cables' products are supplied with approvals from independent bodies including BASEC and LPCB. It

also holds approvals from organisations including Lloyds, the MoD, Network Rail and LUL and works to international standards around the world.

By incorporating this guidance into the selection of cabling for these critical systems, those people using these striking new buildings can move about safe in the knowledge that they are safe.